

ASRS Database Report Set

Controlled Flight Toward Terrain

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

Update Number.....37

Date of UpdateMarch 7, 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: 2044287 *(1 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 *(2 of 50)*

Synopsis

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

ACN: 2042697 *(3 of 50)*

Synopsis

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

ACN: 2042505 *(4 of 50)*

Synopsis

S46 TRACON Controller reported an aircraft descended below their assigned altitude and flew below the minimum vectoring altitude.

ACN: 2042480 *(5 of 50)*

Synopsis

Corporate jet pilot reported the pilot flying descended too low on a visual approach and they received a terrain alert.

ACN: 2042012 *(6 of 50)*

Synopsis

A Flight Instructor reported the student on short final had to add power and initiate a go around to avoid hitting street lights.

ACN: 2041658 *(7 of 50)*

Synopsis

Captain reported a GPWS pull up alert during the initial approach phase of a night visual approach. The First Officer immediately pulled up, then continued the approach to a safe landing.

ACN: 2041651 *(8 of 50)*

Synopsis

Air carrier flight crew reported non-compliance with the obstacle clearance charted procedure while climbing from a non-towered airport.

ACN: 2041383 *(9 of 50)*

Synopsis

Air carrier First Officer reported receiving a GPWS terrain alert on approach into CHO airport.

ACN: 2041382 *(10 of 50)*

Synopsis

Air carrier First Officer reported receiving a GPWS terrain alert on a visual approach to HTS airport.

ACN: 2041148 *(11 of 50)*

Synopsis

Air carrier flight crew reported descending below the glide slope on approach to SYR when the flying First Officer lost situational awareness.

ACN: 2041011 *(12 of 50)*

Synopsis

Air carrier flight crew received a low altitude alert from ATC while on approach. Flight crew complied with alert and landed uneventfully.

ACN: 2040977 *(13 of 50)*

Synopsis

EMB-505 Captain reported their inexperienced First Officer was conducting a visual approach and received an EGPWS terrain warning, and an ATC altitude alert inside the final approach fix. Flight crew climbed and reacquired a normal descent profile for landing.

ACN: 2040853 *(14 of 50)*

Synopsis

Tower Controller reported a possible minimum vectoring altitude violation due to a miscommunication in regards to the assigned altitude of a go around instruction.

ACN: 2040849 *(15 of 50)*

Synopsis

A TRACON Controller reported a small aircraft on approach in IMC repeatedly deviated from their course and descended below assigned and published altitudes flying below Minimum Vectoring Altitudes.

ACN: 2040820 *(16 of 50)*

Synopsis

Pilot reported they became disoriented after takeoff in marginal VFR conditions. The aircraft entered a stalled condition and the pilot landed off airport.

ACN: 2040738 *(17 of 50)*

Synopsis

EMB-145 Captain reported receiving a "terrain alert" turning final while on a visual approach. Captain climbed back up and continued the approach to landing.

ACN: 2040510 *(18 of 50)*

Synopsis

Beechcraft Bonanza pilot reported descending toward terrain while attempting to remain VFR below lowering cloud deck. Pilot climbed into clouds and after re-entering VFR conditions diverted to a suitable airport.

ACN: 2040203 *(19 of 50)*

Synopsis

A Center Controller reported a flight of two RV8's descended from their assigned altitude and flew below the Minimum IFR Altitude. Later in the flight the same aircraft deviated from their assigned route.

ACN: 2039482 *(20 of 50)*

Synopsis

Cessna 172 instructor pilot reported an altitude deviation in an area of mountainous terrain during daylight visual conditions on a IFR flight plan. The pilot became distracted while avoiding icing conditions and descended below the ATC assigned minimum enroute altitude, then recovered and continued the flight.

ACN: 2039272 *(21 of 50)*

Synopsis

CRJ-900 Captain reported receiving a low altitude alert from ATC while conducting a visual approach. The Captain indicated the aircraft was vectored closer to the airport and upon receipt of the ATC low altitude alert, leveled the aircraft, stabilized, and landed safely.

ACN: 2039132 *(22 of 50)*

Synopsis

Air carrier flight crew flying a visual approach at night into an unfamiliar airport received a ground proximity warning. Flight crew climbed up several thousand feet then resumed the descent on approach.

ACN: 2039086 *(23 of 50)*

Synopsis

An Air Carrier flight crew reported they received a Ground Proximity warning after initiating a go around.

ACN: 2038915 *(24 of 50)*

Synopsis

A Local Controller reported an aircraft descended in response to a TCAS/RA for traffic abeam landing on the parallel runway and flew below the Minimum Vectoring Altitude.

ACN: 2038628 *(25 of 50)*

Synopsis

A Center Controller reported an aircraft deviated for weather from their assigned heading and flew below the Minimum Vectoring Altitude.

ACN: 2038613 *(26 of 50)*

Synopsis

A Tower Local Control trainee reported they cleared a turbojet for takeoff behind a slower moving aircraft which had began its turn away from the runway. The first aircraft unexpectedly turned back into the path of the jet departure and stopped climbing resulting in a Low Altitude Alert.

ACN: 2037498 *(27 of 50)*

Synopsis

Captain reported a loss of situational awareness when maneuvering at the minimum vectoring altitude while trying to locate GJT airport at night in mountainous terrain. The Captain expressed concern that this approach may not be safe.

ACN: 2037429 *(28 of 50)*

Synopsis

Air carrier pilot reported ATC low altitude alert while maneuvering for approach.

ACN: 2037096 *(29 of 50)*

Synopsis

Air carrier crew reported descending below an ATC assigned altitude while maneuvering prior to the non-precision published approach course, in mountainous terrain at night. ATC reported a low altitude alert to the crew and the crew climbed to the assigned altitude, then continued the approach to a safe landing.

ACN: 2036702 *(30 of 50)*

Synopsis

Corporate F/O reported getting low on a visual approach. The Captain and Tower also gave a too low alert. The F/O suggests more training is needed in this LR-45 on visual approaches.

ACN: 2036602 *(31 of 50)*

Synopsis

Air carrier flight crew reported receiving a low altitude alert while descending on the BFL FASTO2 arrival. The crew expressed confusion over ATC's clearance verbiage, the lack of crossing restriction altitudes depicted other than MEA, and the operator's SOP for the conduct of the RNAV arrivals of this sort.

ACN: 2036580 *(32 of 50)*

Synopsis

Fractional Captain reported a descent below the minimum altitude on the initial approach. The Captain states the Pilot Flying/First Officer descended when believing they had been cleared for a visual approach.

ACN: 2036468 *(33 of 50)*

Synopsis

A Center Controller reported he approved a weather deviation for an aircraft which resulted in it flying below the Minimum Vectoring Altitude.

ACN: 2036107 *(34 of 50)*

Synopsis

Flight crew on approach reported low altitude alert from ATC. Flight crew intercepted glideslope and landed uneventfully.

ACN: 2035959 *(35 of 50)*

Synopsis

Air carrier First Officer reported a CFTT event during approach to BNA requiring an immediate climb. Reportedly, the flight crew misheard ATC cleared them to 2,000 feet which is below the MSA in the area.

ACN: 2035723 *(36 of 50)*

Synopsis

ATC Controller reported a flight of two military trainers exited their training route prior to the coordinated fix and were flying below the Minimum Vectoring Altitude.

ACN: 2035032 *(37 of 50)*

Synopsis

A TRACON Controller, trainee and the Controller in Charge reported an IFR departure was assigned a VFR departure procedure and assigned a VFR data tag identifier which resulted in the aircraft flying below the Minimum Vectoring Altitude.

ACN: 2035031 *(38 of 50)*

Synopsis

A TRACON Controller reported a Corporate jet deviated off course from the approach and flew below the Minimum Vectoring Altitude.

ACN: 2034887 *(39 of 50)*

Synopsis

Air carrier First Officer reported a terrain warning while maneuvering during a visual approach in VMC conditions at a tower controlled airport. The pilot flying increased altitude, then continued the approach and landed safely.

ACN: 2034463 *(40 of 50)*

Synopsis

Air carrier B737-700 crew reported receiving GPWS obstacle warnings while on a visual approach at night. The crew executed a go around and returned to land uneventfully. Crew recommended use of the published RNAV approach versus visual procedures.

ACN: 2034436 *(41 of 50)*

Synopsis

A TRACON Controller reported they vectored an aircraft below the Minimum Vectoring Altitude.

ACN: 2034127 *(42 of 50)*

Synopsis

A Tower Controller reported they received a Minimum Safe Altitude Warning for an aircraft on short final and advised the aircraft.

ACN: 1994114 *(43 of 50)*

Synopsis

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

ACN: 1993285 *(44 of 50)*

Synopsis

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

ACN: 1993174 *(45 of 50)*

Synopsis

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

ACN: 1993167 *(46 of 50)*

Synopsis

TRACON Controller reported confusion between similar call signs as aircraft entered a higher MVA which resulted in a CFTT encounter and failure to issue a low altitude alert.

ACN: 1993123 *(47 of 50)*

Synopsis

SR20 pilot reported a less than expected climb rate while operating over mountainous terrain and the need to leave the area.

ACN: 1993020 *(48 of 50)*

Synopsis

Flight crew reported ATC issued a low altitude alert while they were on base leg for a visual approach.

ACN: 1992740 *(49 of 50)*

Synopsis

EMB-145 First Officer reported receiving an EGPWS terrain warning while on initial approach. The pilots observed the small hill below, were in VFR conditions, and continued to a normal landing.

ACN: 1992550 *(50 of 50)*

Synopsis

TRACON Controller reported an minimum safe altitude warning alarm failed to alert when an aircraft descended below the minimum vectoring altitude.

Report Narratives

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.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : S56.TRACON
State Reference : UT
Altitude.MSL.Single Value : 11000

Aircraft

Reference : X
ATC / Advisory.TRACON : S56
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 : Descent
Route In Use : Vectors
Airspace.Class E : S56

Person

Location Of Person.Facility : S56.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Military : 6
ASRS Report Number.Accession Number : 2042505
Human Factors : Confusion
Human Factors : Workload
Human Factors : Distraction

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 : Became Reoriented
Result.Air Traffic Control : Issued New Clearance
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 : Airspace Structure

Narrative: 1

Aircraft X was on a heading of 110 to avoid weather over a mountain range. I issued a descent to 11000 ft. from 12000 ft. (11000 ft. is the MVA in that area) with a good readback from the Pilot. I observed the aircraft at 10700 ft. and restated to maintain 11000 ft. The Pilot responded that they were on their way back up and they thought the clearance was to 10000 ft. I then issued a low altitude alert to which they responded they were on their way back up. I observed them a get to 10500 ft. before climbing back up. Luckily when this happened, they were east of the ridgeline and headed for lower terrain. Suggestion: This was Pilot error that I think I caught just about as soon as I could. With him reading back the altitude correctly there is not much more I could have done differently in this situation to fix it. I did not issue a brasher warning at the time because they were entering a critical phase of flight to final, but I should have had tower issue a Brasher warning once they were on the ground to ensure the Pilot was aware of their mistake and at least prevent this from happening to this particular Pilot again.

Synopsis

S46 TRACON Controller reported an aircraft descended below their assigned altitude and flew below the minimum vectoring altitude.

Time / Day

Date : 202310

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 11200

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Night

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Gulfstream IV / G350 / G450

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Flight Phase : Descent

Route In Use : Visual Approach

Airspace.Class B : ZZZ

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 : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 17700

Experience.Flight Crew.Last 90 Days : 30

Experience.Flight Crew.Type : 3680

ASRS Report Number.Accession Number : 2042480

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

This one report includes three separate parameter-deviations that happened in quick succession by the pilot flying. I was the assigned PIC (Pilot In Command)/PNF (Pilot Not Flying). We were on ZZZZZ X RNAV Arrival into ZZZ. We both are very experienced pilots with over 30000 hours between the two of us and around 10000 in the make and model of the airplane. We both are very conscientious too. Further, we know each other for about 28 years and flown together extensively on and off. Yet, on this particular flight, the PF (Pilot Flying) crossed the ZZZZZ1 intersection about 200 feet high he then accelerated to 250 knots (assigned speed was 210 KIAS) while trying to keep up with the descend-via clearance. Right after that, while on Visual Approach to Runway XXR (backed up by RNAV/GPS XXR), he got too low on final. I kept announcing that we were low and slow, but his corrections were very minimal. We then got a "too low, obstacle!" alert. We were in perfect VMC and did not see any obstacles, but, now he made a more assertive correction and returned to the glide path. The landing was uneventful. I could conclude with complex analysis of why and how, but, given our background together and my knowledge of this pilot's skills, I can tell you that he just had a bad day. He was very displeased with himself afterwards and tried to analyze what had happened. On my part, when I was telling him that we were low and slow and not getting the desired reaction, I should have changed my verbiage to something like "push the throttles";"

Synopsis

Corporate jet pilot reported the pilot flying descended too low on a visual approach and they received a terrain alert.

Time / Day

Date : 202310

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Altitude.MSL.Single Value : 5800

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Make Model Name : Skyhawk 172/Cutlass 172

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : VFR

Mission : Training

Flight Phase : Final Approach

Route In Use : Visual Approach

Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X

Reporter Organization : FBO

Function.Flight Crew : Instructor

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Commercial

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 564.4

Experience.Flight Crew.Last 90 Days : 105.1

Experience.Flight Crew.Type : 461.4

ASRS Report Number.Accession Number : 2042012

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Training / Qualification

Events

Anomaly.Deviation - Altitude : Overshoot

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

Anomaly.Deviation / Discrepancy - Procedural : FAR

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

I was the pilot monitoring. My student was doing a power off 180 to practice teaching it for his CFI checkride. We came in a bit low and had to add power to avoid hitting street lights. We were not in danger of colliding with them, just came in a bit low for my liking, which is why I am submitting this report. Tower did not mention us coming in low at all. Taxi instructions were normal, nothing was said. I just felt we came in a little too low and feel the student should have initiated a go around earlier. I called for the go around when I saw the street lights on the road just before [Runway] XXR.

Synopsis

A Flight Instructor reported the student on short final had to add power and initiate a go around to avoid hitting street lights.

Time / Day

Date : 202310

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : MHT.Airport

State Reference : NH

Altitude.MSL.Single Value : 1800

Environment

Flight Conditions : VMC

Light : Night

Aircraft

Reference : X

ATC / Advisory.TRACON : A90

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 : MHT

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 : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2041658

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Other / Unknown

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 : Aircraft Other Automation

Detector.Person : Flight Crew

When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

Cleared for the visual [Runway] 24 we were descending to the 1800 ft. MSL FAF altitude. As we rolled out on a base leg inside the WAVBO fix we simultaneously captured 1800 ft. and received a GPWS "PULL-UP"• . The FO (First Officer) disengaged the autopilot and took corrective action. The alert ceased almost immediately. We were lower than what is typical for our position on approach to MHT. A combination of our position and altitude in trying to avoid the obstacle at 1708 ft. MSL northeast of PUTRE. We neglected to note the obstacle at 1060 ft. west of WAVBO. Add into the company pages for MHT a warning about GPWS alerts for terrain on right downwind for Runway 24.

Synopsis

Captain reported a GPWS pull up alert during the initial approach phase of a night visual approach. The First Officer immediately pulled up, then continued the approach to a safe landing.

Time / Day

Date : 202310

Place

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

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
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
Route In Use.Other

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
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 : 2041651
Human Factors : Communication Breakdown
Human Factors : Other / Unknown
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 : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2041653
Human Factors : Other / Unknown
Human Factors : Communication Breakdown

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

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
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
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

ZZZ is uncontrolled. Once holding short of the runway, we called ZZZ Center and received our clearance to ZZZ1 via "As Filed". We had planned for the ZZZ obstacle departure, which reads to turn right direct to ZZZ VOR, then from ZZZ climb in hold until passing MEA/MCA. We were familiar with the terrain, had briefed the grid MORAs, had terrain radar on Navigation Display (ND), and had the enroute chart open. Weather was night VFR. After take-off, approaching the ZZZ VOR, identified by and in contact with ATC, we were climbing at a rate that was clear that terrain separation wouldn't be an issue, we were approaching the MSA, and so we decided we did not need to enter the hold, but rather to turn enroute as filed. We were of the mindset that once in contact and identified, that ATC would take over both terrain and route clearance/planning, but no further instructions were given. Out of curiosity, we queried ATC if they needed a specific altitude to continue on our route, or if they had a minimum vectoring altitude they needed us to climb above. They reminded us that terrain separation was our responsibility at that time, but that if we had any doubt they recommended a heading of 170 degrees. While terrain separation was never in any doubt for us, in order to ensure we were all on the same page we elected turn onto the suggested heading, and passing XY,000 we were cleared direct to ZZZ1 VOR and continued our flight as planned. In hindsight, we should have entered the hold at ZZZ [VOR] and completed the obstacle departure routing, including a climb to at least XX,200 ft. (MORA) and requested direct routing, or to XZ,000 ft. (airway MEA) and continued as filed. Terrain clearance was never in doubt, the radar altimeter never activated, the terrain radar display gave us no cause for concern, the enroute chart was displayed, and MORAs were extensively briefed (since it was night and uncontrolled). However, in essence, we deviated from the obstacle departure procedure, and thus also deviated from the operations manual procedure, and felt it prudent to file this.

Narrative: 2

We were cleared as filed to ZZZ1 departing ZZZ which is uncontrolled. We briefed the departure procedure ZZZ. Upon departure started on the Obstacle Departure Procedure (ODP) but elected not to do the hold as we felt we were safely approaching MSA and MORA. Our display and terrain display reflected so as well. We queried ATC on our terrain clearance and they advised terrain separation was our responsibility but advised a vector to the South. We took the vector and out of XY,000 proceeded direct to ZZZ1 [VOR]. In

hindsight, per general operations manual we should have flown full ODP (entered hold) until ATC was satisfied to give us a direct or just continue to MEA until going on course. Clarifying clearance with my First Officer (FO). Proper operations manual adherence. Following ODP procedures.

Synopsis

Air carrier flight crew reported non-compliance with the obstacle clearance charted procedure while climbing from a non-towered airport.

Time / Day

Date : 202310

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : PCT.TRACON

State Reference : VA

Aircraft

Reference : X

ATC / Advisory.TRACON : PCT

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 : CHO

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 : 2041383

Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

The altitude alerted us of terrain as we descended to 3,000 feet on approach. We notified ATC and they assured us of the MDA. The altimeter was checked and was correct. Check for any new antennas that might be in the area that may have caused this alert.

Synopsis

Air carrier First Officer reported receiving a GPWS terrain alert on approach into CHO airport.

Time / Day

Date : 202310

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : HTS.Airport

State Reference : WV

Aircraft

Reference : X

ATC / Advisory.TRACON : HTS

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

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 : 2041382

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

GPWS "Terrain"• alert on visual approach joining final/localizer Runway 30 in HTS, leveling off before FAF/GS intercept within protected area. Mountainous terrain in area. FO (First Officer)/PF (Pilot Flying) will make efforts to join final further out at higher altitude or request ILS in lieu of visual.

Synopsis

Air carrier First Officer reported receiving a GPWS terrain alert on a visual approach to HTS airport.

Time / Day

Date : 202310

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : SYR.Tower

State Reference : NY

Environment

Flight Conditions : IMC

Aircraft

Reference : X

ATC / Advisory.Tower : SYR

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 : SYR

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 : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2041148

Human Factors : Training / Qualification

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 : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 11703

ASRS Report Number.Accession Number : 2039645

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Events

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Returned To Clearance

Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

As Pilot Flying, we were being vectored to the Final Approach Course, instructed to intercept the final approach course, then cleared the approach, once established. As I was intercepting the final approach course, I perceived that we were getting above the glide slope, so I engaged TCS (Touch Control Steering) to hand fly back onto the glide slope as we descended. I over-controlled and went below [the glide slope] momentarily and got an altitude alert. The Captain took control, and got us back on the proper glide path. Once we were back on the proper glide path he returned control to me, and we landed normally. No comment was made by ATC. I likely experienced some form of confirmation bias. We so often get left high, that as we were intercepting, I overcompensated, causing me to over-control the aircraft, as we were busy configuring, etc. Lesson learned. I may have allowed myself to get a bit complacent about proficiency. Never again.

Narrative: 2

Turning onto the Runway 28 LOC ATC gave us a final turn, and 2,600 ft ALT to intercept. 2,600 was in the altitude alerter, and the aircraft was in the for the intercept heading to fly to join the Runway 28 LOC. Our minimums were 300 AGL and WX (Weather) was 500 ft OVC (Overcast). I turned my attention momentarily for a final review of the missed approach segment, since the possibility of a missed approach due to WX was higher than a typical approach. I looked back and noticed the aircraft was at 2,300 and rapidly descending. I alerted the FO (First Officer). He disconnected the autopilot and started a climb to return to 2,600 ft. The correction was too aggressive, and the aircraft climbed to 2,900 AGL, at which time I announced "my aircraft" and assumed control. I flew the aircraft manually to re-establish a stable descent and join the localizer. When the aircraft was stable, The autopilot was turned back on, and controls transferred back to the FO. The approach was stable at 1,000 AGL, and we continued the approach to a normal landing. ATC said nothing of the altitude deviation. FO inexperience, lack of currency. He had told me earlier in the trip that he is on RSV (reserve), and rarely has flight assignments.

Synopsis

Air carrier flight crew reported descending below the glide slope on approach to SYR when the flying First Officer lost situational awareness.

Time / Day

Date : 202310
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : F11.TRACON
State Reference : FL
Altitude.MSL.Single Value : 1600

Environment

Flight Conditions : VMC
Light : Night
Ceiling.Single Value : 2500

Aircraft

Reference : X
ATC / Advisory.TRACON : F11
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
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : F11

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 : Commercial
ASRS Report Number.Accession Number : 2041011
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 : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2041164
Human Factors : Communication Breakdown
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
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 : FLC complied w / Automation / Advisory
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Event occurred while flying the GRNCH5 / BRICE transition into MCO for a Runway 36L arrival. Weather was VMC. The ATC Controller informed us to expect and plan for the RNAV (GPS) Runway 36L approach while on the GRNCH5. The RNAV 36L was correctly loaded into the FMS with LNAV and VNAV PATH active. Once we were past the last waypoint on the GRNCH5 (BRICE), the Controller began to give us short vectors to the final approach course and was late on providing descent altitudes. The base leg vector provided by the Controller put us inside the final approach fix (BERDY) and did not provide enough space for the approach to engage and for the aircraft to reach 1600 ft. MSL at BERDY as per the approach. The final approach course was not captured and autopilot was disengaged. I manually flew the aircraft on to the 36L final approach course. At this time, we received a "low altitude warning" from the Controller. I leveled the aircraft out and transitioned to the 36L PAPI indicators for glideslope guidance. We were in a stable flight regime and did not require a go-around. The aircraft landed without further incident. I was expecting to fly the RNAV 36L with an extended left downwind leg that would lead to a left base turn to final with plenty of space to capture the final approach course and be at the correct approach altitudes prior to BERDY. I did not expect the short vectors that put us high and inside BERDY. Tell the Controller that we are unable to accept the short vector inside of BERDY and would like to fly the RNAV 36L as previously informed to plan for.

Narrative: 2

Plan was a visual approach 36L. We had the RNAV 36L set up for guidance, it was night, good visibility and approximately 2500 overcast. ATC gave us radar vectors for the visual approach and descent to 1600 ft. ATC turned us inside the FAF and we picked up the airport then the runway. We lost the RNAV guidance but picked up the PAPI. The PAPI was all red lights, at the same time Tower advised us of a low altitude alert, we were already climbing up to get back on the PAPI. The First Officer (FO) returned the aircraft to two white and two red on the PAPI and we landed uneventfully. We should have requested the

full approach or at least a turn into the airport outside the FAF but were expecting to pick up the airport sooner than we did. ATC should not have turned us in so tight. We should have requested the full approach or done a go-around and started it again.

Synopsis

Air carrier flight crew received a low altitude alert from ATC while on approach. Flight crew complied with alert and landed uneventfully.

Time / Day

Date : 202310

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Environment

Flight Conditions : VMC

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : EMB-505 / Phenom 300

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Final Approach

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2040977

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Events

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

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Air Traffic Control

Detector.Automation : Aircraft Terrain Warning

Detector.Person : Air Traffic Control

When Detected : In-flight

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

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

On final approach into ZZZ, my First Officer (FO) was flying the aircraft on a visual approach to Runway XXL. The First Officer is inexperienced in jet aircraft and work executing a visual approach in fast aircraft. During the approach, he got low on the glide path. We had the RNAV XXL as a back up to the visual approach. Inside the final approach fix, we got a warning for "Glideslope"• . The Tower Controller also gave us an altitude alert. At that time we were seeing one white and 3 red lights on the 4 light PAPI system to which I avoided the Controller. The First Officer was able to get stabilized on glide path by 500 ft. and a landing was made. No further action was taken. Warning and ATC alert. Descending to low on approach during a visual procedure. I directed the FO to correct the stride and descent rate and return to the fidelity. The First Officer corrected the descent rate and proceeded to become stabilized by 500 ft. Were continued to land without further event. Be vigilant of descent rate on a visual approach.

Synopsis

EMB-505 Captain reported their inexperienced First Officer was conducting a visual approach and received an EGPWS terrain warning, and an ATC altitude alert inside the final approach fix. Flight crew climbed and reacquired a normal descent profile for landing.

Time / Day

Date : 202310

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Altitude.MSL.Single Value : 2600

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : B777 Undifferentiated or Other Model

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Climb

Route In Use : Vectors

Airspace.Class B : ZZZ

Person

Location Of Person.Facility : ZZZ.Tower

Reporter Organization : Government

Function.Air Traffic Control : Local

Qualification.Air Traffic Control : Fully Certified

Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 4

ASRS Report Number.Accession Number : 2040853

Human Factors : Communication Breakdown

Human Factors : Confusion

Human Factors : Workload

Human Factors : Time Pressure

Communication Breakdown.Party1 : ATC

Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Altitude : Undershoot

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 : Executed Go Around / Missed Approach

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

I was working Local Control. We were in an unusual, complex configuration due to an airshow. It had been pre-coordinated that, for the special configuration, ZZZ TRACON MUST provide 20 miles in trail to RWY XXL with standard separation to RWY XXR. ZZZ TRACON was running 4-6MIT in trail to RWY XXL with no one landing RWY XXR. It was exceptionally difficult to manage the existing traffic and depart RWY XXL, which had an abnormally high number of departures due to the configuration. In addition, all of the destinations that typically have CFR programs were being sent to RWY XXL. We attempted to adjust a CFR flow time due to being unable to depart and the aircraft ended up with an additional 20 to 30 minute delay on top of what they already had received. With limited space and places to put aircraft, I crossed the aircraft to hold between the runways, which was the only available spot to hold an aircraft due to traffic waiting for both RWY XXR and RWY XXL. The following 3 to 5 aircraft also had flow times and with an already complex operation. In order to not run the risk of the other aircraft receiving delays and blocking and preventing any and all departures, given that the next 5 to 7 aircraft were tightly in trail to RWY XXL, I sent Aircraft X around on check in, approximately 5 mile final. I gave the pilots of Aircraft X, a standard go-around of "turn left to heading 260, maintain 031." I completed several other tasks and then, before shipping the aircraft to departure, observed the heading and altitude to be appropriate. Heading 260 and 2600 ft. at the moment of transfer of communications, given the instructions, and shipped them to departure. Later, when the aircraft came back around, the pilot asked for the tower phone number and called the tower. It was then that I learned that there was an issue with their altitude and a possible MVA violation. The pilot stated that they were given "H260, M026" and were upset about the proximity to terrain. When we listened to and watched the playback, it was hard to differentiate whether they read back M021 or M031, which, either way, was not what they complied with. And watching the playback, they were level at 2600 ft. for a little while before shipping the aircraft, but the aircraft never inquired about the altitude with the tower. Suggestion: Despite a culture of ZZZ TRACON not advising us when an aircraft is not on the advertised approach and also some controllers and management not wanting the published missed to be issued, I am going to go back to issuing that, since it is nearly identical to what we assign manually, but it leaves less room for ambiguity, poor/mistaken readbacks, and hearback issues. Furthermore, while it is not everyone in Area B at ZZZ, there is a culture of ignoring procedures, LOAs (Letter of Agreement), and prearranged coordination when it comes to arrivals and runway assignments, even when there is an extreme need for help and adherence to the rules and coordinations due to complexity or traffic needs. This is something that has been discussed at length and clearly there is a systemic lack of understanding, caring, and or ability on that side.

Synopsis

Tower Controller reported a possible minimum vectoring altitude violation due to a miscommunication in regards to the assigned altitude of a go around instruction.

Time / Day

Date : 202310
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 4000

Environment

Flight Conditions : IMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : Cessna 210 Centurion / Turbo Centurion 210C, 210D
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class C : ZZZ

Person

Location Of Person.Facility : ZZZ.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Approach
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 2
ASRS Report Number.Accession Number : 2040849
Human Factors : Workload
Human Factors : Time Pressure

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / 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.Flight Crew : Diverted
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

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
Contributing Factors / Situations : Weather
Primary Problem : Human Factors

Narrative: 1

I relieved another CPC and Developmental that had been training for approximately 90 minutes. They had just had an issue with this aircraft. The pilot turned and descended unexpectedly. The aircraft was trying to come to ZZZ and land. The weather conditions on the surface were IMC. The pilot was consistently unable to maintain altitude or assigned headings. There were multiple other aircraft on frequency in bound to ZZZ. I put Aircraft X on a vector to be last in my sequence. As the aircraft got closer to the airport I noticed him veer off the final. I issued reintercept vectors. Within 10 miles of the airport the pilot also went below safe altitudes. I issued multiple low altitude alerts and got the pilot to climb to a safe altitude and vacate the approach. I asked the pilot if he was having equipment issues or if there was something wrong with the aircraft. The pilot advised the issue was with the pilot himself. Knowing he was in an unsafe and scary situation, I tried to calm the pilot and reassure him by getting him to focus on maintaining the altitudes I assigned. I asked how much fuel too and he said 2 hours. I offered ZZZ1 as an alternate with better weather. The pilot asked for another approach at ZZZ so I gave him a heading to fly and periodically checked back in to make sure his altitude and heading were good. He asked if the weather was still IMC at ZZZ. I said yes and then he asked to try ZZZ1. I gave vectors and kept prompting the pilot to maintain a safe altitude. I issued more Low Altitude Alerts. The pilot did not report ZZZ1 in sight and asked to return to ZZZ2. I immediately had the pilot climb to safe altitudes and issued vectors away from high terrain. The pilot was able to climb safely and get on course. I advised the Center Sector of the issues before completing the handoff. Suggestion: Use vigilance for aircraft performance and when they are descending dangerously or not flying the correct path. The pilot did not seem capable of operating in IMC conditions.

Synopsis

A TRACON Controller reported a small aircraft on approach in IMC repeatedly deviated from their course and descended below assigned and published altitudes flying below Minimum Vectoring Altitudes.

Time / Day

Date : 202310

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 3500

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 2.5

Weather Elements / Visibility.Other

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.CTAF : ZZZ

Aircraft Operator : Personal

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

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : VFR

Mission : Ferry / Re-Positioning

Flight Phase : Initial Climb

Route In Use : Direct

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Private

Experience.Flight Crew.Total : 523

Experience.Flight Crew.Type : 442

ASRS Report Number.Accession Number : 2040820

Events

Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control

Anomaly.Inflight Event / Encounter : VFR In IMC

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Landed As Precaution

Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

I checked weather on aviationweather.gov, website, ForeFlight Radar, and listened to ZZZ AWOS. None reported IMC over ZZZ at XA:45 Day 0. I could see blue sky with no ceiling evident. AWOS reported mist and 2.5 mile visibility. I departed Runway XX. Lost visibility around 200 ft. AGL. Was unsure when I would regain visibility if I continued the climb so I decided to descend and return to ZZZ. When I regained visibility I was disoriented and unable to stop my descent without stalling so I put the plane down in a field.

Synopsis

Pilot reported they became disoriented after takeoff in marginal VFR conditions. The aircraft entered a stalled condition and the pilot landed off airport.

Time / Day

Date : 202310

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 3600

Aircraft

Reference : X

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 : 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

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 : 2040738

Human Factors : Situational Awareness

Events

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

Anomaly.Inflight Event / Encounter : CFIT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

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

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

After being cleared for the visual to Runway XX and while descending on the approach into ZZZ I felt that I needed to extend my approach a little further to account for the descent. Several miles away from the final approach fix I decided to descend to 3600 ft. since the FAF was 3600. While making my turn to final we received a terrain alert. I disconnected

the Autopilot and climbed about 200 ft. and the terrain warning stopped. The rest of the approach and landing were uneventful.

Synopsis

EMB-145 Captain reported receiving a "terrain alert" turning final while on a visual approach. Captain climbed back up and continued the approach to landing.

Time / Day

Date : 202309

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : Marginal

Weather Elements / Visibility.Visibility : 10

Ceiling.Single Value : 1100

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Personal

Make Model Name : Bonanza 35

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : None

Mission : Personal

Flight Phase : Cruise

Route In Use : Direct

Airspace.Class G : ZZZ

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Single Pilot

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 10500

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 350

ASRS Report Number.Accession Number : 2040510

Human Factors : Situational Awareness

Events

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

Anomaly.Inflight Event / Encounter : VFR In IMC

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Took Evasive Action

Result.Flight Crew : Diverted

Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Weather

Primary Problem : Human Factors

Narrative: 1

Flight from ZZZ1 to ZZZ. ZZZ forecast was marginal VFR with improving conditions. Conditions 30-60 miles south of the airport were much better and the weather was moving north so I anticipated improvement. Easy to stay VFR for 80 percent of the flight. Between broken layers at worst. Had to stay east of direct track to avoid moderate to heavy rain and low ceilings. Twenty-five minutes or so from destination, I descended below broken layer while easily maintaining visibility and cloud clearance requirements. Ceiling continued to lower and I descended to stay below it. At time of incident, believe I was east-northeast of ZZZ (reporting 1100 broken I believe at the time). I was at 2000 MSL (unsure of AGL as I was over the hills/valleys). Flight is getting uncomfortable now given need to stay out of clouds and still comply with minimum safe altitudes. Ceiling continued to lower and I thought I set altitude alerter for 1800 MSL and started a 300 fpm decent. Looked down at the chart to confirm terrain/Tower clearance ahead and to attempt to stay out of any lower class E airspace. Out of the corner of my eye, I saw the ground rushing past indicating the aircraft was at an altitude I felt was too low. At the same time I entered clouds and lost visibility briefly (felt like 5 seconds). Looked at altimeter and saw I was approaching 1700 ft. (altitude had not captured). The proximity to the ground was not comfortable and I knew the layer above me was thin so even though I could see again, I pulled up into the clouds. Broke out around 2500 ft. MSL and proceeded to ZZZ2 where I could land VFR. As for lessons learned...ha!...many. I'm employed as a commercial pilot and have not scared myself in many years. Not sure if it was arrogance or overconfidence or what, but I badly underestimated the difficulty of completing this flight. This was one of those situations where I got on the ground and felt stupid and unprofessional. I relearned lessons about scud running and just how difficult and busy it can get trying to look ahead at what's coming, maintain cloud clearance and ground clearance, and manage flying the airplane. I must have mismanaged the Autopilot given the decent below my selected altitude of 1800. The Bonanza is a relatively fast aircraft and the ground moves by quickly. Flying VFR in "marginal VFR" conditions is technically legal, but it may not be smart. Never again.

Synopsis

Beechcraft Bonanza pilot reported descending toward terrain while attempting to remain VFR below lowering cloud deck. Pilot climbed into clouds and after re-entering VFR conditions diverted to a suitable airport.

Time / Day

Date : 202310

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Environment

Flight Conditions : Marginal

Aircraft

Reference : X

Aircraft Operator : Personal

Make Model Name : RV-8

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Descent

Person

Location Of Person.Facility : ZZZ.ARTCC

Reporter Organization : Government

Function.Air Traffic Control : Enroute

Qualification.Air Traffic Control : Fully Certified

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

ASRS Report Number.Accession Number : 2040203

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Track / Heading : All Types

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Air Traffic Control

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Requested ATC Assistance / Clarification

Result.Flight Crew : Became Reoriented

Result.Air Traffic Control : Issued New Clearance

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
Contributing Factors / Situations : Weather
Primary Problem : Human Factors

Narrative: 1

Aircraft X, a flight of 2/RV8, was on an IFR flight plan to ZZZ at 9000 ft. through Sector ZZZ and ZZZ1 sector respectively. The aircraft requested lower and was descended to 5000 ft. then to 3500 ft. per the MIA (Minimum IFR Altitude) in that area. After passing the 3500 ft. MIA I witnessed the aircraft begin to descend on his own. Out of 3300 ft. I told Aircraft X to maintain 3000 ft. and that the minimum IFR altitude in that area was 2800 ft. I witnessed the aircraft continue to descend through 2800 ft. at which point I gave a Low Altitude Alert and told the aircraft to climb back to 2800 ft. The aircraft responded and began to climb. Once at the appropriate altitude the aircraft advised he would no longer like to conduct a visual approach and wanted vectors for the RNAV XX instead. For clarification, the aircraft did not have an approach clearance at any time. Person A pointed the aircraft out to ZZZ approach and got control, as well as pointing the aircraft out to sector ZZZ2 and got control. I then cleared the aircraft to the initial approach fix ZZZZZ. After about a minute I noticed the aircraft was about 15 degrees left of course from his route line that showed direct ZZZZZ. I advised the aircraft he was left of course and cleared the aircraft back to ZZZZZ, at which point the aircraft asked for vectors for the RNAV XX. I told the aircraft we cannot provide vectors for that approach as it is not depicted on our radar scope and clarified that if the aircraft wanted vectors to load the fix into the system that I could do that but not vectors for the approach. The aircraft then stated that he had "found a hole in the weather" and wanted to cancel IFR, which he did. I first reported this event to the Front Line Manager (FLM) when the aircraft descended below the MIA, then reported again when the aircraft was not direct ZZZZZ.

Synopsis

A Center Controller reported a flight of two RV8's descended from their assigned altitude and flew below the Minimum IFR Altitude. Later in the flight the same aircraft deviated from their assigned route.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 7650

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 9000

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 470
Experience.Flight Crew.Last 90 Days : 130
Experience.Flight Crew.Type : 470
ASRS Report Number.Accession Number : 2039482
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance

Assessments

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

Narrative: 1

I was on a commercial duties of PIC (pilot in command) training flight with a student in day VFR conditions under an IFR flight plan. We were maintaining 9000 ft. MSL. A cloud layer ahead of us (9000 ft. MSL-12000 ft. MSL) posed a threat of icing due to the noted OAT at that altitude (1 deg C). We requested to divert off route to the right heading 120. ATC gave it to us. It was apparent after a while that we would not be able to maintain cloud separation unless we descended. We ultimately requested to descend to 7000 ft. MSL. The idea was that we would maintain clear of clouds and be in temperatures above freezing. They cleared us to 8000 ft. MSL. We overshoot and descended to roughly 7650 ft. MSL. ATC notified us of the altitude slip and we made immediate corrections. We climbed at best rate with full power, but were unable to get back to our assigned altitude promptly. ATC informed us of a possible pilot deviation moments later due to the altitude deviation which caused us to descend below the MEA. The cause of this deviation in my opinion was fixation. I was fixated on remaining clear of icing conditions and altitude was an after thought, despite being on an IFR flight plan.

Synopsis

Cessna 172 instructor pilot reported an altitude deviation in an area of mountainous terrain during daylight visual conditions on a IFR flight plan. The pilot became distracted while avoiding icing conditions and descended below the ATC assigned minimum enroute altitude, then recovered and continued the flight.

Time / Day

Date : 202309
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Ceiling : CLR

Aircraft

Reference : X
ATC / Advisory.Tower : 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
Route In Use : Visual Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Type : 6000
ASRS Report Number.Accession Number : 2039272
Human Factors : Fatigue
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 - 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.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Upon making visual contact with ZZZ airport, we were cleared for a visual approach and told to remain within 5 miles of the field. During the base leg, the aircraft altitude became less than normal, but was immediately leveled off and a normal approach and landing was made without incident. The Tower issued a low altitude alert while we were on the base leg which led me to write this report. Fatigue may have been a factor. As well since it was the fourth leg and we had earlier maintenance delays. We briefed that final would be about 7 miles but we were issued instructions to stay within 5 miles of the field. So I configured during base turn and allowed the aircraft to descend a little too early. After receipt the altitude alert from Tower, I leveled off. The airport was in sight by both pilots and we decided a safe and stable approach could be made. I should have refused the request for an early base turn, within 5 miles of the field when I had briefed a 7 mile final.

Synopsis

CRJ-900 Captain reported receiving a low altitude alert from ATC while conducting a visual approach. The Captain indicated the aircraft was vectored closer to the airport and upon receipt of the ATC low altitude alert, leveled the aircraft, stabilized, and landed safely.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : A319

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

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)

ASRS Report Number.Accession Number : 2039132

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Confusion

Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X

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)

ASRS Report Number.Accession Number : 2039678

Human Factors : Workload

Human Factors : Situational Awareness

Human Factors : Human-Machine Interface
Human Factors : Confusion
Human Factors : Time Pressure

Events

Anomaly.Deviation - Altitude : Overshoot
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
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Airspace Structure
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 : Procedure

Narrative: 1

I was the pilot flying and set up the arrival to the ILS XXR at ZZZ. The company pages mentioned nothing abnormal regarding terrain or the arrival, however we briefed high terrain and night as potential threats. I planned to mitigate these threats by flying the published arrival to the published ILS approach. I was slightly surprised that there were no altitude restrictions published for the STAR, particularly due to the high terrain. When we were still about 50 miles from even starting the published STAR at ZZZ1, the Center Controller told us to "fly present heading and descend to 14,000', vectors to final. Since he was setting us up for vectors to final, I reloaded the approach, no STAR, and the ZZZZZ transition to the ILS XXR. I then extended the final approach course off ZZZZZ. We intercepted the final course and the Controller advised us "due to MVA"• it would be another 3 miles or so before he could clear us lower, but if we called the field in sight he could clear us for the visual. Conditions were VFR with a full moon at our 6 o'clock which provided excellent visibility, so we elected to call the field but still continue an instrument assisted descent. I set the GS (Glide Slope) intercept altitude and engaged managed descent (still in managed lateral guidance due to our distance from the field). The LOC showed about 1/4 dot right of course and the GS showed about 1.5 dots low, however since the LOC/GS are only valid to 18/10nm, respectively, I decided to fly in managed mode until we got closer. Looking outside we noticed the terrain was significant, and I pointed it out, however we were well clear and could see all of the city lights unobstructed all the way down. Shortly after we had mentioned and discussed the terrain, we got a "TERRAIN, TERRAIN-PULL UP, PULL UP"• warning. I hesitated for maybe a second before applying the terrain-escape procedure because it seemed like a spurious warning since we could see the terrain was no factor, but I quickly realized it wasn't optional at night. I executed the escape procedure and climbed about 3000 feet before reducing power and resuming the descent. We then intercepted the ILS LOC and GS, configured, and landed normally. Cause: Unfamiliarity with the airport and STAR. Also, I don't understand why the points on the STAR didn't have altitudes associated with the fixes like most do, particularly

when terrain could be a factor. There are MEA/MOCAs listed between points, but this wouldn't have helped us since the Center Controller vectored us off the STAR. The ILS is also dangerous in my opinion since there's a NO routing from ZZZZ, but there's a nearly 7000 ft. peak about 5 miles to the east of it with no procedure depicted to safely descend. I also (clearly mistakenly) thought I was being conservative with terrain avoidance by using managed descent rather than dive and drive. I also think the GPWS may have triggered earlier than we expected because we were still so far from the field. I would be interested to know what specific conditions triggered the alert if FOQA data was reported. Also, the terrain display on both of our PFDs (Primary Flight Displays) was completely useless throughout the entire event. We both had our brightness turned all the way up, but even when it announced "PULL UP" there was zero red or even amber displayed on our PFDs, which added to our confusion. I'm wondering if it was a combination of radar altitude with a certain descent rate rather than the GPWS database. Solution: Add some mention of the terrain to the company pages and maybe recommend adding MEA/MOCA to the waypoints in the arrival, as well as not allowing Center to vector off the arrival at night. Overall, I just think the entire STAR and approach are very poorly designed for mountainous terrain. There are lots of unnecessary "gotchas" that I haven't dealt with at any other airports I've operated into with company.

Narrative: 2

We had done a thorough arrival briefing prior to descent, and specifically mentioned terrain as a potential threat flying into ZZZ. We were aware of the high terrain south and east of ZZZ, and we both had our terrain display depicted on our ND's (Navigation Display). The ILS XPR approach was briefed and the highest MSA of 8800 ft. was mentioned as well as the highest obstacle depicted on the XPR ILS approach chart of 6963 ft.. While talking to Center, we had been given direct ZZZ1 for the Arrival ZZZ. While flying direct ZZZ1, we requested direct ZZZZ1, but Center instead gave a heading to fly towards ZZZ. Center indicated that they couldn't give us lower because of the high MEA restriction. Center also indicated that the Tower was closed, and asked if we had the airport in sight. I increased the runway lights to high intensity and the runway was clearly visible. We reported the airport in sight and Center gave us a heading to intercept the localizer and cleared us for the Visual Approach approximately 30 miles out. Cause: We started a managed descent down from the MEA while tracking the localizer. I had a clear line of sight to the city lights and the terrain below us was clearly visible with the full moon light. The terrain display on the ND did not depict any terrain. I mentioned to the F/O (First Officer) that I had the terrain in sight and it was no factor. Just as I said that, we got a GPWS warning "terrain, pull up". We executed the GPWS recovery maneuver, climbing up to about 10,500 ft. Clear on the terrain, we re-engaged the autopilot and reconfigured the automation and continued the descent into the approach phase and flew the visual approach XPR, backed up by the ILS to a normal landing. Solution: We flew a Basic A319 at night into an unfamiliar uncontrolled airport with high terrain as a potential threat with no approach control. We were off airway, on a radar vector, to intercept a localizer 30 miles out and then cleared for a visual approach from Center. I don't think we had EGPWS, so the visual display on our ND's was limited. The flight to ZZZ was a reassignment. We were originally scheduled to fly to ZZZZ. Change the ZZZZ1 STAR to incorporate minimum altitude crossing restrictions, instead of just the MEA's depicted. Change the [company] arrival procedure into ZZZ to mandate staying on the STAR for terrain avoidance. Do not accept radar vectors.

Synopsis

Air carrier flight crew flying a visual approach at night into an unfamiliar airport received a ground proximity warning. Flight crew climbed up several thousand feet then resumed the descent on approach.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

ATC / Advisory.TRACON : 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 : Initial Climb

Airspace.Class D : ZZZ

Airspace.Class E : ZZZ

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2039086

Human Factors : Time Pressure

Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2039719

Human Factors : Situational Awareness

Human Factors : Human-Machine Interface

Human Factors : Confusion

Human Factors : Time Pressure

Events

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

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

Approach control delayed descending aircraft due to opposite direction traffic. We were subsequently cleared for a visual to Runway XX ZZZ. The crew, however, decided to initiate a "go around" due to the height above the glide path. The tower controller then instructed us to turn right and enter a right downwind for Runway XX. Shortly after initiating the turn, the EGPWS activated. We responded to the EGPWS and advised the tower controller.

Narrative: 2

Was kept high due to traffic, unable to descend safely to be stable for landing. Started a go around (soft) above 1500 ft. Was visual, turned into right traffic per tower. Above 2100 feet received "terrain, terrain"•, no conflict in sight, initiated an immediate climb and informed tower. He asked why we were climbing, we explained. We handed off to approach, got vectors and landed without incident. ATC related, we were too kept to high. I could have requested a 360, or s turns sooner, it may have helped.

Synopsis

An Air Carrier flight crew reported they received a Ground Proximity warning after initiating a go around.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : B737 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

Person

Location Of Person.Facility : ZZZ.Tower

Reporter Organization : Government

Function.Air Traffic Control : Local

Qualification.Air Traffic Control : Fully Certified

Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 7

ASRS Report Number.Accession Number : 2038915

Human Factors : Workload

Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Air Traffic Control

Detector.Automation : Aircraft RA

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.General : Flight Cancelled / Delayed

Result.Flight Crew : Executed Go Around / Missed Approach

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

Result.Flight Crew : Requested ATC Assistance / Clarification

Result.Air Traffic Control : Provided Assistance

Result.Air Traffic Control : Issued New Clearance

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airport

Contributing Factors / Situations : Airspace Structure

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

Narrative: 1

I was working Local Z, landing Runway XXL and Runway XXR. An aircraft checked in turning base on the RNAV-Z Runway XXR. There was traffic on the straight in final for XXL. I called the traffic and cleared the aircraft to land. Aircraft X was not on my frequency. Aircraft X's initial contact was indicating he was responding to a TCAS RA. I responded, "Roger, advise clear."• Aircraft X descended, and at the final approach fix was at 5900 ft. and I received a low altitude alert. I issued the alert to Aircraft X. One mile later the aircraft indicated he was clear of conflict. I responded with, "say intentions."• He requested a missed approach and I issued the instructions. The aircraft came back around and landed Runway XXR without incident. On exit, Aircraft X requested the Tower phone number. Not putting two aircraft side by side on the finals for the Runway XX's. I personally had 5 TCAS RA's on this single day.

Synopsis

A Local Controller reported an aircraft descended in response to a TCAS/RA for traffic abeam landing on the parallel runway and flew below the Minimum Vectoring Altitude.

Time / Day

Date : 202309

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 2300

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Military

Make Model Name : Heavy Transport, Low Wing, 4 Turbojet Eng

Crew Size.Number Of Crew : 3

Flight Plan : IFR

Mission : Tactical

Flight Phase : Descent

Route In Use : Vectors

Airspace.Class E : ZZZ

Person

Location Of Person.Facility : ZZZ.ARTCC

Reporter Organization : Government

Function.Air Traffic Control : Instructor

Function.Air Traffic Control : Enroute

Qualification.Air Traffic Control : Fully Certified

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

ASRS Report Number.Accession Number : 2038628

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Workload

Human Factors : Time Pressure

Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Track / Heading : All Types

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Became Reoriented

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

Narrative: 1

I was monitoring a Controller. Aircraft X was west of ZZZ1 and direct ZZZZZ expecting RNAV XXL at ZZZ. Controller assigned 2,300 ft. and heading 160 with precipitation in the area. Shortly after, Controller stated that Aircraft X was below the 2,900 ft. MVA surrounding ZZZ1. He assigned Aircraft X a climb to 2,900 ft. Controller seemed to believe that Aircraft X had deviated around weather after being assigned the 160 heading. I did not hear Controller approve such deviations, but it's possible he did so. Suggestion: The obvious solution is don't bust the MVA. However, I have noticed that some controllers immediately descend all aircraft to the lowest available altitude, usually 2,300 ft. Aircraft X had 40 or so miles to fly and would have been perfectly fine at 3,000 ft. or 4,000 ft. Perhaps encourage facility controllers to not be in such a rush to descend aircraft all the way. Explain to people that it's perfectly possible to conduct a stabilized approach without dumping to below 3,000 ft. 50 miles from the runway.

Synopsis

A Center Controller reported an aircraft deviated for weather from their assigned heading and flew below the Minimum Vectoring Altitude.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Aircraft : 1

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Personal

Make Model Name : MU-2

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Initial Climb

Route In Use : None

Airspace.Class C : ZZZ

Aircraft : 2

Reference : Y

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Beechjet 400

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Ambulance

Flight Phase : Initial Climb

Route In Use : None

Airspace.Class C : ZZZ

Person

Location Of Person.Facility : ZZZ.Tower

Reporter Organization : Government

Function.Air Traffic Control : Local

Qualification.Air Traffic Control : Developmental

ASRS Report Number.Accession Number : 2038613

Human Factors : Confusion

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types

Anomaly.Conflict : Airborne Conflict

Anomaly.Deviation - Altitude : Undershoot

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.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

On local, I departed Aircraft X runway heading 060. Their flight plan had them flying to ZZZZZ intersection which is a heading of 050. Once I switch him to departure at the departure end of the runway Aircraft X appeared to be turning to the left. From my point of view I assumed departure turned the aircraft to the left. Per our SOP once an aircraft turns away from the centerline, the departure controller is not allowed to turn back towards the centerline without approval from local control. The departure controller did not call up and coordinate turning back towards the centerline, regardless if the pilot turned on his own. Once I noticed Aircraft X turning I cleared Aircraft Y for takeoff turning right to a 090 heading. This would provide more than the 15 degree minimum separation required. But as Aircraft Y was on his takeoff roll, Aircraft X started to turn back towards the center line. They ended up being only 2 miles apart without the divergence. I issued traffic to Aircraft Y and insured he turned right to 090. He immediately climbed above Aircraft X and had vertical separation within a few seconds. I believe Aircraft X was having issues because he was still at 1500 ft. 7 miles off the departure end, he also had a low altitude alert at the same time. Anticipating aircraft characteristics he should have climbed higher and faster and it shouldn't have been as close as it ended up being. There was no collision alert for the incident. Suggestion: In the future I will turn the first aircraft to ensure the separation is there and not assume departure had turned the aircraft. Also clear guidance on whether an aircraft turns on his own, if that still requires coordination with local. Since he was supposed to be runway heading is departure allowed to turn back to runway heading without coordination. That could be clearer.

Synopsis

A Tower Local Control trainee reported they cleared a turbojet for takeoff behind a slower moving aircraft which had began its turn away from the runway. The first aircraft unexpectedly turned back into the path of the jet departure and stopped climbing resulting in a Low Altitude Alert.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : D01.TRACON

State Reference : CO

Altitude.MSL.Single Value : 10500

Environment

Flight Conditions : VMC

Light : Night

Aircraft

Reference : X

ATC / Advisory.TRACON : D01

Aircraft Operator : Air Carrier

Make Model Name : Medium Large Transport

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

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 12500

Experience.Flight Crew.Last 90 Days : 143

Experience.Flight Crew.Type : 1967

ASRS Report Number.Accession Number : 2037498

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Confusion

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 : Weather / Turbulence

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

Narrative: 1

As we were nearing GJT airport, we requested the RNAV (GPS) Rwy 29 Approach. We were told by the ATC Controller that he would be unable to clear us for any approach to RWY 29 from our direction because their minimum vectoring altitudes were well above the charted approach altitudes. We queried him, because I did not believe that we would be unable to shoot either of the published approaches to 29, into an airport surrounded by high terrain at night. The Controller descended us incrementally as he could, but once we reached 9500 ft MSL, he stated that until we reported the runway in sight and cleared us for the visual, he was unable to clear us to a lower altitude due to terrain. As a result, we flew past the extended centerline of the runway and finally saw the airport as we passed approx. 5000 ft above the field elevation. I did not recognize the airport at first, because from our altitude it looked tiny, and I was looking farther to the north for the visual picture I expect when looking for an airport. Once we passed to the west of the airport and reported GJT in sight, the controller was able to give us vectors and a lower altitude. We were given a 180 degree turn for the downwind leg and then cleared for the visual approach, with turns onto base and final legs at our discretion. Given the limited moonlight, we could not see any of the terrain to the south or west of the field, only the outline of the mountain peaks against the skyline. I have approx. 12,500 hours of flight time; 10,000 with the airline and was extremely uncomfortable throughout this approach. Although I believe I was flying conservatively, I had no actual idea where the terrain was and just tried to fly the closest-in approach I could, while still getting configured in time to be stabilized for landing. To add to my mental workload, I was conducting IOE with a new-hire. I was mentally prepared to conduct the terrain escape maneuver if needed. One of the only things that gave me any comfort in conducting the visual approach is my experience level, conservative energy management and belief that ATC was watching us on radar and would have alerted us if they had gotten a “~low altitude’ alert. I believe this operation is inherently unsafe: descending into a valley, surrounded by high terrain and just guessing what altitudes were appropriate while on a visual approach. I half considered diverting, thinking to myself, “How is it possible that this is legal?”• The airline should commission Jeppesen to create a custom RNAV STAR linked to an Approach for Rwy 29 that meets the criteria required by ATC.

Synopsis

Captain reported a loss of situational awareness when maneuvering at the minimum vectoring altitude while trying to locate GJT airport at night in mountainous terrain. The Captain expressed concern that this approach may not be safe.

Time / Day

Date : 202309
Local Time Of Day : 1801-2400

Place

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

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A320
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 : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 4748.62
Experience.Flight Crew.Last 90 Days : 184.43
Experience.Flight Crew.Type : 4748.62
ASRS Report Number.Accession Number : 2037429
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight

Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Asked by approach control if we had the field in sight for a visual approach. Neither myself or the F/O (First Officer) did. Controller cleared us to the final approach fix for the RNAV XX. We were at 3000 feet FAF was 2600 feet understood that we were cleared the approach -not the visual, so descended to FAF altitude. Controller came back with a low altitude alert. Climbed back to 3000 feet. Recleared for the approach"; started to descend for a segment of the approach. Controller once again asked about us descending to FAF altitude. Said to stay at 2700 feet got the field in sight and notified the approach controller. He handed us off to the tower and gave us a phone number to contact with Center.

Synopsis

Air carrier pilot reported ATC low altitude alert while maneuvering for approach.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : BOI.TRACON

State Reference : ID

Relative Position.Distance.Nautical Miles : 2

Altitude.MSL.Single Value : 12300

Environment

Light : Night

Aircraft

Reference : X

ATC / Advisory.TRACON : BOI

Aircraft Operator : Air Carrier

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Descent

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Last 90 Days : 200

Experience.Flight Crew.Type : 12000

ASRS Report Number.Accession Number : 2037096

Human Factors : Other / Unknown

Human Factors : Situational Awareness

Human Factors : Training / Qualification

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 : Air Carrier

Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 90
Experience.Flight Crew.Type : 1200
ASRS Report Number.Accession Number : 2036485
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

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
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

During descent into BZN we were communicating with Big Sky Approach. We were cleared direct to JOXIT intersection which was the IAF on the RNAV RNP Runway 30 Approach. We were instructed to cross JOXIT at or above 13000 ft. and cleared for the RNAV RNP 30 approach. We were in LNAV/VNAV PATH and I selected 11300 ft. which was the next lowest altitude after JOXIT on the RNAV RNP approach. I thought that I had set the crossing restriction in the FMC to 13000 ft. at JOXIT. Unfortunately, I failed to do so and the aircraft while following the descent guidance has us crossing JOXIT intersection at around 11800 ft. When we were at approximately 12300 ft, Big Sky Approach gave us a low altitude alert and told us the minimum vectoring altitude was 13000 and to climb immediately to 13000. I immediately disconnected the autopilot and climbed back up to 13000 ft. Once reestablished at 13000 ft. I reengaged the autopilot and we continued on the RNP approach to Runway 30. We landed in BZN without further incident. Suggestion: We were expecting a different runway at BZN and the change caused me to rush and miss making sure that I had manually entered a hard altitude at the IAF. I failed to verify when I entered the lower altitude without checking that the higher altitude was set correctly in the FMC. There isn't an altitude depicted on the Jeppesen chart, so the only way to trap the error is to make sure that the altitude is entered manually in the FMC. Due to the terrain in the area, it might be helpful to Crews to place that as the crossing restriction on the chart so that the FMC can account for this altitude automatically instead of having the Crew have to manually enter the altitude during a high workload time of the flight.

Narrative: 2

When cleared for the approach, was given a crossing restriction at or above, to begin the approach. Aircraft began the descent mode early. As pilot monitoring I recognize that we were descending too early. As pilot monitoring I questioned why we were descending early. The Captain began to make adjustments to the descent and correct the deviation. I then queried ATC as to our original approach clearance, so we had a better understanding, and to clear up any miscommunication they instructed us to climb to meet the restriction we were given. Approach continued uneventful, and a normal stable approach. Suggestion: Make sure Approach clearance is understood completely and FMS is programmed correctly to safeguard any deviations

Synopsis

Air carrier crew reported descending below an ATC assigned altitude while maneuvering prior to the non-precision published approach course, in mountainous terrain at night. ATC reported a low altitude alert to the crew and the crew climbed to the assigned altitude, then continued the approach to a safe landing.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Relative Position.Angle.Radial : 100

Relative Position.Distance.Nautical Miles : 3

Altitude.MSL.Single Value : 1900

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 50

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Corporate

Make Model Name : Learjet 45

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Personal

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Final Approach

Route In Use : Visual Approach

Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Commercial

Qualification.Other

Experience.Flight Crew.Total : 1184.8

Experience.Flight Crew.Last 90 Days : 111.4

Experience.Flight Crew.Type : 209.6

ASRS Report Number.Accession Number : 2036702

Human Factors : Troubleshooting

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Events

Anomaly.Inflight Event / Encounter : Unstabilized Approach

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 : 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

During a left traffic pattern into ZZZ, turning from a left base onto final, the PNF said "You're a little low." I was making a continuous turn from the downwind as I was closer to the runway than I intended to be and did not want to overshoot the final turn. I did not properly compensate for the change in lift component during the turn, and noted the Vertical speed at the time of the PNF's call out to be 1200FPM down. I recall the flaps to be set at 40 degrees, gear down and confirmed, and airspeed about 140 knots. There were no GPWS alerts. Almost immediately after the PNF's call out, as I was already taking corrective action, the control tower called out a low altitude alert and gave us an altimeter setting. Neither I nor the PNF found our altitude to be critical; I corrected my descent rate, intercepted a 3 degree glide slope, and landed without incident. I feel that additional training on flying a visual traffic pattern in the LR-45 type would be beneficial. The visual approaches conducted during my type rating were all straight-ins, and the approach in question on this report I estimate to only be the third time I have conducted a visual approach from a standard traffic pattern as Pilot Flying in this type.

Synopsis

Corporate F/O reported getting low on a visual approach. The Captain and Tower also gave a too low alert. The F/O suggests more training is needed in this LR-45 on visual approaches.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : BFL.Airport

State Reference : CA

Altitude.MSL.Single Value : 9000

Environment

Light : Night

Aircraft

Reference : X

ATC / Advisory.TRACON : BFL

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Flight Phase : Descent

Route In Use.STAR : FASTO2

Airspace.Class D : BFL

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 : 2036602

Human Factors : Communication Breakdown

Human Factors : Confusion

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 : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2036608
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - 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.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

We were given the following clearance from ATC during a dark night time descent with the FASTO2 arrival on our route clearance: "Cross PMD at 14,000... cleared approach into Bakersfield" with no approach name or approach type specified in the clearance, but we were previously told to expect the RNAV 30R approach which we were set up for and had briefed. I put an altitude constraint of 14,000 into the box at PMD. We had already verified all published constraints on the STAR and RNAV 30R approach (STAR has no altitude constraints). I set 2500 into the altitude window (FAF altitude on the RNAV 30R), pushed managed descent, and armed the approach. We crossed PMD at 14,000 and immediately after PMD we went into Final App [mode] on the FMA and I called "Set Missed Approach Altitude." Approach was continued in Final App and gradual speed reduction was initiated. At 8800 MSL we received from ATC "low altitude alert, check altitude immediately" with the local altimeter setting. ATC then asked us to verify we are descending "via the FASTO2 descent profile and "maintain 10,000 to KELEN." We were not yet at KELEN. I immediately set 10,000 into the altitude window and selected open climb. We leveled off at 10,000. I set 2500 into the window again, waited till KELEN then pushed managed descent again. The Prog page showed us 4300 feet high of the profile at this point so I called for gear down and used full speed brake to return to profile and we re-intercepted Final App. We were still 15 miles out so plenty of time to return to profile although from 10,000 to 3500 at FASTO is a very steep descent. We configured normally and landed on 30R with an uneventful landing. After parking at the gate we didn't understand the request to verify we

were descending via the FASTO2 descent profile as there are no magenta altitude constraints on the STAR nor did we get a descend via clearance. There are only altitudes for NAV reception and minimum segment altitudes. We don't normally don't enter minimum segment altitudes into the box as constraints so we weren't sure what he was talking about. Then we looked at the terrain contours at the gate and clearly 8800 feet where we were is too low. We complied with the 14,000 at PMD, and also met all published constraints on the RNAV 30R approach. We were in Final App and followed it down. A few seconds before the low altitude alert, my FO (First Officer) spoke up and said he didn't like it but he wasn't sure why. Seconds later we received the low altitude alert and immediately climbed to 10,000. We never got a radar altimeter nor an EGPWS but believe we were on a descent path to get both. I find this arrival to be safety concern. Cause - I've never seen Final App take me into terrain before so I can only conclude 1 of 2 things needs to happen here. Either the Controller should have assigned us radar descent altitudes for the area we were in, or there should be magenta constraints on the STAR if the Controller is expecting us to descend via a descent profile. Neither of which existed. I was also under the impression that Final App protects us with regards to terrain clearance when all ATC issued altitude constraints and all published STAR and Approach constraints are in the box correctly. Everything looked correct to me and yet we ended up 1200 below a segment altitude with a low altitude alert. Suggestions - Looking at other STARs into other airports with terrain on the descent route (such as Sacramento as an example arriving from the east), there are usually magenta constraints to protect your terrain clearance. I don't understand why this arrival doesn't have at least 1. Obviously ATC issued descent altitudes would have solved this issue since you can't descend via on this arrival but yet the Controller was expecting us to comply with the minimum segment altitudes on the arrival on our own. I also thought that once in Final App those minimum segment altitudes were protected. Here they were not.

Narrative: 2

Around XA10 PDT, cleared on FASTO 2 into BFL. Direct PMD at 14,000. Approach gave us "cleared approach into Bakersfield"• . We crossed PMD at 14,000 - armed/activated the RNAV for 30R, verified Final App [mode] and then started down on the FMS path. Both arrival and approach verified as correctly loaded. I was PM. It seemed odd there were no altitude constraints on the FASTO, I felt a bit uncomfortable and asked the PF what was guaranteeing terrain clearance. Discussed, and since there were no further constraints the RNAV path should keep us safe with our clearance. Got an "altitude alert"• from ATC and an additional clearance to climb and maintain 10000 until KELEN. Lowest I saw was around 9000. Climbed back up to 10000, descended at KELEN and reintercepted the RNAV, landed uneventfully. Cause - The FASTO doesn't have any altitude constraints - but it does have an MEA. I think the Controller expected us to descend via those altitudes (which matched what he gave us later). However, I've never heard of or been trained on loading anything other than published constraints. My best guess was it was a bad clearance, but even after talking about it for two days we couldn't precisely determine where the problem was. We never got particularly close to the terrain, but definitely could have on another day, would definitely like to learn what the issue was and help make sure doesn't happen to anyone else. Suggestions - Frankly, unsure. Possibly update the STAR with constraints (like LAX or the other west coast airports).

Synopsis

Air carrier flight crew reported receiving a low altitude alert while descending on the BFL FASTO2 arrival. The crew expressed confusion over ATC's clearance verbiage, the lack of crossing restriction altitudes depicted other than MEA, and the operator's SOP for the conduct of the RNAV arrivals of this sort.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 1600

Aircraft

Reference : X

ATC / Advisory.CTAF : ZZZ

Aircraft Operator : Fractional

Make Model Name : Citation Excel (C560XL)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry / Re-Positioning

Nav In Use : FMS Or FMC

Nav In Use : GPS

Nav In Use.Localizer/Glideslope/ILS : RNAV

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 2036580

Human Factors : Confusion

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Training / Qualification

Human Factors : Workload

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Altitude : Overshoot

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

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Took Evasive Action

Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

We were operating a flight into ZZZ from ZZZ1. Upon approach, multiple cloud layers were reported, with the lowest being a scattered layer at 2,500 ft. The winds were favoring landing on Runway X so we chose to execute the RNAV to Runway X until we could pick up the airport visually. We were given direct to the ZZZZZ fix to intercept the approach. At this time we were at 3,000 ft. and still did not have the airport visually. We were then given a clearance to maintain 2,000 ft. or above until ZZZZZ and we were cleared for the RNAV X approach. 2,000 ft. was set and seen in the altitude selector and the Pilot Flying (PF) started a descent to 2,000 ft. so we could pick up the airport visually. I then made a position report on the CTAF on Comm2. While I was off giving the position report we had entered VMC conditions. I returned to COMM 1 and told the PF I was back and I was looking for the airport. I glanced down to see how far away the airport was and I noticed we were level at 1,600 ft. outside of ZZZZZ. At this time we were not cleared for the visual and still on an IFR approach. I informed the PF to get back up to 2,000ft. We then saw the airport and quickly cancelled IFR about 8 miles from the airport. I asked the PF/First Officer how did we get down to 1,600 ft. The PF seemed confused and said as we came out of the clouds he thought we were on a visual approach and not an IFR approach and went down to 1,600 ft. for traffic pattern altitude. I had missed this loss of 400 ft. of altitude during a very task saturated time.

Synopsis

Fractional Captain reported a descent below the minimum altitude on the initial approach. The Captain states the Pilot Flying/First Officer descended when believing they had been cleared for a visual approach.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZAB.ARTCC

State Reference : NM

Aircraft

Reference : X

ATC / Advisory.Center : ZAB

Aircraft Operator : Military

Make Model Name : Military

Crew Size.Number Of Crew : 2

Flight Plan : IFR

Flight Phase : Cruise

Airspace.Class E : ZAB

Person

Location Of Person.Facility : ZAB.ARTCC

Reporter Organization : Government

Function.Air Traffic Control : Enroute

Qualification.Air Traffic Control : Fully Certified

Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 7

ASRS Report Number.Accession Number : 2036468

Human Factors : Confusion

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types

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

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Air Traffic Control

Detector.Person : Air Traffic Control

When Detected : In-flight

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

Contributing Factors / Situations : Procedure

Contributing Factors / Situations : Weather
Primary Problem : Human Factors

Narrative: 1

I was busy with military and arrivals. A low guy asked to deviate around weather. He was on an airway at a good altitude and I got busy with another aircraft. The frequencies were jammed up everyone was being stepped on. I looked to see what the MVA was and I missed the 10400 ft. so I told him to deviate left and advise on course. I started working on a clearance and the aircraft immediately started flashing with the MVA. So I turned and climbed the aircraft away. I issued a low altitude alert. He just clipped the corner.
Suggestion: More staffing, or less traffic.

Synopsis

A Center Controller reported he approved a weather deviation for an aircraft which resulted in it flying below the Minimum Vectoring Altitude.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : STL.Airport

State Reference : MO

Relative Position.Distance.Nautical Miles : 4

Environment

Light : Night

Aircraft

Reference : X

ATC / Advisory.Tower : STL

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 : Initial Approach

Airspace.Class B : STL

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 : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Last 90 Days : 105

Experience.Flight Crew.Type : 2685

ASRS Report Number.Accession Number : 2036107

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 : 2035751

Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

As Pilot Flying, we were cleared direct to RELEY at an altitude of 2100 ft. We reported Runway 30R in sight and we were cleared for the visual approach. I was concerned about being too high to intercept the glideslope at RELEY. As we were capturing the LOC, I called for landing gear down. At the same time, Tower called for a Low Altitude Alert. We verified our altitude, I was slightly low. I disconnected the autopilot captured the glideslope and flew a stable approach to touchdown. ATC should avoid clearing us directly to the FAF. It can be difficult to capture the glideslope for the ILS backup and remain stable on the approach.

Narrative: 2

Cleared for visual approach First Officer intercept 300 or 400 ft. low on Localizer at FAF, Tower issues low altitude warning, however airport environment was in sight continued for stabilized approach. Cleared for approach F/O flying intercept altitude/should have been 2100 ft. actual 1700 ft. More vigilance regarding altitude and not intercepting Localizer below FAF altitude.

Synopsis

Flight crew on approach reported low altitude alert from ATC. Flight crew intercepted glideslope and landed uneventfully.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : BNA.Airport

State Reference : TN

Altitude.MSL.Single Value : 2200

Environment

Flight Conditions : VMC

Ceiling.Single Value : 900

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Airspace.Class C : BNA

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 : 2035959

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

Events

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

Assessments

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

Narrative: 1

While in VMC conditions, ATC, vectored us around a storm towards the final approach course. I thought I heard them ask us to descend and maintain 2,000. At 2,200, we received a GPWS message and corrected by climbing to the MSA. ATC then gave us vectors around to re-intercept the final approach course. The rest of the flight was uneventful. Cause: A busy approach around weather. Suggestion: During a busy approach, I will take my time [to] reiterate any altitude or heading changes that goes against the approach plate.

Synopsis

Air carrier First Officer reported a CFTT event during approach to BNA requiring an immediate climb. Reportedly, the flight crew misheard ATC cleared them to 2,000 feet which is below the MSA in the area.

Time / Day

Date : 202309
Local Time Of Day : 1201-1800

Place

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

Aircraft : 1

Reference : X
ATC / Advisory. TRACON : ZZZ
Aircraft Operator : Military
Make Model Name : Military
Crew Size. Number Of Crew : 2
Flight Plan : IFR
Mission : Training
Flight Phase : Cruise
Route In Use : Direct
Airspace. Class E : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory. TRACON : ZZZ
Aircraft Operator : Military
Make Model Name : Military
Crew Size. Number Of Crew : 2
Flight Plan : IFR
Mission : Training
Flight Phase : Cruise
Route In Use : Direct
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
Experience. Air Traffic Control. Military : 3
Experience. Air Traffic Control. Time Certified In Pos 1 (mon) : 0
ASRS Report Number. Accession Number : 2035723
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Time Pressure
Communication Breakdown. Party1 : ATC
Communication Breakdown. Party2 : ATC

Events

Anomaly.ATC Issue : All Types
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 : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued Advisory / Alert

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

Flight of 2 Aircraft, Aircraft X and Aircraft Y was coordinated to be in training route and exit at XA00z at ALT 090. Radar ZZZ received that information from ZZZ Center and told me about it as I was working the ZZZ sector. Sometime later, an IFR aircraft inbound to a satellite airport was coordinated from ZZZ1 sector to enter my airspace at ALT 083 for terrain. The flight path and altitude were in conflict with the exit point and altitude with training route, so I told the ZZZ1 Controller to assign heading 320 to deconflict. When the satellite arrival was in my airspace, I had descended the aircraft to 080 and had them on a heading to parallel the protected airspace of the training route. The MVA in the area is 078. ZZZZZ1 is the exit point of training route and where I was expecting Aircraft X and Y to exit. That point is also in ZZZ1 airspace. I noticed Aircraft X and Y targets spilling out of the lateral confines of the training route and tracking westbound toward ZZZ airport. The altitude indicated approximately 044 and they were within the 078 MVA. Aircraft X and Y then radioed my UHF frequency looking for Approach Control Service. I was never advised from ZZZ1 sector of a handoff or any status change to the training route. This happened around XB53Z. The point Aircraft X and Y terminated their training route was around ZZZZZ. I was expecting them to go all the way to ZZZZZ1. I instructed Aircraft X and Y to ident. I radar identified the flight, advised them of IFR traffic overhead at 080, and that they were currently in a 078 MVA. I issued traffic to the civil aircraft before Aircraft X and Y radioed me, when I observed the targets spilling out. The speed of Aircraft X and Y and their rate of climb was not a safety issue with the other aircraft, but it was unsafe for that flight to exit the training route early and expect IFR service at those low altitudes. After I established radar and radio communication with Aircraft X and Y, I advised ZZZ1 sector that the flight was with me and on their way to ZZZ airport. ZZZ1 flashed me the data block at that time. I received a position relief brief and advised the incoming Controller of the situation. At that time Aircraft X and Y was above the MVA and being sequenced to ZZZ. Suggestion: ZZZ Center needs to confirm the exit point of ZZZZZ1 to the pilots of the aircraft operating in the training route before they begin the route. If anything different is going to happen, then ZZZ needs to be made aware immediately so that we can ensure that proper separation is maintained from aircraft and terrain. If ZZZZZ had been coordinated earlier, then I could have had the satellite arrival at ALT 100, and also made sure that Aircraft X and Y didn't exit the confines of the protected airspace until at an appropriate altitude. This situation was very dangerous and not the way we should control our airspace.

Synopsis

ATC Controller reported a flight of two military trainers exited their training route prior to the coordinated fix and were flying below the Minimum Vectoring Altitude.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Personal

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 : IFR

Mission : Personal

Flight Phase : Climb

Route In Use : Vectors

Airspace.Class D : ZZZ

Airspace.Class E : ZZZ

Person : 1

Location Of Person.Facility : ZZZ.Tower

Reporter Organization : Government

Function.Air Traffic Control : Local

Function.Air Traffic Control : Trainee

Qualification.Air Traffic Control : Developmental

ASRS Report Number.Accession Number : 2035032

Human Factors : Confusion

Human Factors : Distraction

Human Factors : Human-Machine Interface

Human Factors : Time Pressure

Human Factors : Training / Qualification

Human Factors : Workload

Human Factors : Situational Awareness

Person : 2

Location Of Person.Facility : ZZZ.TRACON

Reporter Organization : Government

Function.Air Traffic Control : Instructor

Function.Air Traffic Control : Approach

Qualification.Air Traffic Control : Fully Certified

Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 13

ASRS Report Number.Accession Number : 2035036

Human Factors : Workload
Human Factors : Training / Qualification
Human Factors : Time Pressure
Human Factors : Distraction
Human Factors : Confusion
Human Factors : Situational Awareness

Person : 3

Location Of Person.Facility : ZZZ.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Supervisor / CIC
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 15
ASRS Report Number.Accession Number : 2035033
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface
Human Factors : Confusion
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 : FLC complied w / Automation / Advisory
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
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

I was training VFR position when we had an Aircraft X come off of ZZZ heading west toward the MVA as is standard for our VFR departures. He had ZZZ1 in his tag but also had S for standard instrument climbout. I turned him northbound on a 350 heading as he was in the 10,900 feet. MVA and questioned if the aircraft was IFR or not. After he confirmed he was IFR I climbed the aircraft to 11,000 feet and issued a low altitude alert. I then issued a 020 heading to ensure the aircraft would exit the MVA quicker without conflicted with our IFR aircraft on final. Aircraft that are IFR inbound to ZZZ doing a practice approach should not have their next destination in the scratchpad to ensure that they do not get confused with VFR aircraft. Regardless of their next destination they are still getting the same climbouts.

Narrative: 2

I was training on the (VFR) position. Aircraft X checked on departing on a 260 heading and I believe my trainee issued him a heading of 350 which is what we typically turn VFR aircraft to that are headed northbound. Multiple aircraft tags were overlapping at the airport so it was difficult to see Aircraft X's tag initially. We do not turn IFR aircraft westbound at ZZZ so I and my trainee had every reason to believe this aircraft was VFR. IFR aircraft are supposed to come off runway heading and should always contact Departure Radar (DR) initially, not our position of VFR. When my trainee and I saw the tag we noticed that his tag looked IFR because it had an "S" in the tag indicating he had been given IFR climb out instructions. I asked my trainee to ask the aircraft to verify whether they were IFR or VFR. I figured it was possible the aircraft had cancelled IFR with the tower wanting to go VFR on the go and they had forgotten to update the tag. However, the aircraft replied that they were indeed still IFR. Realizing the tower must have mistakenly turned the aircraft westbound and forgot he was IFR, I told my trainee to issue them a low altitude alert and we issued a climb to 11,000 feet. I thought the 350 heading he was originally given might be enough to stay clear of the 11,000 feet MVA but it was not and the aircraft did enter the higher MVA. I told my trainee to turn the aircraft a little further east to help them exit the higher MVA and we ended up giving him a 360 heading. This kept him east of the 11,000 feet MVA and we told him he could stop his climb at 10,000 feet which would have been his normal altitude going northbound. I thought about giving a harder turn to the east initially but was hesitant because the tower was busy and I did not know what else they had coming off and I did not know what was coming inbound on the finals at the time either. We made sure Departure Radar knew that this aircraft was IFR climbing to 10,000 feet just west of their finals. They ended up needing to break out an IFR arrival aircraft to the east as he was inbound at 10,000 feet and in conflict. If we had noticed he was IFR sooner we could have issued a 360 or 010 heading on initial contact and that might have kept him clear of the 11,000 feet MVA. I would not have felt comfortable issuing a heading any further east because I didn't know what was going on in the tower pattern. Firstly, the tower forgot this aircraft was IFR on the go so I think it would be helpful to ensure tower is using some kind of memory aid to help avoid this mistake. We just recently implemented using strips to help with memory aids such as this. However, there has not been clear instruction on how to use the strips effectively and most controllers are not using strips for arriving or practice approach aircraft at all. The DR/VFR procedures, as they are currently, did not help this situation. It has never made sense to allow even VFR aircraft that are transitioning northbound next to the finals to be talking to VFR. These aircraft are in very close proximity to DR traffic and when something goes wrong it can be difficult to fix quickly when it has to be relayed through VFR. It is common for aircraft to come off and VFR thinks DR is talking to them and DR thinks VFR is talking to them and in reality no one is talking to them. If Aircraft X had called DR they would have been more familiar with his status as they had just worked him IFR inbound on an approach. They also would probably have felt more comfortable turning him further eastbound as they were working all the other arriving aircraft inbound and had a better understanding of potential conflicts. There was busy training happening at the DR position and the VFR position. Practice approach aircraft should maybe be denied if the positions are getting overloaded. I don't know what was going on in the tower but they must have been busy because there was a cluster of data tags over the tower that were difficult to read. I think a better job needs to be done managing both Touch-and-go aircraft and practice approach aircraft. The amount we feel pressured into working at times is not safe and leads to mistakes like mistaking an IFR aircraft for VFR and turning them into higher MVAs.

Narrative: 3

I was working the (CIC) in the tower. Aircraft X was inbound for a GPS approach, option to radar. The aircraft was IFR and was tagged appropriately. I did not notice that the local

controller altered the tag to add the aircraft's next requested destination to the secondary scratchpad. The secondary destination is not standard in IFR data blocks. We designate climb out using the special letter identifier in the data block an S indicates IFR climb out and a Z represents VFR climb out. After adding the secondary airport to the scratchpad Aircraft X's tag looked just like a VFR tag except for that single letter. After completing the approach the local controller turned Aircraft X to the west towards higher terrain which is standard for VFR climbout. The aircraft was handed off and switched to the VFR position. The MVA 4 miles west of the field is 10,900 feet and Aircraft X was on standard climbout and only climbing to 9,000 feet. Personally, I never noticed the tag change, so from my vantage point in the center of the cab, I thought the aircraft was being handled normally. The local controller simply misread the tag on the go and applied VFR climb out procedures to an IFR aircraft. The aircraft did enter the 10,900 feet MVA. We have been using the single letter to denote climb out for years and it has been a problem several times. We are currently making a change to how the scratchpad is used for intra-facility coordination. In our next SOP the special letter will always either display a V for VFR aircraft or nothing for IFR. I believe that change should take effect before the end of the year and will make this type of mistake less likely.

Synopsis

A TRACON Controller, trainee and the Controller in Charge reported an IFR departure was assigned a VFR departure procedure and assigned a VFR data tag identifier which resulted in the aircraft flying below the Minimum Vectoring Altitude.

Time / Day

Date : 202309
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 12200

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Corporate
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.Other
Airspace.Class E : 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) : 4
ASRS Report Number.Accession Number : 2035031
Human Factors : Distraction
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Human-Machine Interface

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Company Policy

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

Narrative: 1

An accurate description is that I have reported this issue of IFR aircraft stepping below published step downs and taking themselves off of the IFR procedures. Nothing has been done. It is a systemic issue that has not been fixed and now management wants to give me a performance review for "unprofessionalism," because I asked the pilot what he was doing in plain language rather than using prescribed phraseology. It is not culture to deviate the pilots in this situation, so FSDO has not been able to properly document and investigate the systematic issue. Aircraft Y was cleared on the XX approach. Once the pilot got the field in sight, they proceeded east of final well below the 12,900 ft. step down. Safety alert was issued and plain language was used to understand the situation. Start issuing pilot deviations so pilots can report issues with the procedure or approach from their perspective.

Synopsis

A TRACON Controller reported a Corporate jet deviated off course from the approach and flew below the Minimum Vectoring Altitude.

Time / Day

Date : 202309

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ROA.TRACON

State Reference : VA

Altitude.MSL.Single Value : 3700

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : ROA

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

Route In Use : Visual Approach

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

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2034887

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

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 Other Automation

Detector.Person : Flight Crew

When Detected : In-flight

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

Assessments

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

Narrative: 1

EGPWS "terrain, pull up"• during the visual approach to Runway 24 into ROA backed up by the RNAV 24. Pilot Flying selected 3700 for the altitude to intercept the final approach course just outside of HIBAN, as depicted on the approach plate. The landing gear was up at this point, and we received the alert prior to intercepting the course with visual contact to all terrain. Pilot Flying increased altitude and the alert silenced, continuing the approach with no further issues. Cause: Maneuvering for visual approach in mountainous terrain. Suggestion: Intercept at a higher altitude until completely established on final approach course, or configure for landing prior to maneuvering in close proximity to the ground.

Synopsis

Air carrier First Officer reported a terrain warning while maneuvering during a visual approach in VMC conditions at a tower controlled airport. The pilot flying increased altitude, then continued the approach and landed safely.

Time / Day

Date : 202309

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Relative Position.Distance.Nautical Miles : 5

Altitude.MSL.Single Value : 1500

Environment

Light : Night

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : B737-700

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Final Approach

Route In Use : Visual Approach

Airspace.Class B : 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 : 185

Experience.Flight Crew.Type : 18700

ASRS Report Number.Accession Number : 2034463

Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

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 : 2034455

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 : FLC complied w / Automation / Advisory

Result.Flight Crew : Executed Go Around / Missed Approach

Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

During visual approach to Runway XXR, turning from right base to final, we received a GPWS Caution "Obstacle, Obstacle." Immediately the flight path was corrected followed by the execution of a go-around. When we initiated the go-around we were already established on the Localizer, we flew runway heading per ATC instructions. We came back around for an uneventful visual approach and landing. In the future I will use the RNP approach appropriate for the runway landing, especially at night.

Narrative: 2

During visual approach to Runway XXR, turning from right base to final, we received a GPWS Caution "Obstacle, Obstacle." Immediately the flight path was corrected followed by the execution of a go-around. When we initiated the go-around we were already established on the Localizer, we flew runway heading per ATC instructions. We came back around for an uneventful visual approach and landing. Stick with RNAV RNP approach for north runways, even while VMC in order, to avoid proximity with buildings southeast of ZZZ.

Synopsis

Air carrier B737-700 crew reported receiving GPWS obstacle warnings while on a visual approach at night. The crew executed a go around and returned to land uneventfully. Crew recommended use of the published RNAV approach versus visual procedures.

Time / Day

Date : 202309

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 3100

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Final Approach

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class B : 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) : 4

ASRS Report Number.Accession Number : 2034436

Human Factors : Confusion

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Flight Crew

When Detected : In-flight

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 : Human Factors

Narrative: 1

Aircraft X was on a vector of 350 to the RNAV Y Rwy XL approach course at 3100 feet. 5 west of ZZZZZ fix. I was distracted by what aircraft were departing the airport ASDE-X and Aircraft X said they were going through the final approach course. I attempted to turn to a 110 heading to intercept when I realized that heading would take them directly to the FAF I pointed out the airport in an attempt for a visual approach however they responded that they need the RNAV approach. I eventually turned them to a 180 heading for a better approach but it may have been in the higher MVA area of 4000 feet. when I turned them, I wasn't quite sure. I should've paid closer attention to the aircraft on a base ready for the final turn instead of becoming easily distracted.

Synopsis

A TRACON Controller reported they vectored an aircraft below the Minimum Vectoring Altitude.

Time / Day

Date : 202309

Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 800

Environment

Flight Conditions : IMC

Light : Night

Aircraft : 1

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : B737 Next Generation Undifferentiated

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

Aircraft : 2

Reference : Y

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : A380

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

Person

Location Of Person.Facility : ZZZ.Tower

Reporter Organization : Government

Function.Air Traffic Control : Local

Qualification.Air Traffic Control : Fully Certified

Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 23

Experience.Air Traffic Control.Time Certified In Pos 1 (mon) : 8

ASRS Report Number.Accession Number : 2034127

Human Factors : Training / Qualification

Human Factors : Workload

Human Factors : Human-Machine Interface

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

This was a [runways] XXL/XXR Right Turns IFR weather, but not protecting the critical areas. I was seeing the aircraft around 1,000 ft with a reported ceiling of 800 ft broken as well as 1,000 ft broken. Visibility was 10 miles and it was night time. The wind was around 240 at 15 gusting 20. A super A380 was taxiing out for departure, and I observed a large enough staggered space between departing Runway XXL, crossing over the super and departing Runway XXR, while having enough spacing between the Left and Right arrivals. On Local Assist was a Local Assist certified, however still in training on Local controller. I asked them to call over to the finals controller to advise all aircraft on approach that an A380 would be traversing the glideslope critical area. They made the call. Aircraft X had not yet checked in inside of the final approach fix. I reached out to see if they were there. They were. I advised Aircraft X of the A380 going to pass through the glideslope critical area and suggested hand flying the approach for the signal disruption. They thanked me for the advisory. When the A380 was clearing the critical area, I received a low altitude MSAW warning. I keyed up and stated, "Low altitude alert, Aircraft X check your rate of descent, 2 1/2 miles from touchdown and 800 ft" and assigned the current altimeter setting. I received no reply, however the MSAW stopped. The flight landed and was advised to exit the Runway at taxiway 1 or taxiway 2 and contact Ground. They acknowledged and never said a thing about the altitude on approach. This should be taught NAS wide to cover the circumstances when an aircraft will not have the signal integrity protection they expect. I was glad for the opportunity to show a newer controller how to coordinate this type of critical area penetration coordination, when not protecting, hoping that they will do so in the future.

Synopsis

A Tower Controller reported they received a Minimum Safe Altitude Warning for an aircraft on short final and advised the aircraft.

Time / Day

Date : 202304

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : DWH.Tower

State Reference : TX

Altitude.MSL.Single Value : 1000

Environment

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility.Visibility : 5

Light : Daylight

Ceiling.Single Value : 1000

Aircraft

Reference : X

ATC / Advisory.Tower : DWH

Aircraft Operator : Corporate

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Final Approach

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 25000

Experience.Flight Crew.Last 90 Days : 30

Experience.Flight Crew.Type : 350

ASRS Report Number.Accession Number : 1994114

Human Factors : Situational Awareness

Human Factors : Distraction

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Instrument

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

Events

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

Assessments

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

Narrative: 1

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

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

Narrative: 2

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

Synopsis

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

Time / Day

Date : 202304

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower

State Reference : US

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : B737-800

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Airspace.Class B : ZZZ

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 1993285

Human Factors : Communication Breakdown

Human Factors : Distraction

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Confusion

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

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

Events

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

Assessments

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

Narrative: 1

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

Narrative: 2

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

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

Synopsis

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

Time / Day

Date : 202304

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 700

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : A320

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Nav In Use.Localizer/Glideslope/ILS : RNAV

Flight Phase : Final Approach

Airspace.Class C : ZZZ

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Last 90 Days : 85

Experience.Flight Crew.Type : 694

ASRS Report Number.Accession Number : 1993174

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Flying

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

Events

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

Assessments

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

Narrative: 1

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

Narrative: 2

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

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

Synopsis

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

Time / Day

Date : 202304

Local Time Of Day : 0601-1200

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 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

Airspace.Class B : ZZZ

Aircraft : 2

Reference : Y

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Descent

Airspace.Class B : 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 : 1993167

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Communication Breakdown.Party1 : ATC

Communication Breakdown.Party2 : ATC

Events

Anomaly.Airspace Violation : All Types

Anomaly.ATC Issue : All Types

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

Anomaly.Inflight Event / Encounter : CFTT / CFIT
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

I was working Final in WIDE SIMUL (simultaneous arrival sequencing) configuration. I was almost consistently getting the visual approach around 100 at ZZZZZ. Because of this, Sector X did not abide by the feed rule for SIMULs and took Aircraft Y direct ZZZZZ descending to 100. I called to ask them for the airport in sight and did not get a response. (Upon listening to radar display replay, it is because I called them Aircraft X (another Aircraft X that just checked on frequency in the downwind). At this point, Aircraft Y is getting very close to Aircraft Z that Sector X is working to Runway XX without ensured separation. I issue what I thought was Aircraft Y (turns out I said Aircraft X again) an expeditious descent to 080 and asked again for the airport. They (Aircraft X) called the airport in sight. I cleared Aircraft Y for the visual approach with a speed (they had not called the airport in sight, Aircraft X in the downwind did) and Aircraft Y read back the visual approach and speed. I did not realize I had mistakenly transposed callsigns. A few moments later in my scan I realized Aircraft X was at 080 in a 085 MVA and I quickly climbed them to 085 (I did not issue a low altitude alert as I know VFR aircraft are in that exact spot every day at 055.) Recommendation: I completely messed this up. In review of radar display replay I definitely said the instructions to the incorrect callsign. I'm surprised Aircraft Y read back the visual approach clearance when I hadn't asked for the airport and that Aircraft X didn't query me when I cleared a different aircraft for the visual after asking them, but this is 100% on me. I haven't had a situation like this in years, it is so easy to happen and happens in unfortunately really bad situations a lot. I wish the feeder would have done their job and ensured separation so I didn't need to issue an expeditious descent, but I am solely the one that used the incorrect callsign. This is why I as a feeder have started using crossing restrictions to ensure separation. I will 100% pay closer attention to similar sounding callsigns, I didn't even notice this was an issue until I realized what had happened. As for changes, had this been fed to me properly I wouldn't have needed to use the expedite, but I can't say I wouldn't have messed up the callsigns still. I need to be more careful and that's really all I can say.

Synopsis

TRACON Controller reported confusion between similar call signs as aircraft entered a higher MVA which resulted in a CFTT encounter and failure to issue a low altitude alert.

Time / Day

Date : 202304

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Relative Position.Distance.Nautical Miles : 6
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 25000

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : SR20
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Personal
Flight Phase : Cruise
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 1290
Experience.Flight Crew.Last 90 Days : 6
Experience.Flight Crew.Type : 1280
ASRS Report Number.Accession Number : 1993123
Human Factors : Situational Awareness
Human Factors : Distraction

Events

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

Assessments

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 flying with passengers over the mountains. My weight and balance were within the safety envelope, but my climb rate was lower than I'm used to. As a result, my vertical separation was less than planned. Realizing that my climb rate was limited, I left the area.

Synopsis

SR20 pilot reported a less than expected climb rate while operating over mountainous terrain and the need to leave the area.

Time / Day

Date : 202304

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : SYR.Tower

State Reference : NY

Altitude.MSL.Single Value : 900

Environment

Flight Conditions : VMC

Light : Night

Aircraft

Reference : X

ATC / Advisory.Tower : SYR

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 : SYR

Person : 1

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)

ASRS Report Number.Accession Number : 1993020

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Confusion

Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1992697
Human Factors : Fatigue
Human Factors : Confusion
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
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.Flight Crew : Requested ATC Assistance / Clarification
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 : ATC Equipment / Nav Facility / Buildings
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

We were on a left downwind for runway 28. With the airport in sight, we were cleared for the visual. The flying pilot (First Officer), set 2100 ft, minimum crossing altitude at TILLE, in the altitude window and initiated an open descent while turning base. Once level, the tower mentioned they got a low altitude alert and asked if we were stable. I said we were and noticed the radio altimeter read approximately 900 ft. due to the rising terrain to the south of the airport. We did not receive any GPWS warnings. We continued on the visual, backed up by the ILS to runway 28 and landed without incident. The flight was 4 hours late and SYR is an unfamiliar airport. I think I have been there one other time. I definitely think there needs to be some additional information in the company pages alerting crews to the terrain to the south when conducting visual approaches. Reference ZZZ company general page, very similar situation there. Also, I very often see pilots enter a bottom altitude such as a FAF altitude when cleared for a visual and initiate an open descent even when we are below a descent path that would keep us at a higher altitude. Example is descending to a FAF altitude when below a glide path. The reason minimum class B altitudes are busted at ZZZ1. My personal opinion is this is not an ideal "technique" even though it may be safe and legal. I also recommend the use of managed automation 100% of the time if possible and the use of charted flight paths when not on a vector. I think more time should be devoted to visual approaches in recurrent training.

Narrative: 2

We were vectored for the visual 28 backed up by the ILS at night. I was PF (Pilot Flying). Cleared the visual, I descended to 2100 ft, 1700 ft. above field level outside of TILLE on left base. I was referencing the plan view of the ILS 28 for obstacles. Looking back, I should have stayed at either the MSA (Minimum Safe Altitude) or the vectoring altitude. I

don't recall possibly 3,000 ft. until established on the localizer or at least getting the PAPI in sight. We were landing at XA30L which is near the primary window of circadian low. I will do a better job of briefing the MSA, descent plan and terrain especially at night.

Synopsis

Flight crew reported ATC issued a low altitude alert while they were on base leg for a visual approach.

Time / Day

Date : 202303

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 2600

Aircraft

Reference : X

ATC / Advisory.TRACON : 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

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Initial Approach

Route In Use : Direct

Airspace.Class C : ZZZ

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : First Officer

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 : 1992740

Human Factors : Situational Awareness

Human Factors : Distraction

Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

Detector.Person : Flight Crew

Were Passengers Involved In Event : N

When Detected : In-flight

Result.Flight Crew : Overrode Automation

Assessments

Contributing Factors / Situations : Environment - Non Weather Related

Contributing Factors / Situations : Software and Automation

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

Narrative: 1

During our base leg into ZZZ we were flying at 2600 MSL. We were at this altitude and received an EGPWS alert, we determined that the alert was from a small hill beneath us, the RA showed 1250 ft. We were looking at the charts and knew the location of the highest obstacle and since we were visual could ensure visual separation. Maintain a higher base altitude until turning final while going into ZZZ. Descended too soon in hilly terrain.

Synopsis

EMB-145 First Officer reported receiving an EGPWS terrain warning while on initial approach. The pilots observed the small hill below, were in VFR conditions, and continued to a normal landing.

Time / Day

Date : 202304

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 2200

Environment

Flight Conditions : Marginal

Weather Elements / Visibility : Icing

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Make Model Name : Small Transport, Low Wing, 2 Recip Eng

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Flight Phase : Final Approach

Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X

Reporter Organization : Government

Function.Air Traffic Control : Approach

Qualification.Air Traffic Control : Fully Certified

ASRS Report Number.Accession Number : 1992550

Human Factors : Time Pressure

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Altitude : Overshoot

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Ground Event / Encounter : Ground Equipment Issue

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Air Traffic Control

Detector.Person : Air Traffic Control

When Detected : In-flight

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Aircraft

Primary Problem : Aircraft

Narrative: 1

Aircraft X was having issues establishing on approach attempts. Conditions were MVFR with light icing reported. The aircraft when being vectored for ILS Runway XX dipped down to 022 when I issued a low altitude alert and was at 020 when the aircraft recovered. The Low Altitude alert did not sound or signal on the scope when the MVA (Minimum Vectoring Altitude) in the area is 024 (near ZZZ VOR). I am under the impression that the Low Altitude alert is supposed to signal when below the MVAs, as it has in other areas.

Synopsis

TRACON Controller reported an minimum safe altitude warning alarm failed to alert when an aircraft descended below the minimum vectoring altitude.