

ASRS Database Report Set

Controlled Flight Toward Terrain

Report Set Description.....A sampling of reports referencing inadvertent controlled flight towards terrain.

Update Number.....38

Date of UpdateSeptember 10, 2024

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.

A handwritten signature in cursive script that reads "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: 2118105 *(1 of 50)*

Synopsis

General aviation pilot reported receiving a low altitude alert despite being centered on the glide path. According to the reporter, this problem has reoccurred multiple times at GTU with different runways.

ACN: 2111588 *(2 of 50)*

Synopsis

Air carrier flight crew reported during a visual approach and on downwind for Runway 21 at GEG, seeing towers and stopping the flight's descent. The pilot suggested a notation is needed on the charts for all pilots describing the tower's location and height.

ACN: 2110800 *(3 of 50)*

Synopsis

Air taxi helicopter pilot reported JFK Tower issued them a clearance to cross Jamaica reporting point at 500 feet which placed them in unsafe proximity to newly constructed buildings. The reporter could not verify their clearance with JFK Tower due to frequency congestion.

ACN: 2107350 *(4 of 50)*

Synopsis

G-150 pilots reported an unstabilized approach and altitude warning from ATC while on final approach. The crew also determined they were low on the approach when breaking out from cloud bases, performed a go around, then returned for a safe landing.

ACN: 2107205 *(5 of 50)*

Synopsis

Air carrier First Officer reported receiving a low altitude alert from ATL Tower on final approach. Flight crew leveled off and landed safely.

ACN: 2107088 *(6 of 50)*

Synopsis

Air carrier pilot reported receiving an EGPWS alert during visual approach.

ACN: 2107041 *(7 of 50)*

Synopsis

Air carrier pilot reported receiving EGPWS warning on approach. Flight crew stopped descent and intercepted glideslope.

ACN: 2106979 *(8 of 50)*

Synopsis

CRJ-900 First Officer reported receiving a low altitude alert from ATC when the aircraft descended before being established on the final approach course. Captain conducted a go-around and completed approach.

ACN: 2106818 *(9 of 50)*

Synopsis

Air carrier pilot reported descending too low during visual approach and receiving an aircraft terrain warning as a result of entering the wrong altimeter setting. Flight crew continued approach and landed.

ACN: 2106758 *(10 of 50)*

Synopsis

Air carrier First Officer reported the aircraft experienced transponder and GPS failure due to potential GPS spoofing.

ACN: 2106597 *(11 of 50)*

Synopsis

Air Carrier flight crew reported ATC issued a low altitude alert when the crew descended below the charted altitude for an approach segment. Flight crew climbed back to correct altitude and continued approach.

ACN: 2106020 *(12 of 50)*

Synopsis

Air carrier pilot reported receiving a terrain alert while conducting a visual approach.

ACN: 2105877 *(13 of 50)*

Synopsis

Air Carrier pilot reported receiving a caution terrain alert during arrival descent into MMMX airport. Flight crew leveled off.

ACN: 2105772 *(14 of 50)*

Synopsis

Student pilot on a training flight reported they failed to follow the departure procedure and received a Terrain Alert during their initial climb..

ACN: 2105306 *(15 of 50)*

Synopsis

CL350 pilot reported receiving a low altitude warning from ATC while being vectored for approach. Flight crew climbed to a safe altitude and continued approach.

ACN: 2105005 *(16 of 50)*

Synopsis

B737 First Officer reported receiving a terrain and sink rate GPWS warnings which led to an unstable approach followed by a long landing.

ACN: 2104731 *(17 of 50)*

Synopsis

Flight Instructor reported they were informed that a person on the ground had reportedly observed the instructor's aircraft descend below 500 feet AGL during training maneuvers.

ACN: 2104706 *(18 of 50)*

Synopsis

Corporate pilot reported descending below a crossing altitude on approach prior to the fix resulted in an ATC low altitude alert. Pilot performed a missed approach.

ACN: 2104210 *(19 of 50)*

Synopsis

Air carrier pilot reported receiving a terrain warning while on an ATC vector for RNAV Y 24 at ROA.

ACN: 2104204 *(20 of 50)*

Synopsis

Flight crew reported they received a sink rate aural warning during final approach and performed a go around.

ACN: 2103659 *(21 of 50)*

Synopsis

An air carrier flight crew reported they descended below their assigned altitude due to using the wrong altimeter setting and received a low altitude alert from ATC.

ACN: 2103515 *(22 of 50)*

Synopsis

An air carrier pilot on a night time visual approach reported they received a low altitude alert from ATC.

ACN: 2103382 *(23 of 50)*

Synopsis

TRACON Controller reported using wrong call sign when issuing descent instructions resulted in confusion on readbacks and a CFTT event.

ACN: 2103375 *(24 of 50)*

Synopsis

TRACON Controller reported failure to hear readback altitude error, resulted in descent below MVA and a CFTT event.

ACN: 2103338 *(25 of 50)*

Synopsis

Pilot reported flying below the minimum safe altitude and receiving a low altitude alert from ATC.

ACN: 2103332 *(26 of 50)*

Synopsis

Honda jet pilots reported they received a low altitude alert during arrival descent. Flight crew climbed and corrected altimeter setting.

ACN: 2103189 *(27 of 50)*

Synopsis

Flight Instructor and student reported a low altitude terrain alert while practicing instrument procedures in mountainous terrain. The instructor turned away from the terrain, then safely completed the flight.

ACN: 2103159 *(28 of 50)*

Synopsis

An air carrier First Officer reported release had SID fixes listed rather than the transition resulted in missed fix and a CFTT event. First Officer also stated that fatigue factor affected mistake.

ACN: 2102890 *(29 of 50)*

Synopsis

Air carrier Captain reported while FO was flying a visual approach they set a wrong crossing altitude at a fix resulting in the ATC Tower issuing a low altitude alert. The flight crew had the terrain in sight and landed safely.

ACN: 2102810 *(30 of 50)*

Synopsis

Air carrier flight crew reported not following the departure procedure resulting in the flight climbing towards terrain below the MEA in VMC conditions.

ACN: 2102341 *(31 of 50)*

Synopsis

Air carrier flight crew reported they were issued a Low Altitude Alert from ATC after beginning to descend on the approach.

ACN: 2102217 *(32 of 50)*

Synopsis

Air carrier Captain reported the autopilot descended the aircraft prematurely before the final approach fix resulting in an ATC altitude alert. Captain disconnected autopilot, climbed to safe altitude and continued approach.

ACN: 2102100 *(33 of 50)*

Synopsis

A TRACON Controller and corporate jet pilot reported the controller issued a Low Altitude Alert due to the pilot descending to 2000 feet when they were assigned 3000 feet.

ACN: 2101762 *(34 of 50)*

Synopsis

B737 flight crew reported while flying the RNP approach they descended below the FAF crossing altitude resulting in a CFTT situation. The flight crew disconnected the autopilot and landed safely at the arrival airport.

ACN: 2101074 *(35 of 50)*

Synopsis

An air carrier Captain reported on a visual approach, receiving an erroneous terrain alert after passing an antenna resulted in a CFFT event.

ACN: 2100983 *(36 of 50)*

Synopsis

Air carrier Relief Pilot reported an altitude deviation on initial approach which resulted in a terrain warning from ATC. The crew corrected the descent profile and landed safely.

ACN: 2100167 *(37 of 50)*

Synopsis

Air carrier flight crew reported low altitude alert while on approach in mountainous terrain.

ACN: 2100054 *(38 of 50)*

Synopsis

A Center Controller reported they did not correct a pilot readback of the wrong frequency resulting in loss of contact with the aircraft as it flew below the Minimum IFR Altitude.

ACN: 2100051 *(39 of 50)*

Synopsis

TRACON Controller reported an aircraft descended below its assigned altitude. The Controller issued a low altitude alert and a traffic alert.

ACN: 2100039 *(40 of 50)*

Synopsis

Global 5000 flight crew reported low altitude alert while maneuvering for approach.

ACN: 2100022 *(41 of 50)*

Synopsis

General aviation instructor pilot reported a low altitude event while on a training flight during student training maneuvers. The instructor took control of the aircraft during a maneuver to remain clear of a congested area and an unmarked tower obstacle, then transferred control back to the student.

ACN: 2099809 *(42 of 50)*

Synopsis

EMB-145 flight crew reported receiving a terrain alert while flying 1,000 feet lower than they believed due to incorrect altimeter setting on arrival descent. Flight crew corrected altimeter and climbed back to safe altitude.

ACN: 2099668 *(43 of 50)*

Synopsis

Air carrier flight crew reported receiving a low altitude alert from ATC during approach when they descended below a fix crossing altitude. Flight crew continued approach and landed.

ACN: 2099658 *(44 of 50)*

Synopsis

Flight crew reported receiving a terrain warning on the RDG RNAV (GPS) Runway 31 approach for nearby towers even though they flew the approach accurately.

ACN: 2099633 *(45 of 50)*

Synopsis

Flight crew reported receiving a terrain warning while above a waypoint on the approach due to the close proximity of towers.

ACN: 2099557 *(46 of 50)*

Synopsis

A TRACON Controller reported an aircraft on an ILS approach encountered severe turbulence and descended below the Minimum Vectoring Altitude.

ACN: 2099318 *(47 of 50)*

Synopsis

Air carrier flight crew reported receiving a ground proximity warning during visual approach to TRI airport. Flight crew climbed to safe altitude and continue approach to landing.

ACN: 2044287 *(48 of 50)*

Synopsis

A Tower Controller reported they had to vector an IFR helicopter that departed from a nearby hospital below the minimum vectoring altitude to avoid conflicting traffic.

ACN: 2042976 *(49 of 50)*

Synopsis

Air carrier flight crew reported receiving a GPWS terrain warning on a visual approach to ROA.

ACN: 2042697 *(50 of 50)*

Synopsis

Air carrier flight crew received a caution obstacle aural warning on approach. Flight crew corrected flight path and landed uneventfully.

Report Narratives

Time / Day

Date : 202405

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : GTU.Airport

State Reference : TX

Altitude.MSL.Single Value : 1300

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 8

Light : Daylight

Ceiling.Single Value : 2500

Aircraft

Reference : X

ATC / Advisory.Tower : GTU

Aircraft Operator : Personal

Make Model Name : Small Aircraft, Low Wing, 1 Eng, Retractable Gear

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Final Approach

Airspace.Class D : GTU

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Captain

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 16000

Experience.Flight Crew.Last 90 Days : 20

Experience.Flight Crew.Type : 2000

ASRS Report Number.Accession Number : 2118105

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.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFIT / CFIT
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Ambiguous

Narrative: 1

I was flying the LPV to Runway 18 on an active IFR flight plan in VMC. At about 1,300 ft. MSL, centered on the glide path, I was issued a low altitude alert, "Check altimeter setting 29.80 etc". I asked the controller what he was showing for my readout and I believe he said 1,200, which by that time was my altitude since I had continued on the approach since all was in order. This is the third time in 6 months this has happened to me at GTU while performing an IFR approach all at proper established altitudes, twice on Runway 18, once on Runway 29, usually passing 500 ft. on descent in VMC. After the first time the aircraft was due a 24-month static altimeter, encoder check. It checked out fine. The Tower Chief is checking into this now. BUT! If this false alert happens in actual IMC on a low approach, it would lead to significant confusion and a safety of flight situation. I do not know if others have had this occur at GTU and I have not had this happen at any other airport.

Synopsis

General aviation pilot reported receiving a low altitude alert despite being centered on the glide path. According to the reporter, this problem has reoccurred multiple times at GTU with different runways.

Time / Day

Date : 202404

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : GEG.TRACON

State Reference : WA

Relative Position.Distance.Nautical Miles : 5

Altitude.MSL.Single Value : 6000

Environment

Light : Daylight

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

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Initial Approach

Route In Use : Visual Approach

Airspace.Class C : GEG

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 : 90

Experience.Flight Crew.Type : 1000

ASRS Report Number.Accession Number : 2111588

Human Factors : Situational Awareness

Human Factors : Troubleshooting

Human Factors : Distraction

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
Experience.Flight Crew.Last 90 Days : 126
ASRS Report Number.Accession Number : 2111254

Events

Anomaly.ATC Issue : 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 : Became Reoriented

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

On a left downwind for Runway 21 GEG. Cleared for the visual approach at 6,000 ft., told to maintain 4,000 ft. until on final segment. We had briefed obstacle/towers south of the airport on the downwind. After we were cleared the PF (Pilot Flying) started a gradual descent to 4,000 ft. while still on downwind. I called out the tower. He adjusted his heading and then began a turn inbound to the FAF. We never received any terrain caution or warning, but both of us thought on the downwind we should have maintained 6,000 ft., if we had continued in the downwind, due to the vicinity of the towers which are listed at 4,553 MSL on the approach chart. My suggestion is a specific caution or note on the company information page highlighting the tower's position and height on the downwind leg to Runway 21. Suggestion: Refine ATC procedures to ensure aircraft will not conflict with Towers. Mention conflict in company information pages.

Narrative: 2

Vectored on a left downwind at 6,000 ft. for Runway 21 at GEG. Cleared for the visual 21 and maintain 4,000 ft. until established when were abeam the approach end. I began a descent to 4,000 ft. and planned to turn base at five miles. Right before my turn, the Captain calls out towers in front of us. The towers were 12 o'clock and appeared level to our altitude. We were abeam the FAF, and I turned inbound. We did not get an obstacle warning. We leveled at 4,000 ft. approximately mid base. The towers are south of 21's final at 4553 ft. MSL. The company information page only mentions the possibility of turning inbound early at 3.5 miles over the Seattle river. We did discuss that during our brief and mentioned the towers. The company information page does not mention the possibility of an ATC clearance that conflicts with the towers. We feel like extending downwind would have put the aircraft in conflict with the towers and guy wires. The situation would have been more difficult at night.

Synopsis

Air carrier flight crew reported during a visual approach and on downwind for Runway 21 at GEG, seeing towers and stopping the flight's descent. The pilot suggested a notation is needed on the charts for all pilots describing the tower's location and height.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : JFK.Tower

State Reference : NY

Relative Position.Angle.Radial : 350

Relative Position.Distance.Nautical Miles : 4.3

Altitude.MSL.Single Value : 500

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Tower : JFK

Aircraft Operator : Air Taxi

Make Model Name : Helicopter

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 135

Flight Plan : VFR

Mission : Ferry / Re-Positioning

Flight Phase : Cruise

Airspace.Class B : JFK

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

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

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 6295

Experience.Flight Crew.Last 90 Days : 94

Experience.Flight Crew.Type : 1450

ASRS Report Number.Accession Number : 2110800

Human Factors : Confusion

Human Factors : Workload

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 200
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

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

Narrative: 1

Flying eastbound from JRB to ZZZ via helicopter TRACK route with class B clearance from JFK Tower, [frequency] XXX.X. Normally when JFK is landing Runway 22, clearance issued is maintain 1000, cross BELMONT at 500. On this flight, the clearance issued and read back was to cross JAMAICA station at 500 ft. Upon realizing this clearance didn't seem to allow for adequate separation from the newly constructed buildings charted at 386 ft., I attempted to contact the Tower but due to frequency congestion was unable. Also there was another helicopter traffic behind us that we had on TCAS but not visually, so slowing or turning around was not practical. We had to deviate south of course and up to approximately 700 ft. (about 200 ft. above clearance limit) to maintain a safe distance from obstacles. There was no traffic above, and we were an adequate distance west of the Runway 22 corridor with no other traffic in sight. After safe passage, we immediately returned to cleared route and altitude without further incident. Due to the ongoing frequency congestion, was unable to discuss with JFK Tower, they made no mention of it either. Also I attempted to reach the Tower by phone to discuss, but both numbers were constant busy signals. I have traveled this route often, and have never been issued a clearance limit of 500 ft. at JAMAICA. Also it seems that either the buildings are higher than charted or there is an altimeter discrepancy between JFK and that area. I think 500 ft MSL is too low for safe transition in that immediate area, going forward I will not accept that clearance and take an alternate route if that is to become the norm.

Synopsis

Air taxi helicopter pilot reported JFK Tower issued them a clearance to cross Jamaica reporting point at 500 feet which placed them in unsafe proximity to newly constructed buildings. The reporter could not verify their clearance with JFK Tower due to frequency congestion.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Relative Position.Distance.Nautical Miles : 3

Altitude.MSL.Single Value : 700

Environment

Flight Conditions : Mixed

Weather Elements / Visibility : Haze / Smoke

Weather Elements / Visibility.Visibility : 6

Light : Daylight

Ceiling.Single Value : 1300

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Corporate

Make Model Name : Gulfstream G100/G150 (IAI 1125 Astra)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Final Approach

Route In Use.Other

Airspace.Class D : ZZZ

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 7432

Experience.Flight Crew.Last 90 Days : 68

Experience.Flight Crew.Type : 180

ASRS Report Number.Accession Number : 2107350

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Confusion

Person : 2

Location Of Person.Aircraft : X

Reporter Organization : Corporate

Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 9241.1
Experience.Flight Crew.Last 90 Days : 71.7
Experience.Flight Crew.Type : 2791.1
ASRS Report Number.Accession Number : 2107331
Human Factors : Confusion
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness

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.Automation : Air Traffic Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

On Day 0, I was pilot in command (PIC) and pilot not flying (PNF) flying the first of a 3-leg day, when I experienced a deviation from the expected vertical flight path on final approach to ZZZ on the RNAV Y XX approach. The weather was 1300' ceiling and 6 miles visibility in haze. The approach minimums are an 1100-ft ceiling and 4 miles visibility. The flight was procedurally normal and uneventful until our final vector to join the approach at 2000' MSL a few miles outside of the FAF at ZZZZZ. The controller asked us to maintain 170 kts to the FAF and cleared us for the approach. I elected to keep the Autopilot coupled for the approach. While in HDG and ALT hold modes, the course centerline had been extended from ZZZZZ for vectors to join, and the appropriate modes armed for the approach (LNAV, VNAV, and APCH buttons selected). All appeared normal. VPATH vertical mode became active slightly before the lateral course needle centered, but I did not perceive this as unusual given that we were only a few miles from ZZZZZ with 500 ft to descend before crossing the fix. At 2 miles prior to ZZZZZ, the vertical mode changed to VGP, which is normal for an FMS-based approach. The waypoint flashed on the Primary Flight Display (PFD), indicating we were about to pass over the fix. I called for gear down and the landing checklist, while reducing power to slow from 170 KIAS to my final approach speed of 124 KIAS. Full flaps were set once the gear was down. My attention was focused upon the configuration and speed change, and I did not note the crossing altitude as I passed the FAF, but both pilots did confirm the FMS was in VGP mode for the

final approach, and per normal procedure, the initial missed approach altitude was set in the altitude selector. The airplane exited clouds at 1300 MSL, only 200 feet above DA. My PNF was completing the landing checklist, but I wanted to visually sight Runway XX before the avionics called 'Minimums.' When I looked up I recall two things: 1) I had a difficult time seeing the runway through the haze. There is no approach light system to this runway, but I did sight it after a few seconds. 2) Once I found the runway, I realized that the sight picture didn't seem right. I thought to myself this looks low. I immediately looked back at the flight instruments, but I experienced confusion with the vertical path needle showing full scale HIGH deviation, the exact opposite of what I thought I was seeing visually. The Autopilot had not pitched down excessively to 'chase' the needle, but I realized something had gone wrong with the approach. We were about 600-700' MSL and in visual conditions, but too far from the runway threshold for this altitude. Before I could get the words out of my mouth, the Tower Controller advised us, "Low altitude alert, Go Around." I immediately pressed the Go Around button on the yoke, and the flight director cycled modes correctly. We executed the go-around normally, and we were vectored back for the same approach. This second attempt was also flown coupled, this time with no issues. We landed uneventfully from the second approach. I am uncertain as to what might have been overlooked in the FMS legs page when we loaded, briefed, and subsequently attempted to fly this approach, but I cannot dismiss the possibility that I may have missed something.

Narrative: 2

We were on a flight from ZZZ1 to ZZZ I was the second in command (SIC) and pilot not flying (PNF) for the flight. The flight seemed normal until inside the FAF on the RNAV (GPS) Y XX into ZZZ where we ended up low on the approach and Tower gave us an altitude alert and told us to go around. Prior to top of descent from cruise the pilot in command (PIC) and I decided to get the D-ATIS from ZZZ. The PIC and I were wanting to get everything set up for the approach early due to arriving into busy airspace. The ATIS said the ILS XX was in use, I think the ceiling reported was 700ft. I loaded the ILS XX approach for ZZZ into the FMS and the PIC briefed the approach. The PIC had me accomplish the appropriate checklists on our descent and arrival, which I did. Once we had been told to descend to another step down altitude, ATC advised there was a new ATIS. I received the new D-ATIS at ZZZ, weather had improved to 13000VC and 6HZ. The RNAV (GPS) Y XX was now in use. The PIC had me load the RNAV (GPS) Y XX into the FMS and had me set into our refs 1100ft for the LNAV/VNAV minimums (we are not WAAS equipped). We then briefed the RNAV (GPS) Y XX approach. Everything seemed to be set up properly. PIC called for, and I accomplished the appropriate checklists for the continued descent and arrival. ATC then began vectoring us for the RNAV approach. The PIC had me extend the centerline off of ZZZZZ (the final approach fix), as we could see we were being vectored to final inside of ZZZZZ1. The PIC said he was planning on flying the approach on Autopilot. The PIC called for Slats/Flaps 12 setting up for the approach. I selected slats and flaps as requested. ATC gave us a turn to intercept final and told us to maintain 2000ft until established, maintain 170kts to ZZZZZ, we were cleared the RNAV (GPS) Y XX approach into ZZZ, and contact Tower. I could see our position seemed to be correct by looking at our moving map on the MFD as well as selecting the approach plate on the MFD and seeing our position. The PIC called for Flaps 20, which I selected and confirmed set. I saw the Autopilot was intercepting the final approach course and the Autopilot was starting us down to 1500ft. I saw 1500ft to the right of my altitude selector showing that that GPS had the correct crossing altitude at ZZZZZ. The PIC asked me to set our minimum of 1100 in the altitude alerter and he had selected approach mode. I contacted Tower and told them we were just outside ZZZZZ inbound on the approach. Tower then cleared us to land. We had intercepted final and crossed ZZZZZ at approximately 1500ft. The PIC advised that VGP was now active, and asked me to set the initial missed approach altitude

of 1500ft. The aircraft appeared to be descending normally. I double checked that we were in VGP mode and once confirmed, I set the missed approach altitude to 1500ft. I was starting to see ground directly below and ahead of the aircraft as we were coming out below the cloud bases. The PIC called for gear down and the remainder of the before landing checklist. A couple moments after I called three green and while I was still completing the checklist, ATC advised we appeared to be low, check our altimeters set to 29.91. I checked all 3 altimeters and verified they had in fact been set correctly. I looked out the front and saw the runway, and that we were lower than we should be for the distance. The PIC had already started correcting altitude, then ATC told us to go around, climb to 2000ft, turn right to 270 degrees and contact Departure. PIC called for the Go around checklist which we accomplished. We got vectors around, reloaded the approach and completed the remainder of the flight normally. The PIC stated that after looking for the runway, and getting it in sight, we appeared low, he looked back in and saw the Autopilot was descending us too low for our distance from the runway, he had disconnected the Autopilot and stopped the descent about the time the controller had asked about our altimeter settings. I feel we must have missed something when we originally set up the approach that made the Autopilot think we needed to descend steeper than normal on final.

Synopsis

G-150 pilots reported an unstabilized approach and altitude warning from ATC while on final approach. The crew also determined they were low on the approach when breaking out from cloud bases, performed a go around, then returned for a safe landing.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ATL.Tower

State Reference : GA

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Tower : ATL

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

Airspace.Class B : ATL

Person

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 : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2107205

Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Took Evasive Action

Result.Flight Crew : Became Reoriented

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

Flight Crew was cleared for visual approach into ATL. Just inside of 4 miles, ATC told the flight crew "Low altitude alert. Check your altitude immediately" and was given a local altimeter setting. The aircraft was fully configured and one dot low on the PAPI lights. When notified from ATC, the crew leveled off and landed safely. Cause: Crossing over the FAF for the approach, the crew was 200ft above the prescribed altitude for the approach. The airplane was then set to a lower than normal descent path which caused the aircraft to dip below the PAPI light guidance for the visual approach. At this time, the PAPI were three red and one white dot. Suggestions: Despite the flight crew never seeing four red lights from the PAPI system, always correct altitude when the aircraft is seeing 3 red and 1 white PAPI light.

Synopsis

Air carrier First Officer reported receiving a low altitude alert from ATL Tower on final approach. Flight crew leveled off and landed safely.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 2200

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : 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

Mission : Passenger

Flight Phase : Final Approach

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 Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Last 90 Days : 143.52

Experience.Flight Crew.Type : 861.52

ASRS Report Number.Accession Number : 2107088

Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Airspace Structure

Contributing Factors / Situations : Environment - Non Weather Related

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

Narrative: 1

On downwind at 3000 ft. we were cleared for the visual approach to XX. In our brief we discussed terrain considerations and planned to turn toward the runway just outside of ZZZZZ if given the visual approach. We knew there was an 1800 ft. obstacle southeast of the approach but didn't believe it would present an issue since we planned to turn inside of it and would be above. When cleared for the visual approach, I set 2200 ft. for ZZZZZ and the First Officer (FO) began a level change descent as he slowed to 180 kts. Flaps 5 and began his turn to base. We both had terrain up on the Primary Flight Display (PFD) and saw the yellow of the obstacle but believed we would pass inside and above (which we did). What I wasn't prepared for was the "caution, obstacle" call from the EGPWS and it surprised me. We both had visual on the Tower and believed ourselves above and cleared laterally. But the fact that we got that call means we were obviously too close to maintain safe margins. In retrospect, I would have waited to accept the visual approach clearance or, if I did call the field in sight, would have delayed setting the Mode Control Panel (MCP) to FAF altitude until completion of the turn to base.

Synopsis

Air carrier pilot reported receiving an EGPWS alert during visual approach.

Time / Day

Date : 202404

Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZZ.Airport

State Reference : FO

Altitude.MSL.Single Value : 12000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : A319

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Mission : Passenger

Flight Phase : Final Approach

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.Last 90 Days : 150.9

Experience.Flight Crew.Type : 435.32

ASRS Report Number.Accession Number : 2107041

Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

On the arrival to Runway XXR we were cleared to descent to 10 000ft, and cleared direct to ZZZZZ. We were VMC and could see the runway. Passing about 12 000ft we received a Caution terrain EGPWS. We stopped the descent and intercepted the ILS glide slope for a normal landing on XXR.

Synopsis

Air carrier pilot reported receiving EGPWS warning on approach. Flight crew stopped descent and intercepted glideslope.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

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 : Initial Approach

Airspace.Class E : ZZZ

Person

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

Experience.Flight Crew.Type : 400

ASRS Report Number.Accession Number : 2106979

Human Factors : Situational Awareness

Human Factors : Human-Machine Interface

Events

Anomaly.Deviation - Track / Heading : All Types

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFIT / CFIT

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Executed Go Around / Missed Approach

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

On the RNAV Z XX approach to ZZZ, Captain flying, I was pilot monitoring. We were on a heading to intercept and realized too late that we had not sequenced the approach. The Captain immediately turned the plane back on course and we tried to resequence

however, then ATC gave us an altitude alert. The Captain had set the altitude for the FAF however we were not established on the final approach course. The Captain then elected for a go around. We did the go around procedures, climbed up to ATC assigned altitude, and reshot the approach without incident. Cause: Disrupted situational awareness.

Suggestions: During busy moments in flight, I must remember to continue to monitor FMS management, regardless of external factors. Especially as pilot monitoring I must stay vigilant to what the Autopilot is doing. Also always remember to not descend below safe altitude unless established on course.

Synopsis

CRJ-900 First Officer reported receiving a low altitude alert from ATC when the aircraft descended before being established on the final approach course. Captain conducted a go-around and completed approach.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZZ.Airport

State Reference : FO

Aircraft

Reference : X

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

Component

Aircraft Component : Altimeter

Aircraft Reference : X

Problem : Improperly Operated

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 : 2106818

Human Factors : Situational Awareness

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.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Environment - Non Weather Related

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

Narrative: 1

On flight XXXX from ZZZ-ZZZZ I inserted the wrong altimeter setting and got low on a visual approach that was backed up by RNP to Runway XX at ZZZZ. This happened due to a combination of errors that we as a crew allowed due to the ease of flying in VFR conditions. When I set up for the approach, we were too far out to receive ATIS from ZZZZ. I used the weather from FD Pro X app and can only guess that I had old weather due to losing the internet connection earlier in the flight. My First Officer (FO) was not able to get weather due to no internet and I input my weather. We planned to get ATIS when closer to the airport, but on arrival we were given multiple slow downs on the decent and were talking about making the crossing restrictions. When on the approach and visual with the airport we started our final descent to landing and I realized that we were low. There is a large drop off just prior to landing on Runway XX, so I delayed leveling off in case it was a visual illusion. I eventually clicked off the Autopilot and called for flight directors off. At the same time we received a warning of "too low". It went away as soon as we crossed the ridge line to the depression prior to the runway. We landed uneventfully.

Synopsis

Air carrier pilot reported descending too low during visual approach and receiving an aircraft terrain warning as a result of entering the wrong altimeter setting. Flight crew continued approach and landed.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : LLLL.ARTCC

State Reference : FO

Altitude.MSL.Single Value : 9000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Center : LLLL

Aircraft Operator : Air Carrier

Make Model Name : Widebody Transport

Crew Size.Number Of Crew : 3

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Cargo / Freight / Delivery

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Climb

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : Navigational Equipment and Processing

Aircraft Reference : X

Problem : Malfunctioning

Person

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 : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2106758

Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Other Automation
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 : 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

GPWS incident occurred during Aircraft X's flight from LLBG to ZZZZ. During departure from LLBG, we experienced a GPWS pull-up aural warning. Despite normal pre-flight preparations, including awareness of potential GPS spoofing, I opted to disable the GPS and rely on airport latitude/longitude and DME/DME for navigation updates during the flight. The departure proceeded as usual, and we were cleared to 9000 ft. I had requested high speed to expedite clearance from the LLBG terminal area. Utilizing raw data DME and radio information to cross-verify the accuracy of the FMC, both sources indicated accuracy. However, shortly thereafter, we received a GPWS pull-up warning. At the time, flight conditions were VFR, with clear visibility of ground and water, exceeding 10 NM. The aircraft was well above the Grid MORA (Minimum Off-Route Altitude) and MSA (Minimum Safe Altitude). Given the visual confirmation of our surroundings, I did not initiate the escape procedure. Prior to the warning, the aircraft experienced failures of ATC left and right, transponders left and the GPS right. Based on these events, I suspect a spoofing attempt targeting our flight. Despite the incident, the flight continued to ZZZZ without further events.

Synopsis

Air carrier First Officer reported the aircraft experienced transponder and GPS failure due to potential GPS spoofing.

Time / Day

Date : 202404

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 8000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : 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 : Final Approach

Airspace.Class E : ZZZ

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 : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 8427.00

Experience.Flight Crew.Last 90 Days : 69.9

Experience.Flight Crew.Type : 5936.83

ASRS Report Number.Accession Number : 2106597

Human Factors : Situational Awareness

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 : Pilot Not Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 61.92
Experience.Flight Crew.Type : 72.88
ASRS Report Number.Accession Number : 2106599
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Distraction

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.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
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

A visual approach with an RNAV backup to Runway XX was planned on a clear evening at ZZZ. On the leg from ZZZZZ to ZZZ, ATC assigned 9000 MSL as we approached the airport and asked if we had the runway in sight. We did not see the runway until too close for a safe visual approach so we requested vectors for an RNAV (GPS) RWY XX to help with our visual. Last minute vectors direct ZZZZZ1 and clearance for the approach was given by ATC at 9000 MSL. Inside ZZZZZ1 I realized VNAV was not engaged. At that point, and due to the high workload trying to get VNAV to reengage, I decided it was safe to continue and elected to fly the visual approach but neglected to immediately inform ATC. As we made the turn to final and abeam ZZZZZ2, ATC called to inform us that our altitude was low for that segment of the approach (approximately 8000 MSL abeam ZZZZZ2). We immediately, corrected our altitude, told ATC that we had the airport in sight and requested a visual which was approved just prior to ZZZZZ3. Visual approach was continued to an uneventful landing. Safety and terrain separation were never compromised.

Narrative: 2

Crew was direct to ZZZ for an expected visual approach, backed up with RNAV for RWY XX. Assigned 9,000 from ZZZZZ to ZZZ, we did not see the runway until too close for a safe and stable visual approach, so we requested vectors for the RNAV XX. Upon request, we were vectored and then cleared direct to ZZZZZ1, "cross ZZZZZ1 at or above 8,500, cleared for the approach." Published altitude at ZZZZZ1 is 9,900. In order to engage VNAV, crew needed to recruise VNAV/remove published altitude at ZZZZZ1. PM went heads down to try to accomplish this, and mistakenly set FAF altitude in MCP (Mode Control Panel) window when directed, despite VNAV not being armed. Waypoints sequenced from ZZZZZ1 to ZZZZZ2 (8,500 restriction), with MCP alt set at 6,900 (FAF

altitude). Both pilots became distracted by the task of getting VNAV to recruise/engage. Both pilots recognized the error as ATC called to inform us we were low for that segment of the approach. Aircraft had descended to approximately 8,050 feet as it approached ZZZZZZ. PF disengaged autopilot and initiated a climb to 8,500 and informed approach we had the airport in sight and were proceeding visually. Crew was VMC the entire time. Terrain clearance was maintained visually throughout the entire approach, and the flight landed uneventfully.

Synopsis

Air Carrier flight crew reported ATC issued a low altitude alert when the crew descended below the charted altitude for an approach segment. Flight crew climbed back to correct altitude and continued approach.

Time / Day

Date : 202404

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : PCT.TRACON

State Reference : VA

Environment

Light : Night

Aircraft

Reference : X

ATC / Advisory.TRACON : PCT

Aircraft Operator : Air Carrier

Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Airspace.Class E : PCT

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 : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2106020

Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

ATC set us up on a right downwind for Runway 21 and got cleared for the visual approach abeam the field. The PF adjusted his heading for terrain and flew just outside the FAF of MUSOJ. As we started the turn toward the fix we got a "terrain" aural alert. The approach was at night and we were set up on a right downwind which is right next to the mountain range. We also should have turned toward the approach course sooner. We should have shot the RNAV 21 approach direct to CLBRT since it was at night or we should have set up on a left downwind instead.

Synopsis

Air carrier pilot reported receiving a terrain alert while conducting a visual approach.

Time / Day

Date : 202404

Place

Locale Reference.Airport : MMMX.Airport

State Reference : FO

Altitude.MSL.Single Value : 12000

Environment

Flight Conditions : VMC

Aircraft

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 : Descent

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

Experience.Flight Crew.Last 90 Days : 128.07

Experience.Flight Crew.Type : 2032.28

ASRS Report Number.Accession Number : 2105877

Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Contributing Factors / Situations : Human Factors

Primary Problem : Ambiguous

Narrative: 1

We were in day VFR on arrival to RWY 23 at MMMX. We were given a descend and maintain 10000 feet and direct to a point to cross at 12000 feet. On the descent to 10000 around 12000 feet we received a caution terrain alert and leveled off the aircraft at 12000 feet to no event.

Synopsis

Air Carrier pilot reported receiving a caution terrain alert during arrival descent into MMMX airport. Flight crew leveled off.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : SFF.Airport

State Reference : WA

Relative Position.Distance.Nautical Miles : 2

Altitude.MSL.Single Value : 4700

Environment

Flight Conditions : VMC

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Ceiling.Single Value : 6500

Aircraft

Reference : X

ATC / Advisory.TRACON : GEG

Aircraft Operator : Personal

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

Flight Phase : Initial Climb

Route In Use : Vectors

Airspace.Class E : GEG

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 : Private

Experience.Flight Crew.Total : 130.85

Experience.Flight Crew.Last 90 Days : 29.25

Experience.Flight Crew.Type : 55.8

ASRS Report Number.Accession Number : 2105772

Human Factors : Training / Qualification

Human Factors : Workload

Human Factors : Situational Awareness

Events

Anomaly.Deviation - Track / Heading : All Types

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
Miss Distance.Vertical : 800
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

On Day 0 at approximately XA:05, acting as PIC, [I] departed Runway 22R from Felts Field (SFF) and deviated from instructed departure procedure. I am in the process of working through my online ground school and today was my first scheduled flight to begin working my IFR training. My instructor and I decided to operate locally between SFF and ZZZ with departure, holding, and approaches. In the last 90 days I have been diligently working on being comfortable flying my aircraft in VMC and was excited to begin working on exploring its IFR capabilities. In today's flight wind was 210 @ 15 gusting 25. While speaking with Ground at SFF, we requested local IFR clearance for the practiced approach for Runway X at ZZZ with a hold at ZZZZZ. We were assigned departure procedure for Felts Four, and to climb to 6,000. This route does require a climbing left turn to heading 190, and then we would be assigned vectors from there. While in the runup area, myself and my instructor reviewed the plates for the departure and arrival procedures. My aircraft is equipped with a Garmin 430W and we loaded the departure procedure and then the arrival procedure; however, we noticed that we lost the departure procedure in doing so. So, we went ahead made a cognitive decision to depart and fly heading 190 and to await instructions. In the process of departing the wind hit more violently than expected and I found myself flying heading 170. With rising terrain and flying in VMC I instinctively began flying a downwind departure as I've done dozens of times instead of sticking to the 190 procedure filed. The systems in the airplane operated perfectly in notifying me of rising terrain, as well as the controllers at Spokane Approach were quickly on the ball to ensure I was OK. I recognize the importance of following instructions and understanding exactly what I'm to do, for had this been in IMC conditions the outcome would've been very different. I sincerely apologize for my actions and take full responsibility for them.

Synopsis

Student pilot on a training flight reported they failed to follow the departure procedure and received a Terrain Alert during their initial climb..

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 2250

Environment

Flight Conditions : IMC

Weather Elements / Visibility : Thunderstorm

Weather Elements / Visibility.Visibility : 10

Ceiling.Single Value : 1500

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Corporate

Make Model Name : Challenger 350

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 6200

Experience.Flight Crew.Last 90 Days : 78

Experience.Flight Crew.Type : 2300

ASRS Report Number.Accession Number : 2105306

Human Factors : Confusion

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
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 : Returned To Clearance

Assessments

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

Narrative: 1

On Day 0, I was acting pilot-in-command, and pilot flying, of a Challenger 350 from ZZZ to ZZZ1 on an IFR flight plan. At Approximately XA: 45, while being vectored for the ILS RWY XX into ZZZ1, we were advised by TRACON to "check attitude" and "climb to 4000 feet." We immediately complied with a climb from approximately 2250 feet to 4000 feet. We were then given vectors and lower altitudes and cleared for the ILS RWY XX approach in to ZZZ1. The remainder of the flight was without incident. After landing, we were given a request to contact the tower, which we complied with. The supervisor at the time, Person A, collected my personal information and advised us he would listen to the "tapes" and look at the data and may send this to the FSDO. He didn't know at the time if this was a pilot deviation or not. I have called the tower numerous times to obtain more information, but they have been too busy to talk about it. Retracing what led up to this is as follows: Upon handoff to ZZZ TRACON, three attempts were made to contact them before an acknowledgement was received. This was, in my opinion, due to the controller being saturated with additional aircraft transitioning through TRACON's airspace due to storms and buildups. The controllers initial response was curt and sounded annoyed. Earlier in the flight we had momentary trouble communicating with ZZZ Center, which I believe was due to the electrical storms, and may have contributed to requiring three attempts to contact ZZZ TRACON? After checking in with TRACON, we were given multiple lower altitudes and headings and eventually given direct to ZZZZZ, an IF/IAF fix for the ILS XX and an altitude of 4000 feet and then eventually 3000 feet. The altitudes were not given with adequate distance out to allow us to be at an altitude we could join the approach for a landing. Another company aircraft arriving from the west were not given adequate descent clearances as well, causing for pilot requests for lower altitudes and then in our case, being taken through the final approach course for the ILS RWY XX. The controller opted then to bring in the other aircraft first and gave us a heading of 320 and a "descend to 4000 feet." My co-pilot put 2000 feet in our altitude selector and I bugged us to a heading of 320. I didn't catch/see he lowered the altitude to 2000 feet rather than 4000 feet. After listening to the transcripts of liveATC, my co-pilot only replies with "vectors Aircraft X." ATC did not query us to verify we received the correct heading and altitude. I don't know if we had radio reception/interference again or my SIC was saturated with additional changes to our routing and altitudes along with reloading the FMS and running checklists? Or both? I don't recall specifically hearing "2000 feet" stated.

Our company policy is for the pilot who adjust the altitude selector to leave their hand on it until the other acknowledges the correct change. My contract SIC did not do that. What took place is very concerning. In my XX+ years of flying I have never had a possible altitude deviation. My co-pilot and I debriefed and talked about this at length. One of the discussion points was to keep his hand on the altitude selector until the other has a chance to verify. He is a former military helicopter pilot with many years of experience in a variety of challenging and demanding environments. He is a professional and also rattled by this! As mentioned earlier, he was acting in capacity as a contract pilot and therefore the synergies of flying with one of my company co-workers was missing and believe that may have been a contributing factor. In addition, the weather and possible radio interference and TRACON saturation were contributing factors I believe as well. I have tried to piece this together with the best of my recollection and along with listening to the ATC tape transcript from liveATC. I have flown into ZZZ1 over XXX times and feel I know the area and system well and desire to have a thorough understanding so this never happens again. Hopefully ATC will take my call to help me piece this together so I can learn from it and make necessary changes. Thank You!

Synopsis

CL350 pilot reported receiving a low altitude warning from ATC while being vectored for approach. Flight crew climbed to a safe altitude and continued approach.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Altitude.MSL.Single Value : 500

Environment

Flight Conditions : VMC

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

Nav In Use : FMS Or FMC

Flight Phase : Final Approach

Person

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 : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Last 90 Days : 78.68

ASRS Report Number.Accession Number : 2105005

Human Factors : Distraction

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Confusion

Events

Anomaly.Deviation - Speed : All Types

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.Flight Crew : Override Automation

Assessments

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

Narrative: 1

While descending into ZZZ on the arrival, for the RNAV Runway XX, we were twice placed in close proximity to preceding aircraft, leading to a 500 ft. - 700 ft. longer than desired landing. First approach didn't tell us we were following an aircraft on the arrival, until we were told to slow because we were overtaking them. The call and the slowing happened just as we passed the IAF, which led to us starting the descent late and having to descend at a higher than normal rate to catch our approach path. We did manage to get on the approach and achieve a stable approach by 1000 ft. Then, shortly after getting settled, the tower cleared a Company aircraft to depart before our arrival. They were told to expedite, but didn't seem to hurry. The other aircraft distracted me, due to the fact that I thought we likely would need to execute a go around. As we got closer, we were concerned that a go around would put us into a conflict with the departing aircraft. We did receive a couple of "terrain" and "sink rate" calls, but with the city lights and our position on short final, we both thought the calls were erroneous. Again, with the distraction of the closure rate with the preceding aircraft, and the GPWS noise, I allowed the speed to increase on short final. We did touch down a little long, but didn't want to go around due to proximity of the other aircraft. We both thought that it was safer to continue the landing than to go around.

Synopsis

B737 First Officer reported receiving a terrain and sink rate GPWS warnings which led to an unstable approach followed by a long landing.

Time / Day

Date : 202402
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 180
Relative Position.Distance.Nautical Miles : 4
Altitude.MSL.Single Value : 2200

Environment

Weather Elements / Visibility.Visibility : 10
Weather Elements / Visibility.Other

Aircraft

Reference : X
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 : Cruise
Route In Use : None
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 : 4000
Experience.Flight Crew.Last 90 Days : 179
Experience.Flight Crew.Type : 1065
ASRS Report Number.Accession Number : 2104731
Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Other Person

When Detected.Other

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

My commercial student was practicing ground reference maneuvers along [a] road. She had completed Eights on Pylons and was practicing S-turns along a road, as the winds were strong and it was a good time to practice. Today I received a call from the FSDO saying that we had been reported below 500ft by a person on the ground. It's not clear if we were below 500 ft or were too close horizontally. Since the pivotal altitude is between 600 and 1000 agl and our instruments only read msl at the nearest airport it, is possible that we were too low or too close at some point especially if the reported point was on a hill. I am always conscious of CFIT, and always keep in mind where to land should an emergency arise, in this case there was lots of open land and quiet roads available. All we can do is eyeball our height above the ground and in this case we've been informed that we were too low. In future I will train my students in more remote areas, and try the maneuvers at a higher pivotal altitude.

Synopsis

Flight Instructor reported they were informed that a person on the ground had reportedly observed the instructor's aircraft descend below 500 feet AGL during training maneuvers.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : IMC

Weather Elements / Visibility : Rain

Weather Elements / Visibility.Visibility : 2

Light : Daylight

Ceiling.Single Value : 300

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Corporate

Make Model Name : Citationjet (C525/C526) - CJ I / II / III / IV

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class B : ZZZ

Person

Location Of Person.Aircraft : X

Reporter Organization : Corporate

Function.Flight Crew : Single Pilot

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 14250

Experience.Flight Crew.Last 90 Days : 60

Experience.Flight Crew.Type : 30

ASRS Report Number.Accession Number : 2104706

Human Factors : Situational Awareness

Human Factors : Human-Machine Interface

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

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 : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

While being vectored for the RNAV (GPS) Runway XX at ZZZ I had been descended to 3000 MSL. I was cleared direct to an IF called ZZZZ. Shortly after that I was cleared for the approach and instructed to "maintain 3000 ft. until established cleared the RNAV XX ZZZ". At this point in time I was only a few miles from ZZZZ with the autopilot on and all appropriate selections on the flight guidance panel in order to fly the approach including APPR mode and lastly with the LPV DA set. The weather was at minimums and I anticipated a likely possible missed approach. I reviewed the missed approach procedure on the approach plate a second time just in case I had to miss. I then scanned my instruments, and noticed that the autopilot had started to descend prior to ZZZZ and was to the best of my recollection at 2700 ft. I realized and started to correct and at the same moment, ATC queried with a "low altitude alert". I continued to correct, executed the approach, had to miss and was then vectored for the RNAV XY and was able to complete this approach and land. There was never a terrain warning in the airplane nor any loss of separation. In retrospect, I think that I may have taken my eyes off the instrument panel a little too long to review the missed approach procedure. The takeaway is to be sure that all aspects of the approach are reviewed well in advance and when close to commencing the approach, trust but verify the autopilot and what it is doing. I am not sure why the autopilot did what it did, because I believe that I had the approach phase functions properly selected. I will be more vigilant on scanning and trusting the autopilot in the future.

Synopsis

Corporate pilot reported descending below a crossing altitude on approach prior to the fix resulted in an ATC low altitude alert. Pilot performed a missed approach.

Time / Day

Date : 202404
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ROA.TRACON
State Reference : VA
Altitude.MSL.Single Value : 4000

Aircraft

Reference : X
ATC / Advisory.TRACON : ROA
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 Y 24
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class C : ZZZ

Component

Aircraft Component : GPWS
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 : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2104210
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Confusion

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 : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2106024
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Confusion

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

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

Narrative: 1

While being vectored by ATC on the RNAV Y 24, crew was established level at 4000 ft. Position 1 mile left base halfway between Prose and Carus. ATC cleared crew for the approach via a left turn. In the left turn, GPWS "Terrain, terrain." Altitude level at 4000 ft. and intercepting, crew monitored and adjusted flight path not to descend. Warning cleared immediately, and crew was established. Continued for normal approach and landing. Suggestion: ATC should Vector at a higher altitude for RNAV Y 24.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Air carrier pilot reported receiving a terrain warning while on an ATC vector for RNAV Y 24 at ROA.

Time / Day

Date : 202404

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : CLT.Tower

State Reference : NC

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Mission : Passenger

Flight Phase : Final Approach

Airspace.Class D : CLT

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot 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 : 2104204

Human Factors : Situational Awareness

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 : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 2104470

Human Factors : Workload

Events

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.Automation : Aircraft Other Automation

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 : Weather

Primary Problem : Human Factors

Narrative: 1

Unstable approach, we got high on final tried to come back to the right altitude, received an aural alert "Sink Rate". Pilot Monitoring (PM) (Captain called go around). Suggestion: Do not be abrupt in the controls and changes of altitude, that is dangerous due to the proximity of the ground.

Narrative: 2

The First Officer (FO) was flying a visual approach to Runway 36R into CLT with the ILS as a backup to the visual in gusty wind conditions. Below 1000 feet he started trending high. I announced it and he began correcting. After passing 500 feet, the aircraft began descending at an unacceptable rate and we received a "sink rate" warning. I instructed the FO to go around. The FO performed the go around and we were given a rectangular traffic pattern for the missed approach. We were then brought back around for another visual approach backed up with the ILS and landed without incident. Suggestion: Be more wary of the gusty winds and the effects on the aircraft's rate of descent during approaches.

Synopsis

Flight crew reported they received a sink rate aural warning during final approach and performed a go around.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : SBN.TRACON

State Reference : IN

Altitude.MSL.Single Value : 1900

Aircraft

Reference : X

ATC / Advisory.TRACON : SBN

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

Route In Use : Visual Approach

Airspace.Class C : SBN

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

ASRS Report Number.Accession Number : 2103659

Human Factors : Situational Awareness

Human Factors : Distraction

Human Factors : Confusion

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 : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2104027

Human Factors : Situational Awareness

Human Factors : Distraction

Human Factors : Confusion

Events

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 : Requested ATC Assistance / Clarification
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Instructed by ATC to "descend and maintain 2,400 ft. until established, cleared for RNAV 27L approach". We complied and upon reaching 2,400 ft. ATC queried our current altitude due to a low altitude alert of 1,900 feet. The altimeter setting for SBN was 29.23 but we had 29.83 selected in the Kollsman window. The ATIS broadcast was coming in very weak and wasn't audible until well within the descent phase of flight. Upon initial contact with approach control they informed us of the local altimeter setting and I as PM, working the radios mentally noted the large discrepancy but did not call immediate attention to it due to the high workload we were presently experiencing. By doing so I forgot to select the new local altimeter setting resulting in the crew using the wrong one. Suggestion: When an anomaly exists correct it immediately instead of delaying

Narrative: 2

Cleared to descend to 2,400 ft. and cleared for the RNAV Runway 27L, we received a low altitude alert from the approach controller. He report the aircraft at 1,900 ft and gave the current altimeter setting (29.23). The altimeter set and briefed was 29.83 per the Takeoff & Landing Distance card. The root cause is an incorrectly set altimeter. There is an AWOS station that makes listening to the SBN ATIS challenging until closer to the airfield. In our case, that was approximately 16 minutes prior and well into the descent phase with other distractions and duties. As PF and Captain, in retrospect I should have used better judgement and listened, in detail, to the ATIS myself to verify and trap any discrepancies. Solution: PF, if practical, listens in to ATIS when Digital ATIS is not available.

Synopsis

An air carrier flight crew reported they descended below their assigned altitude due to using the wrong altimeter setting and received a low altitude alert from ATC.

Time / Day

Date : 202404

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : EUG.Airport

State Reference : OR

Altitude.MSL.Single Value : 3800

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : EUG

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 : EUG

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

Experience.Flight Crew.Last 90 Days : 144.83

Experience.Flight Crew.Type : 1146.65

ASRS Report Number.Accession Number : 2103515

Human Factors : Workload

Human Factors : Situational Awareness

Human Factors : Confusion

Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Altitude : Overshoot

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT

When Detected : In-flight

Result.Flight Crew : Requested ATC Assistance / Clarification

Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Approaching from the east, passing 5000 feet descending in night VMC conditions, Cascade Approach pointed out EUG. We called the field in sight and were subsequently cleared for a Visual Approach, then handed off to Eugene Tower and cleared to land. We selected 2000 ft. for MACTA, the FAF for Runway 16R and continued our descent. I had the city of Eugene and the field in sight, and believed I had adequate terrain clearance for the descent. At approximately 3800 ft. ATC issued a low altitude alert. Their transmission was somewhat garbled, so we asked for clarification, the alert was for us. I arrested the descent at approximately 3500 ft. increased power to maintain airspeed, and began to climb. We did not trigger any warnings or alerts from the Enhanced Ground Proximity Warning System (EGPWS) or Ground Proximity Warning System (GPWS). The very small amount of terrain displayed on the Navigation Display (ND) was green under the aircraft and yellow to our immediate right. We worked with ATC to confirm that we had cleared the terrain, then continued our descent to an uneventful landing.

Synopsis

An air carrier pilot on a night time visual approach reported they received a low altitude alert from ATC.

Time / Day

Date : 202403
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 4600

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Make Model Name : Citationjet (C525/C526) - CJ I / II / III / IV
Operating Under FAR Part : Part 135
Flight Plan : IFR
Flight Phase : Descent
Route In Use : Vectors

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : ZZZ
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Flight Phase : Descent

Person

Location Of Person.Facility : ZZZ.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
ASRS Report Number.Accession Number : 2103382
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Fatigue
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.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

I descended Aircraft X to 5500ft, and told them to keep their speed up for the sequence. I then thought that I had slowed and descended Aircraft Y to 210kts and 4000ft, but I misspoke and clipped that particular transmission and only had the last syllable and I also said incorrect callsign instead of the correct callsign. I missed the read back from Aircraft X slowing and descending to 4000ft assuming it was Aircraft Y reading back. When Aircraft Y did not slow as expected, I issued a new instruction to them to reduce speed further and then descend to 4000ft. I then noticed that Aircraft X was descending below 5500ft and asked them to verify that they were only descending to 5500ft. They read back that they were descending to 4000ft, so I told Aircraft X to climb and maintain 5500ft. I did not issue the low altitude alert since it had not alarmed and did not alarm. I also questioned Aircraft X when they were at 5200ft, so I did not think that a low altitude alert was necessary at that point. I was on an overtime shift and it was my 6th day towards the end of my shift. Suggestion: I just need to ensure that I say the correct call signs and listen better to read backs.

Synopsis

TRACON Controller reported using wrong call sign when issuing descent instructions resulted in confusion on readbacks and a CFTT event.

Time / Day

Date : 202404

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 5000

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Ambulance

Flight Phase : Descent

Route In Use : Vectors

Airspace.Class E : ZZZ

Person

Location Of Person.Facility : ZZZ.TRACON

Reporter Organization : Government

Function.Air Traffic Control : Approach

Qualification.Air Traffic Control : Fully Certified

ASRS Report Number.Accession Number : 2103375

Human Factors : Communication Breakdown

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.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Procedure

Primary Problem : Procedure

Narrative: 1

Aircraft X was being vectored for the ILS XR at ZZZ. On initial call I descended Aircraft X to 060 to avoid a 056 MVA west of ZZZ. A few moments later I noticed Aircraft X was descending through 055 in the 056 MVA, at which case I climbed them back to 060; however. Aircraft X had already reached 051 before climbing back up to 060. After listening to the replay, I did indeed give Aircraft X 060, but did not catch him reading back 050. Suggestion: Normally, I am quick to catch a read back error; however, in this case one got by me. I would recommend being extra vigilant in the future to prevent these mishaps.

Synopsis

TRACON Controller reported failure to hear readback altitude error, resulted in descent below MVA and a CFTT event.

Time / Day

Date : 202403

Place

Locale Reference.ATC Facility : ZMP.ARTCC
State Reference : MN
Relative Position.Distance.Nautical Miles : 8
Altitude.MSL.Single Value : 3000

Environment

Weather Elements / Visibility : Snow
Weather Elements / Visibility.Visibility : 10
Ceiling.Single Value : 3100

Aircraft

Reference : X
ATC / Advisory.Center : ZMP
Aircraft Operator : Corporate
Make Model Name : Small Aircraft, Low Wing, 2 Eng, Retractable Gear
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Descent
Route In Use : Visual Approach
Airspace.Class E : ZMP

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 1450
Experience.Flight Crew.Last 90 Days : 80
Experience.Flight Crew.Type : 55
ASRS Report Number.Accession Number : 2103338
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
Miss Distance.Vertical : 200
When Detected : In-flight

Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Became Reoriented
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

Accidentally flew below MSA of 3200 ft. down to 3000 ft. Was warned about low altitude by ATC and immediately made corrective action.

Synopsis

Pilot reported flying below the minimum safe altitude and receiving a low altitude alert from ATC.

Time / Day

Date : 202404

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Relative Position.Angle.Radial : 120

Relative Position.Distance.Nautical Miles : 5

Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : IMC

Weather Elements / Visibility.Visibility : 7

Weather Elements / Visibility.Other

Ceiling.Single Value : 2500

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Corporate

Make Model Name : Honda Jet

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class D : ZZZ

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 9800

Experience.Flight Crew.Last 90 Days : 105

Experience.Flight Crew.Type : 710

ASRS Report Number.Accession Number : 2103332

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 9300
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 365
ASRS Report Number.Accession Number : 2103339
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

While receiving vectors to final on a left downwind leg crew requested to descend from 4,000 ft to 3,000 ft. ATC assigned a new altitude to maintain 3,000 ft. Crew began descent from 4000 ft, crossing 3,500 ft. in the descent crew received a low altitude alert and immediately began a climb as a precaution despite indicating much higher than the ATC observed altitude. Crew stated climbing to return to previous altitude 4,000 ft, to which ATC approved. Crew requested a current altimeter and this was noted different than set, and was updated. The crew then began a level off at 3,000 ft. with the new altimeter setting and verified observed altitude match with air traffic controller.

Narrative: 2

While receiving vectors to final on a left downwind leg crew requested to descend from 4,000 ft. to ,3000 ft. ATC assigned a new altitude to maintain 3,000 ft. Crew began descent from 4,000 ft, crossing 3,500 ft. in the descent crew received a low altitude alert and immediately began a climb as a precaution despite indicating much higher than the ATC observed altitude. Crew stated climbing to return to previous altitude 4,000 ft, to which ATC approved. Crew requested a current altimeter and this was noted different than set, and was updated. The crew then began a level off at 3,000 ft. with the new altimeter setting and verified observed altitude match with air traffic controller.

Synopsis

Honda jet pilots reported they received a low altitude alert during arrival descent. Flight crew crew climbed and corrected altimeter setting.

Time / Day

Date : 202404

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : GYR.Airport

State Reference : AZ

Environment

Flight Conditions : VMC

Light : Night

Aircraft

Reference : X

Aircraft Operator : FBO

Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Mission : Training

Nav In Use.VOR / VORTAC : PXR

Flight Phase : Cruise

Component

Aircraft Component : ILS/VOR

Aircraft Reference : X

Problem : Improperly Operated

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : FBO

Function.Flight Crew : Instructor

ASRS Report Number.Accession Number : 2103189

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Distraction

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : FBO

Function.Flight Crew : Trainee

Function.Flight Crew : Pilot Flying

ASRS Report Number.Accession Number : 2103190

Human Factors : Communication Breakdown

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

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

We were flying back from ZZZ preparing to do the Gila crossing arrival. We were at 4,500 there was no traffic around so I decided to demo tracking and intercept a radial from the PXR VOR with Autopilot since she had struggled slightly with that earlier. To avoid the bravo shelf at 3,000 & to set up for the arrival, I gave the instruction to descend and maintain 2500 (I know it's 2000 inbound on the arrival but wanted some extra alt for the quick intercept), track and intercept the 220R from PXR inbound. I should have said outbound. We were only going to track the VOR momentarily to show how Autopilot will pick it up if you fly HDG mode and put NAV VOR in backup. The VOR intercepted and Autopilot turned us inbound at which point city lights started to disappear. I disconnected Autopilot, we got the TAWS message and I essentially chandelled away from the mountain. The CFII student tried to take some responsibility for the situational awareness of the event, but I was teaching and take full responsibility. I was focused on avoiding the bravo shelf and explaining Autopilot but I should have caught the potential terrain hazard. I also wanted to mention that I am thankful that my training gave me the tools to get us out of the situation I put us into and we got home safely. I apologized profusely to the student, told her I was submitting this report and advised her to submit a report as well if she felt it necessary to give her perspective. I will not be demoing anything at low altitudes at night from this point on.

Narrative: 2

My instructor and I were coming back to GYR from doing approaches at ZZZ from the ZZZ VOR to back Goodyear. Along the way back, my instructor asked me if I wanted to do a DME ARC around the PHX VOR to practice. We were flying Northeast of the Estrella Mountains in the south practice area. Before we set up for the ARC. My instructor expressed concerns about the Bravo airspace shelves to make sure we stayed below them. This put us below the tops of the mountains. Once we were able to clear the area of traffic and then we set up for the ARC. Once we intercepted the radial off the PXR VOR I was then given instruction to turn right to start the ARC. This is when the CAS message alerted us to terrain and my instructor noticed that city lights were disappearing and ahead of us was getting dark. The terrain was approaching. She then promptly took the controls and turned to the right while at the same time I promptly told her to climb while we were in

the turn to avoid the terrain. Therefore, we performed a 180 degree max climbing turn away from the terrain. I remained calm, however I could see my instructor appeared to be shaken up by the occurrence. So, I immediately started speaking in a calming manner utilizing CRM, to aid in calming her nerves and mine. I let her know we are okay, the plane is okay, and that she did a great job in guiding us away from the terrain. This seemed to help her regain her bearings and gain her focus back so she can continue to instruct and/or fly the plane. We used positive exchange of controls about 5NM before I flew us back into Goodyear to land Runway 21. On the ground, after we tied the plane up. We talked about it, and I asked her again if she was okay. My instructor was very apologetic about the event and said she didn't intend to put us in a CFIT situation. She stated she was hyper focused to not bust the bravo airspace.

Synopsis

Flight Instructor and student reported a low altitude terrain alert while practicing instrument procedures in mountainous terrain. The instructor turned away from the terrain, then safely completed the flight.

Time / Day

Date : 202404

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : NCT.TRACON

State Reference : CA

Environment

Flight Conditions : VMC

Light : Daylight

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

Flight Phase : Climb

Airspace.Class C : RNO

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2103159

Human Factors : Communication Breakdown

Human Factors : Confusion

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

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.Automation : Air Traffic Control

Detector.Person : Flight Crew

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Returned To Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Departing Reno to the south from runway 17R. Release had us filed via the ZEFFR8 Departure, ZEFFR, JCKPT, MRLET, and more. The PM built the original route as filed. During route discussion as the PF I expressed confusion why we would be filed for multiple points that were on the SID rather than just filing for the SID with an ending transition. When the PDC came it was ZEFFR8, MRLET we went and deleted JCKPT from the flight route and continued. Even during the before takeoff brief we discussed how weird it was that we were going to ZEFFR skip two points on the departure (EPOSE and JCKPT) and go on to MRLET. Neither of us really recognized the mistake nor queried ATC. On climb out departure asked why we started the turn early and inquired whether we saw the terrain. At that point we were already over 10,000 and could clearly see the terrain below us but that is when we identified the issue. Cause: I think this was a combination of confusion and a bit of fatigue. We had two long days in a row. Day 3 ended at XA00 and then was a 10:32 minute rest into an early start. First flight of the morning with all the extra briefing material because of Reno we didn't recognize the issue with our thinking regarding the departure. Suggestions: Not putting the release clearance in or completely restarting the route upon receipt of the PDC. Confirming with ATC if there is any confusion or questions.

Synopsis

An air carrier First Officer reported release had SID fixes listed rather than the transition resulted in missed fix and a CFTT event. First Officer also stated that fatigue factor affected mistake.

Time / Day

Date : 202403
Local Time Of Day : 0601-1200

Place

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

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A319
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class D : ZZZ

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 : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2102890
Human Factors : Communication Breakdown
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 : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

My first time flying with FO. I asked pointed questions to ascertain his ability to fly the visual approach to XXR, ZZZ. I warned him it was a tight turn to final and explained the airspace. He expressed absolute confidence he could fly the visual XXR, ZZZ. As we closed in, I could see him falling behind the aircraft. I began talking him through the approach. 3000 feet was set on the altitude, for charted height at ZZZZZ. At some point on base he set it to 2000, I didn't catch it or notice till we closed in on final. Tower called out low altitude alert. Conditions were VFR, We had terrain in sight. We landed without incident. I have no idea why he set 2000 feet, it has no logic. Next time I see things deteriorating, I will just take over. In the last year I have flown with numerous pilots with very limited time, no swept wing or jet experience, I am an airline captain, I have become a flight instructor. It makes my job much tougher and I have minimal backup.

Synopsis

Air carrier Captain reported while FO was flying a visual approach they set a wrong crossing altitude at a fix resulting in the ATC Tower issuing a low altitude alert. The flight crew had the terrain in sight and landed safety.

Time / Day

Date : 202404

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZZ.ARTCC

State Reference : FO

Altitude.MSL.Single Value : 10000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

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

Flight Phase : Climb

Person : 1

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

Experience.Flight Crew.Total : 6

ASRS Report Number.Accession Number : 2102810

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X

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

ASRS Report Number.Accession Number : 2103106

Human Factors : Communication Breakdown

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

Assessments

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

Narrative: 1

While departing ZZZZ airport, flight crew received the ZZZZZ departure from runway XX. Climb continued arriving back to the ZZZ VOR around 10000 feet. Around the time the crew should have entered a hold to continue climb, tower frequency changed to ZZZZ center. I, PIC, continued on route while PM frequency changed to center and checked in climbing to FL200. The flight remained VMC throughout the climb and had visual clearance from terrain as well as having terrain presented on both pilots' maps. Once turned onto an airway, flight remained above OROCA until being above FL200. A few minutes after turning onto the airway, I realized I should have continued climb in holding over the ZZZ VOR to FL200 which is the MEA for the airway. I also realize once I received the clearance on the ground, I should have requested a change to the ZZZZZ departure to allow more distance and time to climb to or above the MEA for the airway. Again, all portions of the climb to above the MEA was conducted in VMC, but realize I failed to perform the departure procedure correctly to continue climb in holding over the VOR. Cause: Frequency change right as crew was arriving at location I should have entered hold to continue climb to MEA for assigned airway in ZZZZ. I should have entered hold and continued climb in hold while the pilot monitoring contacted ZZZZ center. I thought I would need clearance to continue climb in hold but realized after the fact that I did not. Suggestion: I should have been more clear in my take off brief of the desired correct climb so both pilots were aware of what the procedure should be for a successful climb to the correct altitudes for all phases of the climb.

Narrative: 2

Departed off runway XX. We were given ZZZZZ departure which has a turn back to the ZZZ VOR for and then on the flight route. We briefed that we would request the hold and climb to the MEA/MCA. As we approached the hold we asked ATC to clear us into the hold. ATC responded with roger but never cleared us into the hold. We continued to ask and ATC but the handed us off to another controller. We made the decision to continue on the route instead of holding for the climb. We had terrain clearance and was in VMC. This cause us to be below the MEA. Cause: ATC not fully understanding what we are requesting. Pilots making a quick decision to continue on route being below MEA. Suggestion: More guidance when departing ZZZZ airports. Company pages that have strict guidelines on the intended airport.

Synopsis

Air carrier flight crew reported not following the departure procedure resulting in the flight climbing towards terrain below the MEA in VMC conditions.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 5700

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 : Initial Approach

Flight Phase : Descent

Airspace.Class E : ZZZ

Person : 1

Location Of Person.Aircraft : X

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 2102341

Human Factors : Situational Awareness

Human Factors : Communication Breakdown

Human Factors : Confusion

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 : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 2102354

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 : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

CA - PF,FO - PM. Weather at ZZZ Airport 6500/10nm. Inbound to ZZZZZ, ZZZ Approach cleared us to descend to 7000, cross ZZZZZ at 7000 feet and cleared the RNAV VISUAL Rwy XXL. We crossed ZZZZZ at 7000 had the RNAV VISUAL XXL loaded up and checked and started down on the approach. We crossed ZZZZZ1 at 6000 feet and the electronic glideslope showed us on the correct descent path. Passing ZZZZZ1 and descending through 6000 feet, ZZZ Approach called us and said we were assigned 7000 feet and were giving a low altitude alert. He stopped our descent at 6000 feet. We needed to climb about 100 feet back to 6000 feet. This also caused us to show high on the visual approach glideslope. Shortly after this, ZZZ approach cleared us to descend and recleared us the RNAV VISUAL Rwy XXL. After an autopilot off correction back to glideslope, we descended normally and stabilized for an uneventful landing. Cause: We thought ZZZ Approach had cleared us for the RNAV visual once we passed ZZZZZ. Judging from how he reacted, he hadn't. I was surprised to hear we had set off an altitude alert when, according to the approach information displayed on the screens in front of me, we were right on course and glideslope. Suggestions: Clearer approach clearance from the controller.

Narrative: 2

CA - PF, FO - PM. Weather at ZZZ Airport 6500/10nm. In the descent after handoff from ZZZ Center, checked in with current ATIS at ZZZ Airport. ZZZ Approach cleared us to descend to 7000 feet, cross ZZZZZ at 7000 feet and cleared the RNAV VISUAL Rwy XXL. Crossing ZZZZZ at 7000 then descending on path through 6500 feet ZZZ Approach called us and said we were assigned 7000 feet and were giving a low altitude alert. He stopped our descent and said maintain 6000 feet. This required a climb of about 100 feet back to 6000 feet. We were now high on path, but were cleared again shortly after for RNAV VISUAL XXL. A correction was required to get back to glide path and autopilot was disconnected. A subsequent normal and stabilized approach to landing was completed. Cause: Communication on assigned clearance. Suggestions: Clarification on clearance after read back, since approach was on path but gave a low altitude alert.

Synopsis

Air carrier flight crew reported they were issued a Low Altitude Alert from ATC after beginning to descend on the approach.

Time / Day

Date : 202404

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

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

Flight Phase : Final Approach

Airspace.Class D : 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 : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Last 90 Days : 111.93

Experience.Flight Crew.Type : 765.80

ASRS Report Number.Accession Number : 2102217

Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Overshoot

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Returned To Clearance

Result.Flight Crew : Overrode Automation

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

VFR night into ZZZ. ATC cleared us for the visual approach to XXL. We had the RNAV RNP Z Rwy XXL loaded in the FMGC. After activating the approach, the airplane entered into FINAL APP and was descending on the flight path to 2000 ft, the altitude at the final approach fix ZZZZZ. While on the path, with autopilot on, we noticed the aircraft was descending to be at 2000 ft, about 5 miles prior to the final approach point. As we were discussing this, we noticed that there was terrain to the right of the airplane and discussed how we were well above the terrain but the airplane should not have descended as low as it did, as early as it did. I disconnected autopilot and directed the Pilot Monitoring to select 3000 ft. Right at that moment we got a call from ATC asking us if we were aware of our altitude being lower than normal and we responded yes. We climbed up, and finished the arrival without incident.

Synopsis

Air carrier Captain reported the autopilot descended the aircraft prematurely before the final approach fix resulting in an ATC altitude alert. Captain disconnected autopilot, climbed to safe altitude and continued approach.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 2000

Environment

Ceiling.Single Value : 800

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Personal

Make Model Name : Challenger 350

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Route In Use : Vectors

Route In Use.Airway : X

Airspace.Class D : ZZZ

Person : 1

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) : 12

ASRS Report Number.Accession Number : 2102100

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 : Corporate

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 4482
Experience.Flight Crew.Last 90 Days : 23
Experience.Flight Crew.Type : 290
ASRS Report Number.Accession Number : 2102991
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Confusion
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 : 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 New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

I was vectoring Aircraft X for ILS approach to Runway X. I issued descend to 3000 feet and fly heading 320. Near ZZZ1 airport the low altitude alert sounded and I told Aircraft X low altitude alert, climb and maintain 4000. The pilot thought I had issued a decent to 2000. I told him I did not issue 2000. There was heavy volume and complexity at the time due to weather and two different center sectors were off-loading ZZZ2 arrivals on to me. The pilot thought I had given a decent to 2000. Also he never gave a read back saying 2000 feet at any time. So there was a miss communication somewhere.

Narrative: 2

I was second-in-command, and the non-flying pilot (pilot monitoring), of a Challenger 350 from ZZZ3 to ZZZ by IFR. At approximately XA: 45, while being vectored to final for the ILS Runway X at ZZZ, we were advised by ZZZ Approach on frequency XXX.X to "check altitude" and immediately "climb to 4000 feet." We complied and ZZZ continued vectoring us to the final approach course without incident. Upon landing at ZZZ the crew of Aircraft X was given a number to call ZZZ Tower controller, which we did. The Tower Control supervisor collected our information and advised there may have been a pilot deviation, and that information he collected would be sent along to the FSDO for determination. Aircraft X flew from ZZZ3 to ZZZ under Part 91. Weather at time of arrival was forecasted to be 05011G21KT 6SM -SHRA BR OVC008. In a two-hour TEMPO period just prior to our arrival, weather was forecast as 2SM TSRA BR OVC010. Prior to initial descent we were

given new routing by Center to avoid easterly moving weather build-ups, and then during descent we requested and were granted further deviations until being handed over to ZZZ Approach on XXX.X at approximately XA: 38. Upon handover, I attempted to contact the Approach Controller two times with aircraft ID, altitude, ATIS code, and type of Approach requested. I did so after a listening watch during which there were no other transmissions. I did not receive a reply until a third attempt in which I queried the controller as to how he was receiving our transmissions. He replied that he heard us and cleared us down to an altitude of 10,000 feet and vector deviation of 10 degrees left. I estimate approximately two and half minutes elapsed from the time of my initial attempts to establish contact and the controller's positive handling of Aircraft X. We were then given further clearance to 8,000 feet and direct ZZZZZ (intermediate point along localizer course), followed approximately one minute later by a clearance to 3,000 feet. We complied. At approximately XA: 43, we were given a heading of 320 degrees and an altitude for vectors to final. Having been previously cleared to 3,000, we believed we heard a clearance to a lower of 2,000 feet and continued to descend while turning to 320. At approximately XA: 45 ZZZ ATC advised our immediate climb. We received no TCAS alerts. At completion of the flight, the Captain of Aircraft X and I conducted a debrief of the events and our crew interactions. Some key takeaways from our discussion are: While the Captain is responsible for the overall safety and compliance of the aircraft and its crew, as pilot monitoring, I am responsible for among other tasks: communicating with ATC; obtaining and reading back clearances accurately and timely; cross-monitoring systems; and setting altitudes in the flight guidance system. Upon review, it appears I either missed hearing or did not properly read back altitude assignments within the terminal area. This likely contributed to our misunderstanding of the last altitude given. In the future, I will endeavor to be more proactive in fully reading back clearances. The controller did not prompt me after omissions of altitude in two read-backs to ensure we heard him correctly. A more thorough review and brief of the approach plate for ILS X would've revealed an MSA of 2,500, so a descent to 2,000 feet while be vectored to the final course would not make sense. Even if we thought we heard a clearance to below the MSA, it would be essential to query the controller under the circumstances. We failed to do so. In the future, we will ensure all pertinent aspects of the approach are thoroughly briefed. The delay in our handling by ZZZ Approach after handover from ZZZ Center led us to be rushed in our final checklist tasks and landing preparation while in less-than-marginal weather. The delay may have come from atmospheric interference - which we previously encountered with ZZZ Center - or task-saturation of a controller if he was simultaneously handling traffic on the ZZZ Approach East frequency. More than one aircraft had to prompt the controller for further timely guidance such as obtaining lower altitudes during our time on frequency. There are likely more lessons to be learned and we intend to discuss them as a crew in the coming days. As professional pilots, we take seriously any event like the foregoing and seek ways to prevent future occurrences within our crew but to share lessons learned to possibly prevent something similar in other crews. While these were "honest" mistakes, the associated threats could have been better mitigated in this situation.

Synopsis

A TRACON Controller and corporate jet pilot reported the controller issued a Low Altitude Alert due to the pilot descending to 2000 feet when they were assigned 3000 feet.

Time / Day

Date : 202403

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 7000

Environment

Flight Conditions : VMC

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 : Final Approach

Route In Use.Other

Airspace.Class B : ZZZ.TOWER

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

Experience.Flight Crew.Total : 846.55

Experience.Flight Crew.Last 90 Days : 124.7

Experience.Flight Crew.Type : 846.55

ASRS Report Number.Accession Number : 2101762

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 : Flight Crew

When Detected : In-flight

Result.Flight Crew : Returned To Clearance

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

We were cleared for the RNP Z XXR approach. We ran all checklists and set up in accordance with the briefing guide. When cleared for the approach we set the FAF altitude of 7,000. Once established on the approach we set TDZE. ATC assigned 170 KTS until the FAF. So, the speed window was open and set to that. As we turned final, I noticed we were low on the VASI and I disconnected the autopilot to initiate a climb. At that same time ATC gave an altitude alert as we were at approximately 6,800 feet prior to the FAF. I looked at the Mode Control Panel and VNAV was not engaged and it wouldn't re engage when selected. The approach was continued to landing. VNAV became active again once crossing the FAF.

Synopsis

B737 flight crew reported while flying the RNP approach they descended below the FAF crossing altitude resulting in a CFTT situation. The flight crew disconnected the autopilot and landed safely at the arrival airport.

Time / Day

Date : 202403

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : AVP.Airport

State Reference : PA

Altitude.MSL.Single Value : 2800

Environment

Ceiling : CLR

Aircraft

Reference : X

ATC / Advisory.Tower : AVP

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

Flight Phase : Final Approach

Airspace.Class D : AVP

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 : 2101074

Human Factors : Distraction

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Primary Problem : Environment - Non Weather Related

Narrative: 1

During the descent to the AVP airport for a visual approach to runway 22, air traffic control (ATC) provided us with vectors to the final approach course and instructed us to descend to 4000 feet. Once we reported that we had the airport in sight, ATC cleared us for the visual approach. As a pilot flying (PF) I set the heading bug to the "WEXIN" final approach fix (FAF) and adjusted the altitude to 2800 feet. While descending, at approximately 3200-3100 feet, we received a terrain alert. We suspected that the alert was triggered by a tower (antenna) with a height of 2125 feet, which we had already passed. In adherence to standard operating procedures (SOP), I disconnected the autopilot and pitched up to arrest the descent. Throughout the entire descent, we maintained visual contact with the tower and believed the alert to be erroneous. As a precaution, I halted the descent and resumed only after crossing the Final Approach Fix (FAF). We promptly informed the Tower about the alert and proceeded with the approach, following the published approach profile and the SOP procedures, without experiencing any further issues.

Synopsis

An air carrier Captain reported on a visual approach, receiving an erroneous terrain alert after passing an antenna resulted in a CFFT event.

Time / Day

Date : 202403
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZGSZ.Airport
State Reference : FO
Altitude.MSL.Single Value : 1800

Environment

Flight Conditions : Marginal
Weather Elements / Visibility : Cloudy
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZGSZ
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 : Cargo / Freight / Delivery
Nav In Use : FMS Or FMC
Nav In Use.Localizer/Glideslope/ILS : ILS Y 33
Flight Phase : Initial Approach
Route In Use : Direct

Component

Aircraft Component : Autoflight System
Aircraft Reference : X
Problem : Improperly Operated

Person

Location Of Person.Aircraft : X
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Relief Pilot
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 3600
Experience.Flight Crew.Last 90 Days : 158
ASRS Report Number.Accession Number : 2100983
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
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 : Human Factors

Narrative: 1

I was the RO on a heavy crew. For the departure from ZZZ and arrival into SZX I was seated in the second observers seat behind the CA. After reporting for duty I noticed that there had been a crew change and an ACP (Assistant Chief Pilot) was listed as FO2. After he arrived, he said he would be the CA and the original CA would be FO2. When they initialized the ACARS, the CA change had not been made. I did not know that as I was conducting my preflight as RO. I noticed that he signed the company electronic document with the original CAs and I stated that the FOM said the assigned CA had to occupy his seat in the terminal area. They made some phone calls and got it switched. Additionally, the ACP had been listening in on a conference call during the brief and preflight almost up until door closure. We blocked out on time. Departure and cruise were uneventful. Once talking to approach we asked which arrival to expect several times. Finally, after passing POU, we were assigned the SAR9ZA and RWY33. Around SAREX we were vectored off of the arrival for traffic and given a descent below the path, so the PF was using a combination of FLCH and VS to descend. We were eventually given direct to NLG, which was an approximate SE heading to rejoin. NLG was also a feeder for the ILS Y 33. We were given many step down descents to 2300 (700m) and began configuring towards flaps 5 to comply with speeds. On the base leg, after D8.8 SHK, we were cleared for the approach. The PF armed LOC to intercept and set the FAF altitude of 1800 in the MCP (Mode Control Panel). I believe we were in VS at the time, but I could not see many of the instruments from my seat. I noticed that we were starting to descend and mentioned that there was a WARNING on the approach plate that said Before intercepting LOC, Aircraft should keep 2300 or above. Immediately after saying that, ATC directed us to climb multiple times in rapid succession. After climbing back to 2300, LOC captured and we turned inbound. During the (left) turn we broke out of the bottom of the clouds and could see the buildings that were the reason for the warning. There was a mention of being above GS, but I could not see the ISFD from my seat so I was just following along on my approach plate and what I could make out of the FOs flight displays. Once established inbound we finished configuring and continued to land. During crew debrief we discussed what happened and what we could have done differently. The CA and FO2 said they saw a false glideslope initially. I could not see the ISFD and the FO said he did not see it. We

also discussed use of different vertical modes. The CA said he would make sure that warning was added to the airport company pages to alert other crews. I asked if any reports were required and was told that it was not on the list of reportable events. The next morning, the CA reached out to us and requested that we send him a synopsis just in case. Before I could send it to him I received another email from an ZZZ ACP stating to send him a synopsis. I sent my summary to both the CA and the other ACP. They said that was all they needed but I still felt an official report was required so I reached out for guidance and they recommended that I fill out a report.

Synopsis

Air carrier Relief Pilot reported an altitude deviation on initial approach which resulted in a terrain warning from ATC. The crew corrected the descent profile and landed safely.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 14800

Environment

Flight Conditions : IMC

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

Mission : Passenger

Flight Phase : Final Approach

Airspace.Class E : 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.Last 90 Days : 69.15

Experience.Flight Crew.Type : 213.92

ASRS Report Number.Accession Number : 2100167

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

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 : Pilot Not Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Last 90 Days : 101.27
Experience.Flight Crew.Type : 188.75
ASRS Report Number.Accession Number : 2100173
Human Factors : Situational Awareness
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
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 : Human Factors

Narrative: 1

Potential for Terrain avoidance procedure. ATC cleared us to descend to 16,000 and direct ZZZZ on the RNAV XX. Then cleared us for the approach. During this time we were IMC. As I was in the approach phase I instinctively checked the MSA on the approach chart. We put in the next constraint and descended. We leveled off at 14,800 for the constraint on the approach. The approach plate gave a MSA of 14,400 so this seemed appropriate. At this altitude the airplane made a "2500" call and I looked down and saw we started to receive Radio Altitude information. The Radio altitude information quickly went away and we passed another peak that gave us another "2500" call. The altitude fluctuated too quickly for me to note an accurate altitude but saw it went below 2000' and entered the 1000'-2000' range. After we passed both peaks we exited IMC and could see there was no more terrain ahead. At this point ATC reported to us that MSA is 16,000 and asked if we were VMC. We reported back yes but we didn't have visual of the mountains we passed. We didn't receive any GPWS/EGPWS warnings. In hindsight we were outside of the Approach plate MSA distance. This is my first time to the airport. I checked the Mountain Flying Guide and Company Pages before and after departure. A mention of the threat of the potential of being cleared on the approach outside the approach MSA distance may mitigate this terrain threat in the future.

Narrative: 2

Loss of awareness. We were on our descent down into the ZZZ airport. We were clear for the approach off of an airway. As the crew, we lost situational awareness as to where the minimum altitude was. We descended down to 14,800 to cross the initial approach fix on the RNAV XX approach into ZZZ. When we really should've been at 16,400 feet. we did get an alert from the radiometer calling out 2500 feet. We never got a terrain For a GPWS alert. Yes, I think we lost awareness of our surroundings while descending to the next crossing altitude on the fix.

Synopsis

Air carrier flight crew reported low altitude alert while on approach in mountainous terrain.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 7000

Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Personal

Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Cruise

Airspace.Class E : ZZZ

Person

Location Of Person.Facility : ZZZ.ARTCC

Reporter Organization : Government

Function.Air Traffic Control : Approach

Qualification.Air Traffic Control : Fully Certified

Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 1

Experience.Air Traffic Control.Time Certified In Pos 1 (mon) : 6

ASRS Report Number.Accession Number : 2100054

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Confusion

Communication Breakdown.Party1 : ATC

Communication Breakdown.Party2 : Flight Crew

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 : Human Factors

Primary Problem : Human Factors

Narrative: 1

Aircraft X was on route at 7000 feet heading east bound. The next sector accepted the handoff, and I switched them to their frequency XXX.X. On readback, I thought I may have heard the aircraft read back XXX.X5 so I went to correct him but remembered that a lot of times, frequencies have a "5" at the end don't matter and so I let him go thinking that I was in the wrong and the aircraft was right. The aircraft never went over to the right frequency and ran into an area of terrain where the MIA (Minimum IFR Altitude) altitude was 7200. By that time everyone was listening to me and telling me what to try, to reach the aircraft. I was doing everything possible and when he finally did come back to us, I immediately climbed him but was not able to issue the appropriate safety alert phraseology. This was a complete misunderstanding on my part.

Synopsis

A Center Controller reported they did not correct a pilot readback of the wrong frequency resulting in loss of contact with the aircraft as it flew below the Minimum IFR Altitude.

Time / Day

Date : 202403
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 8000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Taxi
Make Model Name : Beech 1900
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Flight Phase : Descent
Route In Use : Visual Approach
Airspace.Class C : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : ZZZ
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Flight Phase : Cruise
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) : 14
ASRS Report Number.Accession Number : 2100051
Human Factors : Workload

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict
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 : Returned To Clearance
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Aircraft X was on a visual approach, descending to 080 Direct to the airport. Aircraft Y Departed, ZZZ, Direct ZZZ1 Level at 070. I issue traffic to both aircraft and both acknowledged. Aircraft X Descended through his assigned altitude, Lowest observed altitude was 7800 ft. When I seen him through 7900 ft. began to Key up and ask him if he was leveling off at 8000 ft. before. The transmission was made observed him at 7800 ft. and begin issued a low altitude alert, and a traffic alert. Immediately, after keying up, I Observed Aircraft X Climbing back to his assigned altitude of 8000 ft.

Synopsis

TRACON Controller reported an aircraft descended below its assigned altitude. The Controller issued a low altitude alert and a traffic alert.

Time / Day

Date : 202403
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 195
Relative Position.Distance.Nautical Miles : 3.5
Altitude.MSL.Single Value : 870

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Night
Ceiling.Single Value : 4000

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Taxi
Make Model Name : Global 5000 (Bombardier)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Route In Use : Vectors
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 6000
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 300
ASRS Report Number.Accession Number : 2100039
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 - Speed : All Types
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 : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Air Traffic Control
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 700
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

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

Narrative: 1

The captain wanted to take off ZZZ1 runway XX. On the climbout, he elected to clean up the aircraft instead of keeping it slower and intercepting ILS Z Y circle to land 1 into ZZZ. He was going to overshoot the final of runway Y going westbound, so I asked for vectors around to intercept the ILS Z Y again. I make all the appropriate call outs during the intercept and notice he didn't activate the approach on the autopilot. I mentioned that 3 times, but he didn't react or say anything that was intelligible. He overshoot the final approach course on heading 090 and 2000', and then he swung it back on to the final approach course approximately ZZZZZ and then dropped it to 1500' by ZZZZZ1. At ZZZZZ2 (4nm final Runway Y), he was at 1,300', turned east with heading and speed of 150kts (Vref 112 and Vapp 122kts), and pitched the nose down a bit. We lost a bit of altitude and I was noticing we were getting low. I was about to mention it as ZZZ Tower said "Altitude Alert 870 feet". I noticed the hotel pass by his side window (3.5-3.8nm from the threshold of Runway Z), and saw our altitude in the lower 800s before he started pulling up. I readjusted his VS for better vertical guidance as he overshoot a quarter mile past the final of Runway Z. He sort of got back on course and somewhat of a glidepath going 145-150 kts at 500' AGL. The surface wind was 320 at 12kts gusting 20kts. He ducked down on short final and very firmly planted the jet at the 500' marker with max reverse and braking applied almost immediately. The jet stopped abeam Taxiway 1 with approximately 400' left on Runway Z. The captain then started a minute one-sided discussion about how he didn't need any help or coaching taxing back Taxiway 2 to FBO X. He was so busy talking about how he didn't need any help that he missed the marshaller, and had to do a 270 degree turn on the ramp to the parking spot. He then blamed me about him missing the marshaller as I maintained my part of the sterile cockpit and made sure he didn't hit the wing taxing in. He was angry and didn't want to talk about it. So I brought the issue and safety report up to company management at a later time.

Synopsis

Global 5000 flight crew reported low altitude alert while maneuvering for approach.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : MDH.Airport

State Reference : IL

Relative Position.Angle.Radial : 308

Relative Position.Distance.Nautical Miles : 19

Altitude.MSL.Single Value : 1300

Environment

Flight Conditions : VMC

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility : Haze / Smoke

Weather Elements / Visibility.Visibility : 15

Light : Daylight

Aircraft

Reference : X

Aircraft Operator : FBO

Make Model Name : Small Aircraft, High Wing, 1 Eng, Fixed Gear

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : None

Mission : Training

Airspace.Class E : MDH

Airspace.Class G : MDH

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 : Instrument

Qualification.Flight Crew : Commercial

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 455.3

Experience.Flight Crew.Last 90 Days : 57.1

Experience.Flight Crew.Type : 396

ASRS Report Number.Accession Number : 2100022

Human Factors : Distraction

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Miss Distance.Horizontal : 1300
Miss Distance.Vertical : 800
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

I was instructing a commercial pilot applicant at around XA:30 in the afternoon. Clear day, winds gusting from the south at about 20 knots. We took off with 15 knot winds. Turbulent below 4000 feet MSL. Since the student pilot was near a checkride, I, as the instructor, was doing a "mock" checkride and was evaluating the student. I was not manipulating the flight controls. First, after taking off from MDH, we climbed to 4,500 MSL to do our altitude maneuvers. After these were completed, the student and I descended down to pivotal altitude. I as the IP (instructor pilot), remarked to myself that we were close to a town and wanted to see what the SP (student pilot) would do. The student pilot picked his first pylon about a mile and a half south of this town. Our ground track took us just south of the town, away from flying over a congested area (we were above 1000 AGL). It was about a quarter through the turn that I noticed an unmarked tower near our point. I called this out to the student pilot and he said that he had it in sight. It was no factor through our first complete turn. I then turned my attention to his altitude, airspeed, and coordination, trying to evaluate his maneuver. For reference, the ground level was about 500 feet above sea level. During the second half of the turn, with strong 15-20 knot winds (resulting in a high variance of pivotal altitude), Aircraft X was about to descend past 500 feet AGL in order to maintain pivotal altitude, but as IP (Flight Instructor), I stopped him from doing so. After reaching the completion of the Eights On Pylon maneuver, I asked the student if he wanted to try the Eights on Pylons again. Looking back on the question, I should have prefaced the question with my intention of moving away from the town and unmarked tower. I did not want my student to try Eights on Pylons again being close to a congested area and a tower we were not familiar with. My student said yes to a retry and immediately turned left to start again, this time about 200 feet lower. With us being so close to the congested area, I immediately started a climb while we were in the bank to the left. At this point, I had momentarily forgot about the unmarked tower. The unmarked tower has no marked altitude height, but I can estimate that we climbed just west to the tower about 1000-1250 feet, and 800-1000 feet vertical clearance. While there was no collision imminent, the decision to turn left resulted in a loss of adequate separation with the tower. We climbed to 1700 feet MSL and proceeded farther southwest to continue our practice of Eights on Pylons. Here, the ground elevation rose about 30-50 feet, and neither I nor the student pilot realized it. We, without realizing, accidentally descended below 500 AGL with this new rise in field elevation, about 30-50 feet. I checked the field elevation during the maneuver, and I realized this during the maneuver. Since we were on the climbing part of the maneuver, I allowed the student to finish after climbing back to 500 AGL, and went back to the airport to land without incident. Looking back, I made several

errors. 1. I should have forced the student to pick a different area. While his initial point was legal, it should not have been so close to a congested area. 2. I lost situational awareness due to my monitoring of the student's maneuver. I needed to make decisions as PIC and not as a flight instructor. 3. While flight instruction is important and trying to evaluate the student's performance is needed at times, the PIC must take control of the situation and not let students make a choice not conducive to safety of flight. In the future: 1. I will be enforcing a 3 mile no-fly radius around congested areas for ground reference maneuvers. 2. I will not allow flight instruction to overshadow my duties as PIC. 3. Make sure to double check the field elevation in the area before starting Eights on Pylons.

Synopsis

General aviation instructor pilot reported a low altitude event while on a training flight during student training maneuvers. The instructor took control of the aircraft during a maneuver to remain clear of a congested area and an unmarked tower obstacle, then transferred control back to the student.

Time / Day

Date : 202403

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 11000

Environment

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility : Icing

Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : EMB ERJ 145 ER/LR

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Descent

Airspace.Class E : 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 : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Type : 1758

ASRS Report Number.Accession Number : 2099809

Human Factors : Situational Awareness

Human Factors : Distraction

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 Not Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Type : 8500
ASRS Report Number.Accession Number : 2100271
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Events

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 : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

Altitude Deviation due to incorrect altimeter setting. Altimeter set to 30.41 instead of 29.41. Upon descent through FL180 into ZZZ, the altimeter setting was wrongly set to 30.41. The correct altimeter setting was 29.41. Upon given a descent and lateral clearance to ZZZZ for the DME ARC ILS XX, Air Traffic Management queried our current altitude. We then noticed the incorrect altimeter setting and corrected. Upon recreating the correct altimeter setting, the aircraft climbed, reducing airspeed. I applied full thrust. The aircraft slowed from 210 knots to 180 knots. After correcting the altitude and speed, we continued to ZZZ with no further incident. Upon speaking with Air Traffic Management via phone, they stated we were 900-1000 feet off our altitude. I had terrain mode on my Multi-Function Display and did not come across any amber or red terrain features at any time during the event. I was so focused on the deteriorated weather and field conditions. I should have allocated more of my cognition toward standard operating procedures. We should have noticed this issue on the descent check. I apologize for my actions and take full responsibility for the event. Suggestions: Ensuring I set the correct altimeter setting is essential to safe and smooth operation. I have to focus on flying the aircraft first, then manage destination variables. Even though it isn't listed in my duty as Pilot Flying, I should have and will listen to the AWOS prior descent through FL180. As Pilot Flying, I always elect to reference the TOLD (Take-off and Landing Data) Card when conducting the Release Brief. As Pilot Flying, I must and will reference the TOLD Card regarding altimeter settings and any other details on descent. I must change the way I view descending into airports with diminished weather. While we had no terrain or radio-altimeter warnings other than that given by Air Traffic Management, setting the correct altimeter setting is imperative especially in mountainous terrain. I am extremely apologetic for this mistake and look to strive for better.

Narrative: 2

Set Wrong altimeter Setting, started descent into ZZZ, set the wrong Altimeter Setting and got and terrain Alert. After getting the terrain alert I confirmed the correct altimeter setting, the original setting was 30.41 and corrected setting was 29.41. There was not Terrain warning and where we got the alert from ATC, terrain feature was up on the MFD

(Multi-Function Flight Display) and showed 12800/8000. Suggestions: Focusing when flying in mountainous terrain and setting altimeter. using the method of verifying and monitor. ZZZ Center asked us to contact them.

Synopsis

EMB-145 flight crew reported receiving a terrain alert while flying 1,000 feet lower than they believed due to incorrect altimeter setting on arrival descent. Flight crew corrected altimeter and climbed back to safe altitude.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : SAT.Airport

State Reference : TX

Altitude.MSL.Single Value : 2200

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : SAT

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

Airspace.Class E : SAT

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 : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Last 90 Days : 110.97

Experience.Flight Crew.Type : 110.97

ASRS Report Number.Accession Number : 2099668

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

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 : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Last 90 Days : 109.52

Experience.Flight Crew.Type : 230.48
ASRS Report Number.Accession Number : 2099701
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
When Detected : In-flight
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Descending on the QUERVO1 arrival shortly after passing 10,000 ft. we were cleared direct to QUESO at 4,000 ft. and cleared for the approach. Before arriving at QUESO, our approach clearance was cancelled due to traffic not responding to Approach Control. We were cleared direct QUESO and to descend and maintain 4,100 ft. The Captain identified the clearance cancellation and altitude restriction as a threat and verbalized that we were likely going to be left high and get slam dunked onto the approach as the controlled tried to reach the conflict traffic. Shortly before QUESO at 4,100 ft. we were cleared for the approach again. I re-armed approach mode and the final fix altitude (2,200 ft.) was set in the altitude window. At this point I believe due to confirmation bias, the Captain suggested use of Level Change to get down. I failed to verify our vertical position relative to the published approach altitudes and glide slope indication prior to initiating the descent in LVL CHG. As we turned onto the final approach course, the aircraft descended below the charted altitude of 3,200 ft. at NUGIT and Tower notified us of an altitude alert. At that point we were in VMC conditions approaching NUGIT. By the time we recognized the error we had passed NUGIT and captured the glide slope from below at 2,200 ft. and continued to land.

Narrative: 2

Got cleared direct Queso for the ILS 13R approach into SAT. Once established toward Queso got descend 4,000 ft. cleared ILS 13R approach. At this time the airplane was descending in LNAV/VNAV with VNAV Path captured. Approximately a couple miles before Queso descending through approximately 4,700 ft. Approach Control cancelled approach clearance and said to maintain 4,100 ft. 4,100 ft. was set in the Mode Control Panel (MCP) and then Level Change was selected for vertical guidance. Approach re cleared us for the ILS 13R at about Queso. The FAP altitude of 2,200 ft. for ALAMO was set. From then on we descended in Level Change with Approach mode armed. Just after NUGIT while level at 2,200 ft. we realized our mistake. Due to descending in Level Change and not VNAV Path we realized we had busted the intermediate fix altitude at NUGIT of 3200ft. From there the approach continued uneventfully and flight completed with a thorough debrief of what had happened.

Synopsis

Air carrier flight crew reported receiving a low altitude alert from ATC during approach when they descended below a fix crossing altitude. Flight crew continued approach and landed.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : RDG.Airport

State Reference : PA

Altitude.MSL.Single Value : 1800

Environment

Flight Conditions : Mixed

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Ceiling.Single Value : 2000

Aircraft

Reference : X

ATC / Advisory.Tower : RDG

Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer

Crew Size.Number Of Crew : 2

Flight Plan : IFR

Nav In Use : GPS

Nav In Use : FMS Or FMC

Nav In Use.Localizer/Glideslope/ILS : RNAV(GPS) 31

Flight Phase : Initial Approach

Airspace.Class D : RDG

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Last 90 Days : 100

ASRS Report Number.Accession Number : 2099658

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2099649

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
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 : Airspace Structure
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 : ATC Equipment / Nav Facility / Buildings

Narrative: 1

I was the pilot flying the RNAV (GPS) 31 to RDG. The autopilot was on and providing inputs to the flight controls. We received an Obstacle Alert Caution and then immediately thereafter an Obstacle Warning for the Tower depicted at ADEKY on the approach. We had no deviation, laterally, horizontally, or velocity for the approach. We executed the escape maneuver. This Tower is in the flight path of the approach. The approach is not safe and is unflyable without receiving an Obstacle Caution and Warning. Immediately cease using this approach. It is unsafe and results in an Obstacle Caution and Warning. The approach in its current configuration is not safe and needs to be decommissioned. This runway needs an offset or RNP approach that would be similar to the approach into DCA Runway 19.

Narrative: 2

RNAV 31 into RDG. Pilot flying is Person A, autopilot and LNAV/VNAV engaged. Fully configured and stabilized 1.5 miles from FAF, knowing about obstacles on short final. Still received GPWS warning over ADEKY. Executed escape maneuver. This approach is impossible to be stable without receiving GPWS warning due to towers on short final.

Synopsis

Flight crew reported receiving a terrain warning on the RDG RNAV (GPS) Runway 31 approach for nearby towers even though they flew the approach accurately.

Time / Day

Date : 202403

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : RDG.Airport

State Reference : PA

Altitude.MSL.Single Value : 1800

Environment

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Tower : RDG

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Flight Plan : IFR

Nav In Use : GPS

Nav In Use : FMS Or FMC

Nav In Use.Localizer/Glideslope/ILS : RNAV (GPS) 31

Flight Phase : Initial Approach

Airspace.Class D : RDG

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

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 : 100

Experience.Flight Crew.Type : 12000

ASRS Report Number.Accession Number : 2099633

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 : Multiengine

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2099621

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Contributing Factors / Situations : Software and Automation

Primary Problem : Ambiguous

Narrative: 1

I was the pilot flying the RNAV (GPS) 31 to RDG. The autopilot was on and providing inputs to the flight controls. We received an Obstacle Alert Caution and then immediately thereafter an Obstacle Warning for the Tower depicted at ADEKY on the approach. We had no deviation, laterally, horizontally, or velocity for the approach. We executed the escape maneuver in accordance with the AOM. This Tower is in the flight path of the approach. The approach is not safe and is unflyable without receiving an Obstacle Caution and Warning. Yes, this write-up is exactly like the one I submitted for the event on [another day]. The first event was not a fluke. I am convinced if you fly this approach as it is published this will be the result each and every time. Cease utilizing this approach to Runway 31. It is unsafe and use of it will result in an Obstacle Caution and Warning. This approach in its current configuration and parameters will result in an Obstacle Warning, the approach needs to be a RNP approach similar to the one in DCA to Runway 19 or it needs to be an offset approach like the one to 16R in DEN.

Narrative: 2

RNAV 31 into RDG. Pilot flying is Captain, autopilot and LNAV/VNAV engaged. Fully configured and stable 1.5 NM from FAF, knowing about obstacles on short final. Still received GPWS warning over ADEKY. Executed escape maneuver. This approach is impossible to be stable without receiving GPWS Warning due to towers over ADEKY.

Synopsis

Flight crew reported receiving a terrain warning while above a waypoint on the approach due to the close proximity of towers.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 2100

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Corporate

Make Model Name : Citationjet (C525/C526) - CJ I / II / III / IV

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Final Approach

Route In Use.Other

Airspace.Class E : ZZZ

Person

Location Of Person.Facility : ZZZ.TRACON

Reporter Organization : Government

Function.Air Traffic Control : Approach

Function.Air Traffic Control : Trainee

ASRS Report Number.Accession Number : 2099557

Human Factors : Confusion

Human Factors : Distraction

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Time Pressure

Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Returned To Clearance

Result.Air Traffic Control : Issued Advisory / Alert

Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Aircraft X (approximate) was cleared for the ILS runway XX into ZZZ airport. There was weather in the area and the aircraft was issued the weather. Instructed the aircraft to maintain 021 until established. I noticed the aircraft was at 020 so I issued the altitude again to maintain 021. At that point the aircraft stated they were receiving severe turbulence and altitude went down to 015. I issued a low altitude alert and issued the MVA of 018. I later realized the MVA was 019 but the aircraft was already past 020 again. I'm also wasn't sure if I used the correct phraseology. I think I left out "check your altitude immediately." I also didn't cancel his approach clearance but I did issue him a new clearance to another airport after he requested it. None. I just need to stay calm and ensure I use appropriate phraseology and make sure I have the correct MVA.

Synopsis

A TRACON Controller reported an aircraft on an ILS approach encountered severe turbulence and descended below the Minimum Vectoring Altitude.

Time / Day

Date : 202403

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : TRI.Tower

State Reference : TN

Altitude.MSL.Single Value : 3700

Aircraft

Reference : X

ATC / Advisory.Tower : TRI

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 D : TRI

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 : 2099318

Human Factors : Situational Awareness

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 : 2099319

Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Returned To Clearance

Assessments

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

Narrative: 1

During a visual approach backed by the ILS to Runway 23 at TRI, we descended to 3600 for the FAF. At 3700 the EGPWS (Enhanced Ground Proximity Warning System) commanded a climb. The AP (Autopilot) was disconnected immediately and we followed the command. ATC was notified and once we were clear we advised ATC and descended back. After this the approach and landing was uneventful.

Narrative: 2

During a visual approach backed by the ILS to Runway 23 at TRI, we descended to 3600 for the FAF. At 3700 the EGPWS (Enhanced Ground Proximity Warning System) commanded a climb. The AP (Autopilot) was disconnected immediately and we followed the command. ATC was notified and once we were clear we advised ATC and descended back. After this the approach and landing was uneventful. Cause: Turbulence and gusty winds may have triggered an increase in descent.

Synopsis

Air carrier flight crew reported receiving a ground proximity warning during visual approach to TRI airport. Flight crew climbed to safe altitude and continue approach to landing.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2200

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Taxi
Make Model Name : Helicopter
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Ambulance
Flight Phase : Initial Climb
Airspace.Class C : ZZZ

Person

Location Of Person.Facility : ZZZ.Tower
Reporter Organization : Government
Function.Air Traffic Control : Ground
Function.Air Traffic Control : Local
Function.Air Traffic Control : Flight Data / Clearance Delivery
Qualification.Air Traffic Control : Fully Certified
ASRS Report Number.Accession Number : 2044287
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Workload

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.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
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 : Procedure

Narrative: 1

I was working local/ground/clearance/flight data combined with a stand-alone CIC (Controller in Charge) in the tower cab. Helicopter landed at ZZZ hospital. After they completed whatever business they had there they called ZZZ clearance for their IFR clearance to ZZZ1. ZZZ is an uncontrolled helipad at one of the local hospitals. I was unsure what exactly this meant for me when they called up ready for departure. I got confirmation they would maintain their own terrain obstruction until 2200 MSL because that is our MVA. I told them departure would be at their own risk. On departure before they got to 2200 MSL I had to vector them from their direct, approximate heading 158, to a heading of 180 for incoming traffic to Runway XX. They were at approximately 1200 MSL when they were vectored. There was no loss of separation between the incoming aircraft and the helicopter. I was uncomfortable with a helicopter departing the hospital's helipad as IFR. That seems to be more of an approach control function more than a tower function. I have never seen this, and the CIC in the back said he has never seen this situation before either. Suggestion: I have no recommendations from this event. This is a rare scenario that I, nor the CIC had ever seen before. After talking to the CIC in the back there were other avenues I could have taken, such as departing the helicopter VFR and giving him the IFR clearance in the air.

Synopsis

A Tower Controller reported they had to vector an IFR helicopter that departed from a nearby hospital below the minimum vectoring altitude to avoid conflicting traffic.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ROA.Airport
State Reference : VA
Altitude.AGL.Single Value : 700

Aircraft

Reference : X
ATC / Advisory.Tower : ROA
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 : ROA

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 : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2042976
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot 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 : 2042975
Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

Day VFR condition on a visual approach to RNAV Runway 24 at 700 ft to 1000 ft above the ridge line, the terrain warning (GPWS) went off.

Narrative: 2

GPWS terrain warning when turning base to final on a visual approach. We were at a safe altitude in visual conditions.

Synopsis

Air carrier flight crew reported receiving a GPWS terrain warning on a visual approach to ROA.

Time / Day

Date : 202310

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : CRW.Airport

State Reference : WV

Environment

Flight Conditions : VMC

Light : Night

Aircraft

Reference : X

ATC / Advisory.Tower : CRW

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Mission : Passenger

Nav In Use.Localizer/Glideslope/ILS : ILS or LOC RWY 23

Flight Phase : Final Approach

Airspace.Class C : CRW

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

Experience.Flight Crew.Type : 5000

ASRS Report Number.Accession Number : 2042697

Human Factors : Workload

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

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 : FLC complied w / Automation / Advisory
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Going into CRW at night, landing runway 23, the weather was clear, we briefed everything, ILS23, visual, and all other recommendations, and stated that we would not accept a visual from ATC; requested vectors unto the ILS. On base leg we noticed there was a GS warning so we asked approach, by this time we had joined the localizer, we told him we had the field and vasi and he cleared us for visual, went to tower, asked him and we were the first to notice the GS was out. We were fully configured by the final approach fix and started down. We had briefed a visual approach backed up by an ILS. So when I started down I put a higher number in VS mode. Before I could correct it we got a caution obstacle aural warning. I disconnected the autopilot and stopped descent, this corrected the flight path and the warning went away. We followed the VASI and landed normally. GS was not listed as out of service on paperwork or on ATIS. We noticed it and instead of selecting 800fpm at FAF the rate of descent was higher. During this time FO (First Officer) was checking in with tower and inquiring about GS. This happened shortly after passing the FAP (Final Approach Point) fix. We got a caution obstacle warning. We should have asked for delay vectors and briefed a LOC only approach or GPS as backup to the visual approach, but since we were on LOC and had the VASI and field we elected to follow that.

Synopsis

Air carrier flight crew received a caution obstacle aural warning on approach. Flight crew corrected flight path and landed uneventfully.