ASRS Database Report Set

Controlled Flight Toward Terrain

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

Update Number.....35

Date of Update.....March 29, 2022

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

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

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

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

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

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

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

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

B Hooey

Becky L. Hooey, Director
NASA Aviation Safety Reporting System

CAVEAT REGARDING USE OF ASRS DATA

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

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

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

Report Synopses

ACN: 1858229 *(1 of 50)*

Synopsis

An Air Carrier pilot reported loss of GPS signal and a Terrain Alert Warning on departure.

ACN: 1854861 *(2 of 50)*

Synopsis

TRACON Instructor reported an aircraft entered a MVA at a lower than required altitude.

ACN: 1854752 *(3 of 50)*

Synopsis

ATP Flight Instructor with student reported a CFTT event during climbout from a low approach due to a miscommunication between Pilot and ATC. Reporter stated he did not confirm the alternate departure instructions resulting in the CFTT.

ACN: 1854670 *(4 of 50)*

Synopsis

Air Carrier Captain reported activating a GPWS Terrain alert while on ATC vectors to intercept final approach course.

ACN: 1854651 *(5 of 50)*

Synopsis

CRJ-200 flight crew reported activating a GPWS Obstacle alert during a visual approach. After maneuvering to avoid obstacles flight executed a safe landing.

ACN: 1854531 *(6 of 50)*

Synopsis

Air Carrier flight crew reported a CFIT event during a visual approach. Pilot initialed a climb which silenced terrain alert immediately.

ACN: 1854464 *(7 of 50)*

Synopsis

B737 flight crew reported receiving an ATC low altitude during a visual approach. Flight crew corrected altitude deviation and executed a safe landing.

ACN: 1854300 *(8 of 50)*

Synopsis

TRACON Controller missed a read back which led to the wrong aircraft taking an instruction resulting in a MVA error.

ACN: 1854288 *(9 of 50)*

Synopsis

Controller reported descending an aircraft below the MVA, by mistake. Reporter also shared issues relative to the Metroplex changes.

ACN: 1854244 *(10 of 50)*

Synopsis

CE-560 Captain reported overshooting a crossing altitude resulting in an ATC low altitude alert. After a momentary CRM issue flight crew corrected altitude and executed a safe landing.

ACN: 1854095 *(11 of 50)*

Synopsis

Air Carrier First Officer reported a CFIT event during a visual approach. Pilot took evasive action to silence the terrain warning and stated the terrain warning system was "overcompensating."

ACN: 1853813 *(12 of 50)*

Synopsis

Center D-Side Controller reported they assumed an aircraft was VFR, approved a turn, causing an MVA Violation.

ACN: 1853565 *(13 of 50)*

Synopsis

TRACON Controller reported an LOA violation which caused confusion and a MVA violation.

ACN: 1853385 *(14 of 50)*

Synopsis

A319 Captain reported receiving a partial EGPWS alert during visual approach. Flight crew executed an evasive maneuver, debriefed the event and subsequently completed a safe landing with no issues.

ACN: 1853007 *(15 of 50)*

Synopsis

Air Carrier First Officer reported receiving an Aural Terrain Alert during a visual approach while clear of any terrain factors. The alert ceased before the Captain initiated an escape maneuver and elected to continue approach to a safe landing.

ACN: 1852923 *(16 of 50)*

Synopsis

Air carrier First Officer reported an altitude excursion during instrument approach. Flight crew realized the error, returned to correct altitude and completed a safe landing.

ACN: 1852792 *(17 of 50)*

Synopsis

B767 flight crew reported a GPWS "Too Low, Terrain" alert during IFR approach in a stabilized condition. Flight crew executed a "Go Around". Flight crew then requested another approach which was completed safely with no further issues.

ACN: 1852683 *(18 of 50)*

Synopsis

GSP TRACON Controller reported an aircraft flew below an MVA.

ACN: 1851910 *(19 of 50)*

Synopsis

Center Controller reported an aircraft flew below the MVA by 1,300 feet near mountain side terrain.

ACN: 1851885 *(20 of 50)*

Synopsis

Light Transport aircraft Captain reported a CFIT event during visual approach to ASE requiring evasive action.

ACN: 1851649 *(21 of 50)*

Synopsis

Air Carrier First Officer reported an altitude excursion from published altitude during approach in gusty wind conditions that also included a wake turbulence encounter. Pilot corrected back to published altitude and completed a safe landing without incident.

ACN: 1851101 *(22 of 50)*

Synopsis

A319 flight crew reported a CFIT event during visual approach shortly after being assigned a late runway change. Flight crew utilized an INOP ILS as a visual backup guidance. Flight crew corrected low glidepath by following PAPI glidepath to a safe landing.

ACN: 1850993 *(23 of 50)*

Synopsis

ZLC Center Controller reported that an aircraft changed radio frequency as well as deviated from the approach course and approach altitude before being given ATC approval.

ACN: 1850985 *(24 of 50)*

Synopsis

TRACON Controller reported an aircraft went around, but then did not listen consistently to the Controllers instructions leading to a Minimum Vectoring Altitude violation.

ACN: 1850695 *(25 of 50)*

Synopsis

COS TRACON Controller reported an MVA violation.

ACN: 1850680 *(26 of 50)*

Synopsis

Instructor pilot reported communications problems with ATC and asked for clarification in approach clearance while flying over terrain below approach altitude.

ACN: 1850307 *(27 of 50)*

Synopsis

B737-700 Captain reported a track heading deviation during takeoff resulting in a CFTT. The Captain stated the First Officer noticed the error and immediately corrected back on course away from the mountains.

ACN: 1850274 *(28 of 50)*

Synopsis

Light transport pilot reported ATC issued a low altitude alert during approach into BZN. Reporter stated the PIC may have programmed an incorrect approach and added that the autopilot became disconnected, but was not sure how that occurred.

ACN: 1850264 *(29 of 50)*

Synopsis

EMB-175 flight crew reported the autopilot did not capture the altitude selected of 2,000 feet during approach. The crew did not notice the issue until they were at 1,500 feet and immediately corrected back to 2,000 feet.

ACN: 1850199 *(30 of 50)*

Synopsis

A Flight Crew conducting an ILS PRM Y 10R Approach to ORD reported they received a Ground Proximity Alert while transitioning to the visual portion of the approach partially due to no Precision Approach Path Indicator (PAPI) system available for this runway.

ACN: 1850099 *(31 of 50)*

Synopsis

Light Transport aircraft flight crew reported a CFTT event during approach to CHA airport. The crew selected 3,100 rather than the cleared altitude of 3,600 feet. ATC announced the terrain alert and the crew took evasive action by climbing.

ACN: 1850025 *(32 of 50)*

Synopsis

First Officer reported descending below approach altitude and was advised by ATC to climb and maintain minimum altitude for terrain clearance, which they did and continued the approach to landing.

ACN: 1849878 *(33 of 50)*

Synopsis

Air carrier flight crew reported descending below charted altitude on approach to ORD in instrument conditions when the First Officer improperly set the MCP altitude.

ACN: 1849801 *(34 of 50)*

Synopsis

TRACON Controller reported a MVA violation when the Tower spun an arrival below the MVA.

ACN: 1849792 *(35 of 50)*

Synopsis

TRACON Controller reported being busy and not catching an aircraft go into a low MVA.

ACN: 1849567 *(36 of 50)*

Synopsis

EMB-145 Captain reported getting a terrain alert and stick shaker while intercepting the approach. The flight crew responded to both, which eventually dissipated.

ACN: 1849554 *(37 of 50)*

Synopsis

CRJ-700 flight crew reported a CFTT event when they set up the approach using the wrong Final Approach Fix and descended below a required crossing altitude. ATC alerted the crew who conducted a go around to a landing.

ACN: 1849204 *(38 of 50)*

Synopsis

Air carrier flight crew reported that while on an RNAV SID to LAS, ATC failed to issue a timely climb to comply with altitude restriction and terrain, resulting in the crew taking evasive action in response to a GPWS caution.

ACN: 1849161 *(39 of 50)*

Synopsis

SoCal TRACON Controller reported vectoring an aircraft below the MVA to avoid traffic.

ACN: 1848339 *(40 of 50)*

Synopsis

ERJ-170 Captain reported receiving a low altitude alert from ATC on an ILS approach in visual conditions when he deviated from the charted procedure.

ACN: 1847914 *(41 of 50)*

Synopsis

Air carrier Captain reported an unstabilized approach during final to BOS airport resulting in a CFTT event requiring crew pitch up correction.

ACN: 1847887 *(42 of 50)*

Synopsis

EMB-170 First Officer reported during a short approach to landing that ATC issued a low altitude alert, resulting in a momentary level off and being slightly high on approach. The pilot flying corrected and continued to a landing.

ACN: 1847874 *(43 of 50)*

Synopsis

EMB-175 Captain reported getting an aural obstacle alert while descending on visual approach. The flight crew climbed back up to altitude and continued the approach to landing. Reporter cited a short flight and task saturation contributed to accepting the visual approach before being ready.

ACN: 1847586 *(44 of 50)*

Synopsis

GA pilot reported a heading deviation while on the CATHEDRAL ONE Departure from PSP airport resulting in a CFTT event.

ACN: 1847492 *(45 of 50)*

Synopsis

Pilot reported a CFTT event during a visual approach in marginal weather conditions when the co-pilot turned the wrong way on a published missed approach procedure, lost 1,000 feet of altitude, and joined the traffic pattern while flying in and out of clouds.

ACN: 1846994 *(46 of 50)*

Synopsis

B737 flight crew reported they inadvertently descended below minimum vectoring altitude during arrival due to not recognizing that the MCP had been incorrectly set. The flight crew subsequently climbed back to the correct altitude.

ACN: 1844445 *(47 of 50)*

Synopsis

GA flight instructor reported being distracted while trying to troubleshoot a GPS information error resulting in an altitude deviation and CFTT during final approach to UES airport.

ACN: 1844428 *(48 of 50)*

Synopsis

GA pilot reported an altitude deviation and CFTT while on the RNAV 16 Approach to PWK airport. The Tower Controller advised the pilot of a Low Altitude warning prompting the pilot to climb back to assigned altitude.

ACN: 1844391 *(49 of 50)*

Synopsis

Pilot reported problems with setting up the Garmin Navigator correctly and almost having a CFIT encounter.

ACN: 1843411 *(50 of 50)*

Synopsis

CRJ-200 Captain reported getting an EGPWS alert due to the terrain during visual approach. The pilot decreased the rate of descent, stabilized the aircraft, and continued to landing.

Report Narratives

ACN: 1858229 *(1 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0601-1200

Place

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

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Cirrus Vision SJ50
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Flight Phase : Climb
Route In Use.SID : ZZZZZ2
Airspace.Class B : ZZZ

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1858229
Human Factors : Confusion
Human Factors : Distraction
Human Factors : Human-Machine Interface
Human Factors : Troubleshooting
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

During the initial climb on the ZZZZZ2 RNAV departure off of runway XXL, we had a TAWS (Terrain Alert Warning) and a GPS lost warning. We also lost all GPS navigation guidance to the Autopilot. I took over by using the heading mode while informing ATC departure control that we had lost all GPS signal and requested Radar Vectors. I was given a Radar Vector to a heading of 140 degrees and instruction to remain clear of all obstructions. I also asked ATC if any other aircraft had experienced the same issue. The response was negative. Since, I had a second pilot, I instructed them to check the GPS integrity and satellite strength. While they were performing the task, I continued to fly the aircraft and communicate with ATC. After approximately three minutes after losing signal, we regained GPS signal and the second pilot confirmed system integrity. I subsequently informed ATC that we had regained GPS navigation ability and they eventually cleared us direct to a navigation fix and I reengaged the GPS navigation mode without any further problems to our destination.

Synopsis

An Air Carrier pilot reported loss of GPS signal and a Terrain Alert Warning on departure.

ACN: 1854861 *(2 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

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

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Corporate
Make Model Name : Widebody, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Flight Plan : IFR
Mission : Test Flight / Demonstration
Flight Phase : Cruise
Route In Use : Vectors
Airspace.Class D : ZZZ
Airspace.Class E : ZZZ1

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : ZZZ
Make Model Name : Beechcraft Twin Turboprop or Jet Undifferentiated or Other Model
Crew Size.Number Of Crew : 1
Flight Phase : Final Approach
Airspace.Class C : ZZZ
Airspace.Class E : ZZZ1

Person

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) : 3
ASRS Report Number.Accession Number : 1854861
Human Factors : Training / Qualification

Events

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

Assessments

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

Narrative: 1

Training in progress on Approach, Arrival, and Departure in the TRACON with a stand-alone supervisor. Aircraft X had just completed a test approach to Runway XX with climb out instructions to fly heading 090 and climb to 3,000 for radar vectors to the RNAV Runway XY approach. At the same time Aircraft Y was inbound for Runway XY on a visual approach. The trainee attempted to vector Aircraft X north, behind Aircraft Y, toward ZZZZZ for the approach and was unaware of the 4,000 MVA he was turning Aircraft X into. I attempted to turn Aircraft X left to a heading of 310 to avoid the MVA and attempted to climb them to 4,000. Aircraft X did not make the turn in time and entered the 4,000 MVA at 3,000 by approximately 1 mile, Aircraft X was not vectored again until they reached 4,000. My technique in this situation is to always vector aircraft for RNAV approaches at 4000 in case they come close to the 4,000 MVA. I explained this to the trainee and they will do the same in the future.

Synopsis

TRACON Instructor reported an aircraft entered a MVA at a lower than required altitude.

ACN: 1854752 *(3 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 2
Altitude.MSL.Single Value : 3700

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 20
Light : Daylight
Ceiling.Single Value : 12000
RVR.Single Value : 5002

Aircraft

Reference : X
Aircraft Operator : Corporate
Make Model Name : PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Initial Climb
Route In Use : Vectors
Route In Use : Direct

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 1427
Experience.Flight Crew.Last 90 Days : 286
Experience.Flight Crew.Type : 589
ASRS Report Number.Accession Number : 1854752
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Conditions were VMC clear below 12000 and visibility better than 20 miles. My student and I were cleared for approach into ZZZ. The controller requested our intentions and I stated this approach would terminate with a low approach only and runway heading then direct to destination when able. The controller acknowledged our intentions and shortly after we were authorized to change to advisory frequency. During our climbout, we checked back in with Approach and it did not sound like the same controller. He stated the missed approach procedure was a right turn. I replied we did not request the missed and were runway heading climbing. He acknowledged my reply then shortly after asked if I could maintain terrain separation until 5200. I replied affirmatively. We were then given direct destination and climb maintain 6000. After some time of being level at 6000 I was contacted regarding the possible pilot deviation. I feel that the alternate missed instructions were not confirmed by me or the controller(s) even though my intent was clear before changing to advisory that we had no intention of flying the missed procedure. This lack of clarity and possibly our intent not being relayed to the next controller, resulted in our left turn away from the terrain in question being instructed and complied with in a timely manner. We remained several miles away from any terrain and at no time was there risk to safety of flight.

Synopsis

ATP Flight Instructor with student reported a CFTT event during climbout from a low approach due to a miscommunication between Pilot and ATC. Reporter stated he did not confirm the alternate departure instructions resulting in the CFTT.

ACN: 1854670 *(4 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 4000

Aircraft

Reference : X
ATC / Advisory.Tower : 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 Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1854670
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

Terrain from GPWS at 4000 ft. Aircraft was level and above minimum vectoring altitude per ATC. Aircraft was being vectored from the base leg to an intercept just inside of ZZZZZ on the RNAVXX.

Synopsis

Air Carrier Captain reported activating a GPWS Terrain alert while on ATC vectors to intercept final approach course.

ACN: 1854651 *(5 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2300

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 200 ER/LR (CRJ200)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1854651
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1854660
Human Factors : Situational Awareness
Human Factors : Workload

Events

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

Assessments

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

Narrative: 1

Coming into ZZZ we were set up for Runway XX. ATC notified winds were 320@16G31. We elected to switch to Runway XY for more of a headwind. We made the switch at about 13000 ft. and re-briefed. Came out of the clouds at 3000 ft. and called field in sight. We continued our descent to FAF altitude of 2300 ft. PF (Pilot Flying) extended downwind to give more time and set up for the approach. At that time at 2300 ft. the aircraft gave us a caution obstacle alert. We were approaching two towers, highest of which was at 1849 ft., we got them in sight, disconnected the autopilot and maneuvered to avoid the obstacles. After clearing the obstacles and out of the alert we got configured and stabilized and landed without incident. [Reporter stated the cause was a] late runway change. Overcast layer at 3000. [Reporter suggests to] insure to brief tallest obstacles in the area. Stay higher possible IAF altitude (2500) until established on final.

Narrative: 2

While descending for landing into ZZZ. We were set up for an approach to Runway XX, we elected to change to Runway XY after hearing winds were 320@16G31 to have less crosswind component. The switch was made around 13,000 ft. The new runway and approach were briefed again. We descended out of 3000 ft. and was able to call the runway and field in sight. A visual approach clearance was issued and we continued to descend to the FAF altitude on the RNAV Runway XY approach of 2300 ft. The PF (Pilot Flying) extended the downwind to slow and configure to have a more stabilized approach. Upon passing abeam the FAF a Caution Obstacle aural warning was received. The PF disconnected the autopilot and began to climb higher above Tower. The tower was charted to be at 1849 ft. and we were approaching to cross above it at 2300 ft. The PF climbed above the obstacle, and made a normal approach to land once the Caution Obstacle was extinguished. Event caused by perception errors and thinking we were high enough above obstacles. In the future a minimum descent to the MSA of 2500 ft. would be more appropriate and provided better vertical separation from all terrain and obstacles in the area.

Synopsis

CRJ-200 flight crew reported activating a GPWS Obstacle alert during a visual approach. After maneuvering to avoid obstacles flight executed a safe landing.

ACN: 1854531 *(6 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0001-0600

Place

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

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
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 : 1854531

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
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 : Overcame Equipment Problem

Assessments

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

Narrative: 1

On DATE I was pilot monitoring on Aircraft X ZZZ1-ZZZ. Upon arrival into ZZZ, we were being vectored for the right downwind for Runway XX. It was clear skies and good visibility. Shortly after passing the airport off our right, Tower asked us if we had the runway in sight and we did. We were then cleared for the visual XX. On our base turn we received a terrain alert. The FO (First Officer) disconnected the autopilot and started the climb. Not a second later the warning went away. We were still in a good position to land so we continued and landed normally.

Synopsis

Air Carrier flight crew reported a CFIT event during a visual approach. Pilot initialed a climb which silenced terrain alert immediately.

ACN: 1854464 *(7 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 1100

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1854464
Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1854482
Human Factors : Human-Machine Interface

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control

When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

On night Visual XX, approaching ZZZZ, descended below 1100 feet and Tower called an altitude alert. Immediately climbed back above 1100 feet. Continued to an uneventful landing. Cause - Human error.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

B737 flight crew reported receiving an ATC low altitude during a visual approach. Flight crew corrected altitude deviation and executed a safe landing.

ACN: 1854300 *(8 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 10100

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Flight Plan : IFR
Flight Phase : Descent
Airspace.Class E : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : ZZZ
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Flight Phase : Cruise
Airspace.Class E : ZZZ

Person

Location Of Person.Facility : ZZZ.TRACON
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 6
ASRS Report Number.Accession Number : 1854300
Human Factors : Communication Breakdown
Human Factors : Distraction
Human Factors : Workload
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Aircraft X was inbound direct to our satellite airport ZZZ from the East at FL150. When he checked on with me I told him to expect the Visual Approach into ZZZ and to descend and maintain FL120. The MVA he was flying over is FL112. The Pilot read the instructions back and I went back to focus on the sequence at ZZZ1. One of the aircraft in the Sequence was Aircraft Y, was instructed to fly present heading and descend and maintain FL100. Though I did not know it at the time, Aircraft X had taken the clearance issued to Aircraft Y. During that time there was multiple VFR pop ups, VFR overflights with conflicting traffic that I was dealing with and one IFR pickup in the air. Because my focus at the time was west of ZZZ1 airport and did not observe Aircraft X descending through FL120. When the Low Altitude Alert (LA) went off I issued the low altitude alert and climbed Aircraft X to FL120. The pilot questioned if we wanted him to climb because he was "passed the ridge" I then issued him FL112 as it was the lowest I could assign. The MVA in the area was FL112 and Aircraft X and descended to FL101 before he started to climb again. Biggest factor in this event was the hearing and read back. There was even a moment that Aircraft Y asked me to restate the instructions which should have sent a red flag to me because I had heard the read back. I assumed he was just confirming the instructions not that he missed them and Aircraft X took the wrong instruction.

Synopsis

TRACON Controller missed a read back which led to the wrong aircraft taking an instruction resulting in a MVA error.

ACN: 1854288 *(9 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : TPA.TRACON
State Reference : FL
Altitude.MSL.Single Value : 2000

Aircraft

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

Person

Location Of Person.Facility : TPA.TRACON
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 5
ASRS Report Number.Accession Number : 1854288
Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Aircraft X was on a vector to SPG and issued 3,000 to get below traffic at 4,000. Aircraft X descended to 2,000 into an MVA of 2,700. When I noticed the aircraft's altitude I issued a safety alert and instructed them to climb to 3,000. When I asked the Pilot why they descended to 2,000 they responded that's what they thought they were issued. I should have been scanning quicker and noticed the descent through 2,700. At the time of the occurrence I was trying to figure out a few reroutes for overflight traffic. Since Metroplex was implemented ZMA issues over flights VARSE direct destination. This does not comply most of the time with our LOA's with JAX or F11. They should be getting VARSE direct NITTS or VARSE direct OCF. Not having this distraction could have helped me see the issue sooner.

Synopsis

Controller reported descending an aircraft below the MVA, by mistake. Reporter also shared issues relative to the Metroplex changes.

ACN: 1854244 *(10 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 3600

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 20
Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Citation V/Ultra/Encore (C560)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial 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 : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 7300
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 60
ASRS Report Number.Accession Number : 1854244
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

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

Assessments

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

Narrative: 1

As the Captain I was the Pilot Not Flying on a short flight from ZZZ1 to ZZZ2. We were told to expect the RNAV RWY XX. The Copilot was the Pilot Flying but had never personally flown into ZZZ2 as flying pilot. I briefed him the approach was steeper than normal at 3.5 degrees and early aircraft configuration was key. I'm relatively new in the aircraft with approximately 60 hours in type, and while having a good grasp of the automation I'll acknowledge there is still a bit to be learned. I programmed the RNAV approach prior to being cleared for the approach. Approach cleared us "direct to ZZZZZ cross at or above 4,000 ft., cleared for the RNAV XX approach". The Pilot Flying was in a VNAV descent and all seemed normal until we approached the ZZZZZ intersection. For whatever reason the aircraft automation didn't intercept the vertical path and just prior to ZZZZZ we both realized the descent path was going to cross us below 4,000 ft. prior to the fix. The Pilot Flying then turned off the autopilot to hand fly to capture the appropriate altitude. I went "heads down" to check the sequencing of the FMS. Within a moment ATC issued us a low altitude alert and advised us to check our altitude. I immediately looked up from the FMS and saw the Pilot Flying hadn't leveled us at 4,000 ft. but had instead descended to an altitude between 3,600-3,700 ft., which was the next fix crossing altitude. I will add, the weather was severe clear, all terrain was in sight and there was never a threat to the safety of the flight. The Pilot Flying quickly returned to the appropriate altitude for the approach. The rest of the approach was uneventful and the VNAV correctly captured shortly thereafter. Looking back I believe my main failure as the Captain and Pilot Not Flying, was my reaction to an unexpected VNAV situation. Instead of looking at the FMS, which my first instinct, I should have insured the situational awareness of the Pilot Flying was correct and he had positively corrected the flight path of the aircraft prior to looking down. Only then, should I have taken my attention away from the altitude and descent path to diagnose what the automation was doing. Overall, the safe outcome of the flight was never in question from the flight deck. Being in visual conditions added a safety buffer, no doubt. Going forward I will make it a priority to make sure any unexpected automation outcome takes a backseat to being in positive control of what the aircraft should be physically doing.

Synopsis

CE-560 Captain reported overshooting a crossing altitude resulting in an ATC low altitude alert. After a momentary CRM issue flight crew corrected altitude and executed a safe landing.

ACN: 1854095 *(11 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 1400

Aircraft

Reference : X
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 Approach

Component

Aircraft Component : GPWS
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1854095
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Overcame Equipment Problem
Result.Aircraft : Equipment Problem Dissipated

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

[I received clearance] for the visual into ZZZ during the day while we were over the mountains. I was being cautious about the mountains and I set the vertical speed to descend at 500 FPM. [I received] a terrain message so I input power and started climbing. Other than that, we were about 1,400 feet AGL above the highest obstacle around and no other action was needed. We both could [agree] that we were well clear of any obstacle. I was clear of the highest obstacle by 1,400 feet AGL. If anything I would suggest only descending very little if at all until on the other side of the mountains. Or the computer was just over compensating.

Synopsis

Air Carrier First Officer reported a CFIT event during a visual approach. Pilot took evasive action to silence the terrain warning and stated the terrain warning system was "overcompensating."

ACN: 1853813 *(12 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 9000

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Make Model Name : SR22
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Flight Phase : Climb
Route In Use : Direct
Airspace.Class E : ZZZ

Person : 1

Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Handoff / Assist
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Developmental
ASRS Report Number.Accession Number : 1853813
Human Factors : Confusion

Person : 2

Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 4
ASRS Report Number.Accession Number : 1853818
Human Factors : Distraction
Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

I was working the D side and got a call from the approach control sector adjacent to our sector. They asked for an approval request to turn an aircraft off an airway and direct to ZZZ1. I for some reason assumed the aircraft was VFR, and therefore did not consider the MVAs in the area when approving the request. The aircraft was assigned 11,000, but checked in level at 9,000, and therefore my R side had to issue the aircraft a climb clearance to get above the MVA.

Narrative: 2

Was working the R-side at 1 [Sectors] X/Y/Z. My D-side fielded a call from TRACON with an APREQ to send an aircraft direct to ZZZ1. I didn't hear the call from TRACON, only that he approved a guy direct to ZZZ1. The aircraft checked on climbing 8,800 to 11,000 direct to ZZZ1. Unfortunately he didn't climb quick enough to get above the MVA, which triggered a MSAW warning. Don't clear aircraft direct unless it is known exactly what the route is like and/or we can ensure the aircraft won't conflict with an MVA.

Synopsis

Center D-Side Controller reported they assumed an aircraft was VFR, approved a turn, causing an MVA Violation.

ACN: 1853565 *(13 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1801-2400

Place

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

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Military
Make Model Name : Military
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Tactical
Flight Phase : Cruise
Route In Use : Vectors
Airspace.Class E : ZZZ1

Person

Location Of Person.Aircraft : X
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) : 5
ASRS Report Number.Accession Number : 1853565
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Confusion

Events

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

Assessments

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

Narrative: 1

Aircraft X was IFR inbound from ZZZZZ intersection area from ZZZ1 Center sector X, which is not in accordance with our LOA. Per ZZZ and ZZZ1 LOA, Category B aircraft should enter ZZZ terminal area through the respective arrival gates. Over ZZZZZ, I thought that Aircraft X was VFR inbound to ZZZ most likely due to the V in their type and was unaware they were IFR. Aircraft X was vectored to follow a DA40 for a left base to runway XX. While on this vector, Aircraft X entered an 8,400 MVA at 8,000. I realized that Aircraft X was IFR when the aircraft was about to enter an 8,900 MVA and was climbed to 9,000 and turned away from the 8,900 MVA. [Recommend] That every entity involved knows the LOA and adheres to such as well as better awareness on my part to flight plan type.

Synopsis

TRACON Controller reported an LOA violation which caused confusion and a MVA violation.

ACN: 1853385 *(14 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

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

Aircraft

Reference : X
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 : Initial Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1853385
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

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

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

On turn to final from the north on visual approach to Runway XX received a EGPWS alert. The alert was not a full alert. aural warning only. no terrain display or RA indications. Declared my aircraft, disconnected the autopilot and excused a climb to clear any possible terrain. Prior to accepting the visual approach to Runway XX the FO (First Officer) and I discussed and identified any and all possible terrain, obstacles and MSA. When we received the partial alert and after climbing and turning for the airport company 10-7 procedure, we were able to determine visually and from the approach chart that we were safely clear of terrain and were able to continue with a normal approach and landing. Cause - Terrain [area]. Suggestions - Crews [should] not accept a visual approach unless outside [intersection] (4,000 feet).

Synopsis

A319 Captain reported receiving a partial EGPWS alert during visual approach. Flight crew executed an evasive maneuver, debriefed the event and subsequently completed a safe landing with no issues.

ACN: 1853007 *(15 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1801-2400

Place

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

Aircraft

Reference : X
ATC / Advisory.Tower : 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 : Final Approach
Flight Phase : Initial Approach
Airspace.Class D : ZZZ

Component

Aircraft Component : GPWS
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1853007
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight

Result.Flight Crew : Overcame Equipment Problem
Result.Aircraft : Equipment Problem Dissipated

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

While on a visual approach into Runway XX into ZZZ, we received an Aural Terrain Warning. The CA was Pilot Flying (PF) and I was Pilot Monitoring (PM), and we had been cleared for the visual approach while abeam the airport on an ATC assigned downwind heading at 4,000 ft. We had discussed the terrain in the area, and maintained 4,000 ft. until we were past the largest terrain factor of towers around 2,750 ft. on downwind. Once beyond those obstacles, the CA descended to the FAF altitude of 2,800 ft. As PM, I was closely monitoring terrain on my Navigational Display as well as my GPS location on my iPad approach plate. We were at 180 knots and on a heading to intercept the final approach course when we received an Aural Terrain Warning. We were level at 2,800 ft. and there were no visual indications on either Navigational Display of any terrain threat as well as no Radio Altimeter Reading. Since there was no terrain threat showing on the Navigational Display, we were referencing the approach plate and the highest of the terrain around us was 2.000 ft. Regardless, the Captain called "my aircraft", cut off the autopilot, and climbed 250 feet while beginning to execute the EGPWS maneuver, however, the alert went away before selecting TOGA, and we were then intercepting the final approach course. I had no RA readings to call out as PM since the Navigational Display did not show a threat. Since we were above the FAF altitude and above any charted or displayed terrain threats, we elected to continue the approach and landed without incident or further alerts. The largest factor here, I believe is accepting a visual approach with surrounding terrain at night. There is no company procedure prohibiting it for ZZZ, however since we did receive an aural warning, there was either an obstacle that was not shown on our charts or in our GPS database, it was registering the obstacles on the south side of the localizer as threats (though still did not show any yellow or red on the Navigational Display), or it could have been a false reading. This was a new airport for me, and if assigned again, I will request vectors to final or extend the downwind leg to the initial fix to remain at a higher altitude. Since we appeared to be clear of any terrain threats but still received an aural warning, I would suggest incorporating notes into the company pages not to descend to the FAF altitude until established on the localizer or not to accept a visual approach clearance at night. My personal plan going forward, if operating at night, will be to maintain 4,000 ft. until established on the localizer course or request vectors from ATC if they are requesting a shorter approach.

Synopsis

Air Carrier First Officer reported receiving an Aural Terrain Alert during a visual approach while clear of any terrain factors. The alert ceased before the Captain initiated an escape maneuver and elected to continue approach to a safe landing.

ACN: 1852923 *(16 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Altitude.MSL.Single Value : 1600

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 : Final Approach
Airspace.Class B : 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 : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1852923
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Human Factors : Other / Unknown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Overcame Equipment Problem
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

Flight crew descended below a fix on the RNAV XX approach into ZZZ. We were cleared to ZZZZZ. Approach was briefed appropriately and checked. Pilot Flying (PF) called for a step down from ZZZZZ instead of ZZZZZ1 and as Pilot Monitoring (PM) I did not initially catch the error either. Should have been at 2,000 ft descended to about roughly 1,600 ft before the error was realized and the autopilot was disconnected and corrective action was applied promptly. At this time ATC called a low altitude alert in which we alerted them we were correcting. Pilot climbed up and we re-intercepted the snowflake. The rest of the approach was stable and as briefed. [Event was caused by] failure of PF and PM to catch early descent. Pilot error on approach. [I] need to focus on comprehension of [approach] plate. As well as managing task saturation.

Synopsis

Air carrier First Officer reported an altitude excursion during instrument approach. Flight crew realized the error, returned to correct altitude and completed a safe landing.

ACN: 1852792 *(17 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Altitude.AGL.Single Value : 800

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B767 Undifferentiated or Other Model
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Flight Phase : Final Approach
Airspace.Class D : ZZZ

Component

Aircraft Component : GPWS
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1852792
Human Factors : Workload
Human Factors : Distraction

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 : 1851748

Human Factors : Distraction
Human Factors : Other / Unknown

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
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.Aircraft : Equipment Problem Dissipated

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

I was First Officer and Pilot Flying on this flight. The Captain was Pilot Monitoring, and the other First Officer was in the third seat. We were in actual instrument conditions, and fully set up and stabilized on the ILS to Runway XX at ZZZ. Somewhere between the GS intercept, ZZZZZ, and Runway XX, we received a GPWS "Too Low, Terrain" aural alert and light. We all checked and saw that we were on localizer, glideslope, and airspeed. We were fully configured and stable. As soon as we determined this, the "Too Low, Terrain" aural alert sounded again. Since we were still in actual instrument conditions at night and could not see if there was an obstacle on the approach, I called "Go-Around, Flaps 20". We executed the missed approach instructions given to us by ATC. We then requested vectors for the ILS to Runway XY at ZZZ. While setting up for and briefing this approach, we decided that if we got another GPWS message, or anything else seemed unsafe, we would divert to ZZZ1, where the weather conditions were better. We flew the ILS to [Runway] XY without any GPWS alert, and safely landed on Runway XY at ZZZ. We made a report to ZZZ tower about what had happened with our GPWS. A government aircraft made the same approach and successful landing using the ILS to Runway XX after we had done the missed approach. They had no issues with their GPWS. It is possible that our GPWS alert was triggered by an equipment malfunction, however, it was the safe choice to go missed in these conditions. We flew the profile like we train in the simulator. We had to go missed, set up for an approach in the opposite direction, and landed in a direct crosswind. I would suggest adding this scenario at ZZZ with the GPWS alert to one of our simulator lessons.

Narrative: 2

We were on the ILS Runway XX into ZZZ. We were fully configured flaps 25, on localizer and glide path, and stable through 1,000 ft. The winds were a direct crosswind and gusty. At approximately 800 ft. we received the GPWS aural alert Too Low Terrain. We were still in the clouds at this time. We called Go Around and we executed the go around. The go around went smoothly. ATC asked why we went around and our intentions. We asked to be vectored back around for the ILS Runway XY. Because it was a direct crosswind and we were not sure why we received the GPWS we all agreed it would be a good idea to try the other approach to the opposite runway. We got vectors and set up for the approach. The approach to ILS Runway XY went smoothly without any problems and we landed Runway

XY. I'm not sure why we received the GPWS alert. We were on localizer, glide path, speed, and fully configured.

Synopsis

B767 flight crew reported a GPWS "Too Low, Terrain" alert during IFR approach in a stabilized condition. Flight crew executed a "Go Around". Flight crew then requested another approach which was completed safely with no further issues.

ACN: 1852683 *(18 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : GSP.TRACON
State Reference : SC
Altitude.MSL.Single Value : 2500

Aircraft

Reference : X
ATC / Advisory.TRACON : GSP
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 : Cruise
Route In Use : Vectors
Airspace.Class C : GSP

Person

Location Of Person.Facility : GSP.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) : 1
ASRS Report Number.Accession Number : 1852683
Human Factors : Situational Awareness
Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

Relieved previous controller, and sat down to immediately begin making multiple transmissions. Aircraft X had been turned on a downwind heading for the sequence behind another commercial air carrier prior to the previous controller being relieved. Upon sitting down, frequency congestion became an issue. The lead aircraft in the sequence had been cleared for the visual approach, and as I looked to point out the traffic for Aircraft X to follow, I noticed they were already in an obstruction MVA (2,800 ft) at 2,500 ft. Aircraft X's course was about 3 miles Northwest of the antenna. At no time was the jet pointed at the antenna, but did lose lateral separation from the antenna. Upon realizing that the Aircraft X was within the required lateral spacing for an obstruction, the aircraft saw the interval traffic, was told to follow the traffic, turned away from the obstruction, and was cleared for the visual approach. Controller preference in that area of the base turn is usually taught to descend aircraft to 3,000 ft, or 2,800 ft at the lowest due to that obstruction. Better controller judgment of using 2,800 ft, or 3,000 ft, especially during a controller relief while combined with more than one position.

Synopsis

GSP TRACON Controller reported an aircraft flew below an MVA.

ACN: 1851910 *(19 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 4500

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Make Model Name : Cessna Stationair/Turbo Stationair 7/8
Crew Size.Number Of Crew : 2
Flight Plan : IFR
Flight Phase : Descent
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 8
ASRS Report Number.Accession Number : 1851910
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : 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
Primary Problem : Human Factors

Narrative: 1

I was working a session with plenty of weather deviations with the cargo arrival push of the evening. Instructed Aircraft X on initial call to depart ZZZZZ intersection on a heading

of 290 degrees to clear a mountainous terrain south of their position. Minutes later, I observed Aircraft X overflying the mountainside terrain below a MVA of 5,700 at 4,500 feet. I immediately advise Aircraft X to turn northbound on a heading of 310 to clear the terrain and the aircraft proceeded clear of the terrain without further incident. The RX/RXX sector was aware of the weather complexity in my sector, but was not giving me the traffic in an orderly and properly spaced manner. I asked the CIC to assist me with coordinating other sectors the departure headings due to the weather deviations, but the RX/ RXX sector was not asked to help me out with the situation by providing sufficient spacing. Also, Aircraft X did not comply with my initial instructions and due to the constant workload, I did not see this situation developing.

Synopsis

Center Controller reported an aircraft flew below the MVA by 1,300 feet near mountain side terrain.

ACN: 1851885 *(20 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ASE.Airport
State Reference : CO
Altitude.MSL.Single Value : 12500

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 100
Ceiling.Single Value : 20000

Aircraft

Reference : X
ATC / Advisory.Tower : ASE
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
Route In Use : Visual Approach
Airspace.Class C : ASE

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 17780
Experience.Flight Crew.Last 90 Days : 160
Experience.Flight Crew.Type : 1130
ASRS Report Number.Accession Number : 1851885
Human Factors : Workload
Human Factors : Human-Machine Interface
Human Factors : Time Pressure

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT

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

Assessments

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

Narrative: 1

On approach to ASE, the LOC/DME-E was briefed with the Roaring Fork Visual Approach as well for a final approach into ASE. The approach was 12,300 feet at FIMSO inbound and transitioned in visual conditions to clear all terrain with the visual procedure. A terrain and pull up warning occurred with full view and adequate terrain clearance. Appropriate and immediate corrections to flight path were made in VFR conditions with a continued approach to satisfactory landing.

Synopsis

Light Transport aircraft Captain reported a CFIT event during visual approach to ASE requiring evasive action.

ACN: 1851649 *(21 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ1.TRACON
State Reference : US
Relative Position.Distance.Nautical Miles : 18
Altitude.MSL.Single Value : 2500

Environment

Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
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
Airspace.Class B : ZZZ2

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : 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
Flight Phase : Final Approach
Airspace.Class B : ZZZ2

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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 220
Experience.Flight Crew.Type : 220
ASRS Report Number.Accession Number : 1851649

Human Factors : Situational Awareness
Analyst Callback : Attempted

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Wake Vortex Encounter
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

While on a visual approach to ZZZ XXR, with high gusty winds and wake turbulence experienced, aircraft dipped below published altitude while on automation. We began correcting as ATC called out an Altitude Alert on us. We climbed back to published altitude and flew the rest of the approach without incident.

Synopsis

Air Carrier First Officer reported an altitude excursion from published altitude during approach in gusty wind conditions that also included a wake turbulence encounter. Pilot corrected back to published altitude and completed a safe landing without incident.

ACN: 1851101 *(22 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

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

Aircraft

Reference : X
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 : Initial Approach
Flight Phase : Final Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1851101
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Distraction

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

Flying into ZZZ while on downwind we were changed from [Runway] XXR to [Runway] XXL. We reviewed the approach plate after inserting the new approach. On base to final after engaging the approach mode the aircraft kicked off the autopilot. The CA (Captain) hand flew the approach from that point forward. Initially we followed the ILS guidance but it appeared that the guidance was faulty as we noticed the glide slope and the localizer didn't appear to be giving accurate information. We had 15 kt. crosswinds. The ILS identifier was correct though. The CA acknowledged the poor ILS guidance and state he using the visual (PAPI) guidance as the weather was clear with no clouds. We were below a visual glide path but I do not recall the exact altitudes vs the distance from the airfield. We slowed the decent to pick up a normal visual glide path and about that time Tower advised us with a low altitude alert, which we already acknowledged internally. Once we picked up a normal glide path we resumed the decent and I eventually called out the 500 ft. stable call with a normal 800 ft. per minute decent so I 100% know we were stable at that point and don't remember the 1000 ft. AGL call as the aircraft did not enunciate either the 500 ft. or the 1000 ft. calls. Upon landing the Tower asked if we were using the ILS glide path. We stated initially but we soon disregarded it as it appeared to be faulty. They responded that ILS on XXL is NOTAMed out. The weather was clear but we knew we would experience a lot of turbulence in the decent. We had the Flight Attendants take their seats early. On the descent while on downwind it was bumpy with gusty winds. We got a late notice runway change but didn't mind as the weather was clear and [Runway] XXL was a longer runway. We briefed the approach but failed to review the NOTAMs for [Runway] XXL. As per company policy we back up visual approaches with glide slope to the maximum extent possible so we just planned on using the ILS as I was the quickest to set up. A review of the NOTAMs would have advised us the ILS was inop. Also the Tower could have advised us the ILS was out but we were on a visual approach. The Non working ILS giving us unreliable information distracted us until we disregarded the ILS info and just used visual references. It was an error of rushing and not reviewing all the information. We could have said no to the change, reviewed the NOTAMs properly, or asked approach if the glide slope and localizer where working.

Synopsis

A319 flight crew reported a CFIT event during visual approach shortly after being assigned a late runway change. Flight crew utilized an INOP ILS as a visual backup guidance. Flight crew corrected low glidepath by following PAPI glidepath to a safe landing.

ACN: 1850993 *(23 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZLC.ARTCC
State Reference : UT
Altitude.MSL.Single Value : 10000

Aircraft

Reference : X
ATC / Advisory.Center : ZLC
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Descent
Airspace.Class E : ZLC

Person

Location Of Person.Aircraft : X
Location Of Person.Facility : ZLC.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
ASRS Report Number.Accession Number : 1850993
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : 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 : Issued Advisory / Alert
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Aircraft X asked for an RNAV approach, I cleared him over the initial fix. The aircraft deviated right of course and began descending below the MIA as well as the altitudes published on the approach. I made several attempts to contact the aircraft, including a low altitude alert. I then asked Aircraft Y to switch to a UNICOM to see if Aircraft X was over there. He was, and he came back to me and informed me that he had intended on cancelling IFR and was proceeding visually to the field. I told him he needs to tell me what he's doing prior to doing it, and to not switch frequencies without ATC approval.

Synopsis

ZLC Center Controller reported that an aircraft changed radio frequency as well as deviated from the approach course and approach altitude before being given ATC approval.

ACN: 1850985 *(24 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 5400

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A321
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Climb
Route In Use.Other
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) : 8
ASRS Report Number.Accession Number : 1850985
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Time Pressure
Human Factors : Situational Awareness
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Undershoot
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 : Executed Go Around / Missed Approach
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

I was working arrivals to Runway XXR. Aircraft X initiated a go around short final. I issued them a turn to 240 and 9,000 feet as local center was departing and I wanted to give them room. Aircraft X read back the instruction but did not turn and leveled off about 5,400 feet. I instructed Aircraft X to turn further right heading 280 with no response. I issued multiple headings further and further to the northwest to avoid terrain and sometimes they would respond and sometimes they would not. I asked multiple times about their altitude and instructed them to climb however they flew level around 5,400 feet for about 5 miles. I was doing my best to turn them away from rapidly rising terrain as it became evident they weren't climbing, but may have still gone into a higher MVA southwest of the airport. I believe the flight crew was dealing with some type of malfunction or abnormality were talking to me was not their priority. In hindsight I could have issued a low altitude alert to try to alert the crew they need to turn and climb in a more timely manner.

Synopsis

TRACON Controller reported an aircraft went around, but then did not listen consistently to the Controllers instructions leading to a Minimum Vectoring Altitude violation.

ACN: 1850695 *(25 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : COS.TRACON
State Reference : CO
Altitude.MSL.Single Value : 8500

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : COS
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 : VFR
Flight Phase : Cruise
Route In Use : Vectors
Airspace.Class E : ZDV

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : COS
Aircraft Operator : Air Carrier
Make Model Name : Widebody, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Airspace.Class E : ZDV

Person

Location Of Person.Facility : COS.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Departure
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 3
ASRS Report Number.Accession Number : 1850695
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

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

Assessments

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

Narrative: 1

Aircraft X was taking off Runway 35L runway heading and Aircraft Y was straight out Runway 35R. I was training on VR and we decided to keep Aircraft X [on] runway heading until the Aircraft Y turned east to avoid wake turbulence. When Aircraft Y turned eastbound, we turned Aircraft X on a 130 degree heading initially at or below 8,500 feet MSL, then amended it to a 100 degree heading to clear the departure corridor. We kept Aircraft X at or below 8,500 feet MSL just as we were entering a 8,900 feet MSL MVA, however; Aircraft X was issued headings prior to entering the 8,900 feet MVA to stay in the 8,400 feet MVA. Better airspace/MVA awareness, better awareness on the Tower when departing eastbound VFR departures reference departures on Runway 35R.

Synopsis

COS TRACON Controller reported an MVA violation.

ACN: 1850680 *(26 of 50)*

Time / Day

Date : 201810

Place

Locale Reference.ATC Facility : N90.TRACON
State Reference : NY
Altitude.MSL.Single Value : 3000

Environment

Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 30
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : N90
Aircraft Operator : FBO
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class D : POU

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Instructor
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Commercial
Qualification.Other
Experience.Flight Crew.Total : 1800
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 1000
ASRS Report Number.Accession Number : 1850680
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Track / Heading : All Types

Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
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

Instructional flight years ago with really good instrument student in stage 3 of a Part 141 program. Doing cross-country IFR flight planning from ZZZ to POU and student requested to do the VOR Runway 24 approach at POU. He wanted to work on VOR navigation and using 2 OBS for a non-precision approach. I thought it was a good idea until we had some trouble with ATC that day. I don't know if date is 100% correct, but it was close to Date, which is what made me think of it this year. We requested the approach and then the Controller was very busy confusing it with the VOR-A approach into POU. After attempting to clarify, he proceeded to give us radar vectors for the approach. Both the student and I were a little confused, but went with it despite out actual attitude being less than prescribed for each quadrant of the approach plate. ATC vectoring altitudes can be lower and we were VFR in some turbulence, 10+ SM visibility and clear with no ceilings. The reason for concern was that it is a hilly area and if "Vectored to Final", it is directly over the path of the ZZZ1 traffic pattern. There was also some confusion over this instruction as 99% of the time when you are "Vectored-to-final" the 'intermediate' course is identical to the 'final' approach course with respect to heading/course changes/corrections. Did he want us to fly to the intermediate segment (course 218), intercept, and then remain on segment of published approach, or did he want us to fly to intercept 242 final approach course before that and continue with vectors? Upon looking this up in 7110 afterwards there seems to be some confusion and ambiguity with these terms when intermediate segment is not the same 'course'. Being VFR we continued as instructed, but if it were IMC this could be extremely problematic. We were low over unfamiliar terrain, irregular topography, another airport, in turbulence, and NOT on a segment of the published approach, above minimums, until passing the VOR into final. The flight continued there and back without incident and caused the student and I to look into ATC instructions, PIC compliance, instrument approaches, and safe practices during instrument procedures during our next ground lesson. I apologize for not including this form in the lesson during our ground debrief and recap of the situation. It could have been more accurate and useful had we done it with it fresh in our minds.

Synopsis

Instructor pilot reported communications problems with ATC and asked for clarification in approach clearance while flying over terrain below approach altitude.

ACN: 1850307 *(27 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

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

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737-700
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Takeoff / Launch
Airspace.Class E : ZZZ
Airspace.Class G : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1850307
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : 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 : Returned To Clearance
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Departing ZZZ we taxied to Runway XX. We had completed all checklists as well triangles for the runway change they requested and was about to takeoff. ZZZ radio issued us a clearance with a void time of 4 mins past the hour. ATC then said, your cleared to depart "direct ZZZZZ". We placed ZZZZZ in L1, confirmed it, executed and departed. As soon as we lifted off the flying pilot (my FO) was still VMC and said this doesn't look right and took immediate correction away from the mountains back to the left. I clarified with Center that what they wanted was the ZZZZZ1 departure via the ZZZZZ transition and not direct ZZZZZ. Center agreed and we corrected back on course. We both had VSD up and had no terrain alerts or warnings on the VSD. Although it did not initially feel rushed looking back, we were at the end of the runway ready to go with many checklists and changes happening in a short period of time that seemed to be going quickly and smoothly. I think this gave us a sense of being on a roll and feeling caught up. If we had not been so close to departing, I may have stopped to look at my chart which would have caught my attention and prompted me to speak up before executing this issuance in the box.

Synopsis

B737-700 Captain reported a track heading deviation during takeoff resulting in a CFTT. The Captain stated the First Officer noticed the error and immediately corrected back on course away from the mountains.

ACN: 1850274 *(28 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : BOI.TRACON
State Reference : ID
Altitude.MSL.Single Value : 9400

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : BOI
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
Flight Phase : Initial Approach
Airspace.Class E : BOI

Component

Aircraft Component : Autopilot
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1850274
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
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
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

On Date I was assigned to fly with a PIC that I haven't flown with before. We were scheduled to fly from ZZZ to BZN. I have been to both of these airports a few times and I felt comfortable flying to them. As I haven't had any issues flying to BZN before. We began our descent and I received the ATIS as early as possible and advised the PIC that Runway 30 was in use. GPS and Visual. The PIC discovered that there was no approach to Runway 30. RNAV (GPS)-A was in the FMS and available. The PIC built the RNAV (RNP) Runway 30, I believe he did this in error and meant to select RNAV (GPS)-A. I noticed the PIC spent a considerable amount of "heads down" time on the FMS. I don't think he heard ATC ask us to descend from 13,000 to 11,000, at that point I said to him that I will initiate a descent to 11,000 at 1500 fpm. The AP and AT was armed and the aircraft began a descent. I was then asked to build a 5 mile final to Runway 30 which I tried to do but a message came up as "unknown waypoint". I made a few more attempts to correct the situation, but did not have enough time. We were then instructed to fly to PESRE. And at that point ATC advised of a low altitude alert and climb to 11,000. I'm not sure how the autopilot became disconnected. I was not the pilot flying and I never touched the controls. I do want to mention that the PIC briefed me to not touch the heading bug. This was mentioned when we were starting engines in ZZZ. I also suggested to the PIC that since we were VMC and I could see the airport environment and I made a gesture pointing to the general location. But I guess during the workload he didn't hear me. At no time did the GPWS activate. The PIC needs to improve CRM and delegate during high workloads. I was using the checklist as assigned.

Synopsis

Light transport pilot reported ATC issued a low altitude alert during approach into BZN. Reporter stated the PIC may have programmed an incorrect approach and added that the autopilot became disconnected, but was not sure how that occurred.

ACN: 1850264 *(29 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 1500

Environment

Flight Conditions : VMC
Light : Dusk

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 170/175 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : ZZZ

Component

Aircraft Component : Autopilot
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1850264
Human Factors : Situational Awareness
Human Factors : Distraction

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 : 1850265
Human Factors : Distraction
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Overcame Equipment Problem
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

We were flying the ILS the approach in Runway XX in ZZZ. We were given to crossing restriction ZZZZZ at 3,000. We push the TSO button to descend to 3,000 feet we were getting closer than what we could make the autopilot do. After recrossed ZZZZZ at 3,000, the airplane was supposed to level off at 2,000 for ZZZZZ1. The airplane went into ALT capture at 2,000 feet but the aircraft itself descended down to 1,500 feet before we were able to turn off the autopilot and climb back up to 2,000 feet. In that time frame we got a message from ATC about altitude alert. By the time we were correcting our altitude back to 2,000 feet. In that time frame we had an issue with one of the passengers possibly unconscious in the back that we were also dealing with. Multiple things going on at the same time that made us a little slow to response to the altitude. We did not catch the airplane fast enough. We got below our given altitude on the arrival five 500 feet. Also, we were in VMC conditions with the airport insight. Cause - Relying on the autopilot to level off at the appropriate next altitude. Suggestions - Make sure aircraft does what we intend it to do and correct the aircraft faster.

Narrative: 2

[Report narrative contained no additional information].

Synopsis

EMB-175 flight crew reported the autopilot did not capture the altitude selected of 2,000 feet during approach. The crew did not notice the issue until they were at 1,500 feet and immediately corrected back to 2,000 feet.

ACN: 1850199 *(30 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ORD.Tower
State Reference : IL
Altitude.MSL.Single Value : 1000

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Thunderstorm
Weather Elements / Visibility : Rain

Aircraft

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 8980.73
Experience.Flight Crew.Last 90 Days : 139.7
Experience.Flight Crew.Type : 8980.73
ASRS Report Number.Accession Number : 1850199
Human Factors : Situational Awareness
Human Factors : Confusion

Person : 2

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
Experience.Flight Crew.Total : 15028.85
Experience.Flight Crew.Last 90 Days : 129.42
Experience.Flight Crew.Type : 15028.85
ASRS Report Number.Accession Number : 1850203
Human Factors : Distraction
Human Factors : Confusion

Events

Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

Assigned and flew ILS PRM Y 10R to ORD. Wind approx 050 at 25G35. Broke out about 1000 feet. In transition to lining up the runway got a glide slope warning which was corrected and the landing was completed without incident. During debrief, we both agreed that a contributing factor was lack of adequate vertical guidance outside the aircraft. Given the weather, wind, and turbulence, lack of a PAPI (Precision Approach Path Indicator) on this runway can compromise the safety margin when you are having to reference outside resources for lateral guidance and inside resources for vertical guidance.

Narrative: 2

While descending on the ORD ILS PRM Y 10R Approach, Glideslope Warning annunciation at approximately 700 to 650 feet in visual conditions. Weather was 1000 to 800 Overcast, good visibility below ceiling, 25 to 30 knot gusty left crosswind, moderate rain. Corrected immediately and back on glideslope in short order. Close enough to 500 feet where a go-around would have been the most conservative course of action, however at and below 500 feet balance of the approach was stable, thus continued to landing. This particular approach is offset, thus a visual maneuver is necessary to line up with the runway. This is exactly when the glideslope deviation occurred. A PAPI (Precision Approach Path Indicator) would greatly enhance the safety of this approach. Event was thoroughly debriefed at the gate. Request consideration for installation of a PAPI ORD Runway 10R.

Synopsis

A Flight Crew conducting an ILS PRM Y 10R Approach to ORD reported they received a Ground Proximity Alert while transitioning to the visual portion of the approach partially due to no Precision Approach Path Indicator (PAPI) system available for this runway.

ACN: 1850099 *(31 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : CHA.TRACON
State Reference : TN
Altitude.MSL.Single Value : 3600

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 6
Light : Daylight
Ceiling.Single Value : 3100

Aircraft

Reference : X
ATC / Advisory.TRACON : CHA
Aircraft Operator : Air Taxi
Make Model Name : Light Transport
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class C : CHA

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 3300
Experience.Flight Crew.Last 90 Days : 30
Experience.Flight Crew.Type : 6
ASRS Report Number.Accession Number : 1850099
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 : Corporate
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Check Pilot
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 10500
Experience.Flight Crew.Last 90 Days : 150
Experience.Flight Crew.Type : 3500
ASRS Report Number.Accession Number : 1850132
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

During descent to CHA from 11,000, expecting the visual approach Runway 20. ATIS ceilings were SCT 3,100 and Broken 4,500. ATC said descend maintain 3,600, left heading 110, altimeter 29.90 advise airport in sight. I read back altimeter 29.90, left 110, altitudes 3,600. When selecting our given instructions, I was going to adjust our altimeter first. Captain told me to select altitude to 3,100 first. I selected and announced "3,100 Altitude Set". Captain acknowledged and we proceeded our descent. Upon 3,300 feet, ATC announce terrain alert climb 3,600. Captain disengaged autopilot and climb. I read back instructions and selected 3,600 altitude. We proceeded to climb back to 3,600 feet. After the event. The Captain called ATC to confirm we were given instructions of 3,100. ATC replied saying he gave us 3,600 feet. During the event, the Captain and I minds were set ATC gave us instructions to descend 3,100.

Narrative: 2

On our descent into Chattanooga, the flight crew was issued heading of 110 to enter a right base for a visual to Runway 20 and an altitude of 3,600 feet. During that descent the First Officer had some difficulty reading back the instructions and ultimately setting the

appropriate altitude. I had set the assigned heading and after waiting for him to set the altitude I instructed the First Officer to set 3,100 feet in the altitude selector which he did. Just prior to that time I had been thinking of what altitude I was anticipating obtaining visual contact with the airport and must have transposed what was the lowest cloud layer at CHA of 3,100 into our assigned altitude. Once we descended below 3,600 feet ATC issued a low altitude alert and instructed us to climb back to 3,600 feet which we did immediately. We were then vectored for the ILS approach to 20. I requested the approach control phone number which I called once we were on the ground to follow up. ATC verified we accurately read back 3,600. I thanked them and advised I would file a report. As an instructor pilot, it can be difficult at times to decide to whether to let your trainee attempt to complete a task on their own for the purposes of gaining experience or to intervene and assure the appropriate outcome. In this instance I tried to let my trainee First Officer attempt the read back the clearance and set the altitude as assigned. The reason I did not intervene was that he had been having some difficulty with these tasks and I wanted him to get as much as experience as possible. I believe that while I waited for him to accomplish these tasks I had become distracted by the delay and unfortunately instructed him incorrectly to set the wrong altitude. A significant contributing factor in this sequence of events is the lack of experience that the First Officer has flying in the IFR environment. I had to spend an extra amount of time monitoring and correcting him during this flight and our previous flights in his communications and IFR procedures as most of his previous experience was as a pilot for [another] business for the last three years in mostly VFR conditions. That being said, in the future regardless of my desire to give my trainees the added benefit of more experience, I will have to be more diligent in intervening when they are not complying with their tasks in a timely manner and I will also have to better assess the ability or lack of ability that my trainees have and limit when and where I allow them to gain additional experience.

Synopsis

Light Transport aircraft flight crew reported a CFTT event during approach to CHA airport. The crew selected 3,100 rather than the cleared altitude of 3,600 feet. ATC announced the terrain alert and the crew took evasive action by climbing.

ACN: 1850025 *(32 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 10000

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Medium Transport
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Airspace.Class D : ZZZ

Component

Aircraft Component : Radio Altimeter
Aircraft Reference : X
Problem : Improperly Operated

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : 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 : 1850025
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Less Severe
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.Automation : Aircraft Other Automation
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 : Overcame Equipment Problem

Assessments

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

Narrative: 1

On descent into ZZZ below 10,000 feet, I recall ATC last clearing us down to 8,000 feet which is what the altitude alert was set to. I was finishing up the approach checklist as Pilot Monitoring (PM). At 8,000 feet the Check Airman in the right seat told me to push vertical speed so he could keep up with the V PATH. I asked if we were cleared for the approach and he said, "Yes". I believed him because of his position and how quick the situation evolved. I should have queried ATC. When we reached 7,300 feet ATC told us to maintain at least 7,800 feet for terrain. We climbed and upon reaching 7,500 feet ATC told us to cross the next fix (can't remember the name) at or above 6,200 feet, cleared approach (RNAV 16). We then recaptured the V PATH and set the altitude alert to the field elevation per FSM and landed safely. ATC didn't say anything further regarding the event. There's a chance we were indeed cleared for the approach and if so, then I missed that radio call. I should have queried ATC regarding our approach clearance. I think the procedure of keeping the altitude alert at the last cleared altitude and only letting the PM adjust it keeps both pilots in check. If the Pilot Flying (PF) wants to descend then he needs the PM to lower the altitude alert first.

Synopsis

First Officer reported descending below approach altitude and was advised by ATC to climb and maintain minimum altitude for terrain clearance, which they did and continued the approach to landing.

ACN: 1849878 *(33 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ORD.Tower
State Reference : IL
Altitude.MSL.Single Value : 3700

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Thunderstorm
Weather Elements / Visibility : Rain

Aircraft

Reference : X
ATC / Advisory.Tower : ORD
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 : Final Approach
Airspace.Class B : ORD

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 : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 120
ASRS Report Number.Accession Number : 1849878
Human Factors : Fatigue
Human Factors : Situational Awareness
Human Factors : Workload
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 : First Officer

Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 107
ASRS Report Number.Accession Number : 1850188
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Fatigue
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

Arriving [early in the morning] in Chicago after an all night flight. Weather in ZZZ was very poor as was weather in Chicago, with lots of turbulence en-route. Descending via Bradford Seven arrival and then vectors to ILS 10C, in heavy rain, thunderstorms, moderate turbulence, lightning and busy ATC communications. On vectors for ILS 10C and in level change descending to 4,000 feet, given clearance to intercept localizer. Continuing to descend to 4,000 feet, given clearance for ILS 10C. MCP altitude was changed without request, verbalization or verification to the marker crossing altitude. While descending, slowing, configuring, and intercepting the localizer in moderate turbulence and heavy rain the MCP altitude change went unnoticed by Pilot Flying (PF). We descended 300 feet below the last crossing restriction on the localizer prior to intercepting the glide slope. After that we intercepted the glide slope and flew a normal approach and landing. Debriefed at the gate about the importance of verbalizing, verifying, and monitoring all changes made to MCP.

Narrative: 2

Day 2 of a 3 day pairing with an all night flight to ORD with [an early morning] arrival. Weather was IMC on departure and approximately 1 hour of flight was spent in light to moderate turbulence. On arrival into ORD there were gusty winds, rain, broken clouds at 900 feet AGL and visibility of about 3 miles. Vectored onto ILS 10C approach [and] told to intercept the localizer and descend to 4,000 feet. Later we were given approach clearance. Once given the approach clearance the Pilot Monitoring (PM) changed the MCP altitude to the FAF altitude without request from the Pilot Flying (PF) and without verbalizing the change. The change in the MCP window occurred prior to the aircraft capturing the 4,000 feet level off and the FMAs changed to V/S and continued to descend below 4,000 feet.

The PF noticed the altitude deviation and intervened by using ALT HOLD. The aircraft ended up deviating 280 feet below the 4,000 foot altitude restriction and captured the glide slope shortly after the PF used ALT HOLD. The rest of the approach and landing were uneventful. PF and PM debriefed what led to the event and what could have been done better after safely parking the aircraft at the gate.

Synopsis

Air carrier flight crew reported descending below charted altitude on approach to ORD in instrument conditions when the First Officer improperly set the MCP altitude.

ACN: 1849801 *(34 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 1100

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
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
Flight Phase : Final Approach
Route In Use.Other
Airspace.Class C : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Military
Make Model Name : Military Trainer
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 C : ZZZ

Person

Location Of Person.Aircraft : X
Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 10
ASRS Report Number.Accession Number : 1849801
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Time Pressure
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict
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 : Provided Assistance
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

On Date at XA:10, the west side of the weekend split configuration was running approaches into ZZZ Runway XX. They had Aircraft X IFR doing the RNAV Runway XX approach and a flight of 2 Aircraft Y, come in for break traffic. I was working the east side of the weekend split. At XA:07 the Local Control at ZZZ Tower calls to ask what's the sequence between Aircraft X and the flight of 2 / Aircraft Y. West Controller told them that the 2 / Aircraft Y are going for the break, thus they call the sequence as they choose where the break point is. A minute or so later we see the IFR Aircraft X start a left-hand turn off the approach at 1,100 and proceeds to do a 360. Then another 360. At no point does the Local Controller call to APREQ (Approval Request) this. The TRACON CIC at the time calls the Tower CIC to ask what Aircraft X is doing / if he had canceled IFR and was told that there was nothing they could have done with him with the sequence we provided and that he was still IFR. This is very troubling to hear as it shows that the Tower Controller does not only [not] know how to work break traffic, but worse, they chose to spin an IFR aircraft on a 3-mile final below the MVA. This is plain unsafe and dangerous. ZZZ Tower has a culture of spinning VFR aircraft in all quadrants of their airspace when they get busy. This I believe, is a contributing factor as their tool box does not include, "Extend your downwind, I'll call your base." [I recommend] training for the Tower staff.

Synopsis

TRACON Controller reported a MVA violation when the Tower spun an arrival below the MVA.

ACN: 1849792 *(35 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

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

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Fractional
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 125
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Route In Use : Vectors
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 1.8
ASRS Report Number.Accession Number : 1849792
Human Factors : Distraction

Events

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

Assessments

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

Narrative: 1

Aircraft X was descended to 020 and turned to a heading of 190 to be cleared for the visual approach. A few minutes later 2 aircraft departed adjacent airports and needed to be identified and turned on their way. 1 aircraft misheard the instruction to climb and

ident so I had to take a longer time to work with him and separate him from aircraft overhead. By the time I went back to Aircraft X he was within a mile of a 2,500ft MVA. I turned him towards the airport and away from the obstruction but he could not report the airport in sight due to a newly formed cloud deck. Aircraft X went into the MVA by about a half mile and was out and turned completely northbound. He landed without further incident 5 minutes later utilizing the GPS approach I should have kept the aircraft at a higher altitude until he saw the airport.

Synopsis

TRACON Controller reported being busy and not catching an aircraft go into a low MVA.

ACN: 1849567 *(36 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 4000

Aircraft

Reference : X
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 Approach
Airspace.Class C : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1849567
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Flight Deck / Cabin / Aircraft Event : Other / Unknown
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : 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 Advisory / Alert

Assessments

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

Narrative: 1

We were on a heading, level at 4000 ft. to intercept the final for RNAV Y XX into ZZZ, we were cleared for the approach. We suddenly received a terrain terrain pull up. We proceeded to pull up even though we were visual and there was no terrain that we were going to impact. We also received a stick shaker as we pulled up doing 210 kts. not configured. As we pulled up the terrain warning went away around 4400 ft. and we also pushed down slightly because of the shaker, which also went away. I believe we did everything correctly, I am not exactly sure why we received that warning.

Synopsis

EMB-145 Captain reported getting a terrain alert and stick shaker while intercepting the approach. The flight crew responded to both, which eventually dissipated.

ACN: 1849554 *(37 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2600

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 700 ER/LR (CRJ700)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use.Localizer/Glideslope/ILS : XX
Flight Phase : Initial Approach
Airspace.Class D : 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 : 1849554
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Distraction
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1849553
Human Factors : Time Pressure
Human Factors : Situational Awareness

Human Factors : Distraction
Human Factors : Workload

Events

Anomaly.Flight Deck / Cabin / Aircraft Event : Other / Unknown
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
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
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

When setting up for visual backed up by the ILS XX into ZZZ we couldn't get the LOC/GS identified and decided to break off and back up our visual using the RNAV XX. Once set up we came back around and upon crossing ZZZZZ I mistakenly set 2600 ft. instead of the DDA, I didn't realize ZZZZZ was the final approach fix and continued to "dive and drive" with a 1500fpm descent rate, at 2600 ft. we received a low altitude alert from ATC and realized my mistake and that I was 20 ft. below the required altitude of 2620 ft. at ZZZZZ1. I immediately initiated a go around where we came back in uneventfully. Did not set DDA at FAF and initiated a descent well beyond the proper 700fpm descent rate resulting in getting low.

Narrative: 2

Upon vectors for the ILS we noticed no blue/ghost needles. We selected the nav source to the ILS frequency, still no ghost needles. I recalled the NOTAM for the ILS being out but it was only for XA00-XG00 local. We inquired with approach they said it was working. We elected to be pulled off the approach and set up for the RNAV. When coming in for the RNAV we thought we were brought out much further beyond the FAF. We began to descend with 2600 ft. set the next fix was 2620. We got an altitude alert and elected to go around at 2600 ft. as soon as we knew we were low by 20 ft. We [had] both mistaken the FAF. we realized we were beyond the FAF after the go around. We then came back and did the ILS by turning the course knob and listening to the nav frequency to identify it. Being rushed on a short flight and being rushed to set up for an RNAV during a line check had us misidentify the FAF for the RNAV approach.

Synopsis

CRJ-700 flight crew reported a CFTT event when they set up the approach using the wrong Final Approach Fix and descended below a required crossing altitude. ATC alerted the crew who conducted a go around to a landing.

ACN: 1849204 *(38 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : LAS.Airport
State Reference : NV
Relative Position.Angle.Radial : 011
Relative Position.Distance.Nautical Miles : 3
Altitude.MSL.Single Value : 6000

Environment

Light : Night

Aircraft

Reference : X
ATC / Advisory.TRACON : L30
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 : Climb
Route In Use.SID : RADYR2
Airspace.Class B : LAS

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 : 135
Experience.Flight Crew.Type : 13401
ASRS Report Number.Accession Number : 1849204
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

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

Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 150
Experience.Flight Crew.Type : 2300
ASRS Report Number.Accession Number : 1849211
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft TA
Detector.Person : Flight Crew
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

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

Narrative: 1

We departed LAS off of Runway 1R, on the RADYR 2 Departure, except we were told to maintain 6000 ft. All was normal, but ATC did not climb us as expected. Departure frequency was 125.9. As we approached HRRLY, I called ATC and stated we needed to climb. (XA18Z). He gave us a climb to FL 190. As he did so, we got a "Caution, Obstacle." The First Officer was flying and he disconnected the autopilot and autothrottles and added power to climb thrust and adjusted the flight path. Once clear of the obstacle, autopilot and autothrottles were re-engaged. No further incident.

Narrative: 2

During departure from Las Vegas we were assigned the RADYR 2 RNAV Departure off of Runway 1R. Prior to departure we were assigned 6000 ft. as a top altitude by ATC. As we climbed out and leveled off at 6000 ft., we turned and were approaching HRRLY intersection we were given an "unable next altitude" message on the FMC. Shortly after the message, the terrain prior to GRUDN began turning yellow. The Captain and I agreed we needed to immediately request a higher altitude from ATC. As we requested the altitude the terrain became a solid yellow block on our display. As ATC was giving us clearance to a higher altitude we received a "Caution Obstacle" alert from our GPWS system. I disconnected the autopilot and autothrottle, added power, and corrected the flight path while climbing clear of the caution without further incident.

Synopsis

Air carrier flight crew reported that while on an RNAV SID to LAS, ATC failed to issue a timely climb to comply with altitude restriction and terrain, resulting in the crew taking evasive action in response to a GPWS caution.

ACN: 1849161 *(39 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : SCT.TRACON
State Reference : CA
Altitude.MSL.Single Value : 1700

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : SCT
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Flight Phase : Initial Climb
Route In Use : Vectors
Airspace.Class D : SDM
Airspace.Class E : ZLA

Aircraft : 2

Reference : Y
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Flight Plan : VFR
Flight Phase : Initial Approach
Airspace.Class D : SDM
Airspace.Class E : ZLA

Person

Location Of Person.Aircraft : X
Reporter Organization : Government
Function.Air Traffic Control : Approach
Function.Air Traffic Control : Departure
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 10
ASRS Report Number.Accession Number : 1849161
Human Factors : Communication Breakdown
Human Factors : Time Pressure
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control

When Detected : In-flight
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

Aircraft X was released for departure off of SDM on the sole DVA of heading 280. After I released him a VFR target that had been maneuvering offshore at 4,700 ft began to descend and fly towards SDM. Aircraft X departed just as the VFR was descending through 2,700 ft. I called SDM tower to see if they were talking to that traffic to see if they could stop the descent but they were not talking to him. Aircraft X checked on with me, I stopped his climb at 2,000 and called traffic, hoping the target would stop descending or that Aircraft X would see him. Neither occurred, so I turned Aircraft X left to avoid traffic, below the MVA. Aircraft X was at 1,700 ft in a 1,900 ft MVA. I should have called SDM tower sooner to see if they could just hold the departure until we saw exactly what the VFR traffic would do.

Synopsis

SoCal TRACON Controller reported vectoring an aircraft below the MVA to avoid traffic.

ACN: 1848339 *(40 of 50)*

Time / Day

Date : 202109
Local Time Of Day : 1201-1800

Place

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

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 170/175 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Airspace.Class B : 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 : 1848339
Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

I was the Captain and pilot flying. We were descending via the arrival when we were cleared for the ILS approach. We were descending in VMC conditions. When we were cleared for the approach I set 2,000 feet at a waypoint on the ILS, and selected a vertical direct descent to that fix. As we were descending I realized I was too low for that phase of the descent [and] ATC brought it to our attention. We climbed back up to 3,000 feet and were cleared the visual [approach]. The mistakes I made were misreading and misunderstanding the arrival and approach, and failing to maintain good situational awareness during the descent phase of flight. The aircraft landed safety with no further incident. I should have descended via the arrival and kept the aircraft descending in LNAV and VNAV, instead of descending in green vertical direct.

Synopsis

ERJ-170 Captain reported receiving a low altitude alert from ATC on an ILS approach in visual conditions when he deviated from the charted procedure.

ACN: 1847914 *(41 of 50)*

Time / Day

Date : 202108
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : BOS.Airport
State Reference : MA
Altitude.AGL.Single Value : 50

Environment

Weather Elements / Visibility : Rain
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.Tower : BOS
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 : Landing
Airspace.Class B : BOS

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 : 1847914
Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

I was the PM in the right seat. On short final on ILS 4R into BOS. The ceilings were at 1,200 feet. We had the runway in sight. We were over the extended threshold as the PF was aiming for the 1,000 feet runway markers when we got a EGPWS "glide slope" at approximately 50 feet. I noticed at that time that the PAPI were indicating 3 red, at that time the PF said correcting and started to pitch up. Then we received 2 more "glide slope" EGPWS. We continued to land the aircraft. We were over the runway. His descent below glide slope was not intentional. Suggestions - Be more vigilant in calling out the glide slope and PAPI deviations even in VMC conditions.

Synopsis

Air carrier Captain reported an unstabilized approach during final to BOS airport resulting in a CFTT event requiring crew pitch up correction.

ACN: 1847887 *(42 of 50)*

Time / Day

Date : 202109
Local Time Of Day : 1201-1800

Place

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

Environment

Weather Elements / Visibility : Turbulence
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 170/175 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Flight Phase : Initial Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1847887
Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
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

Per usual cleared for the Instrument Approach and flying the visual profile as normal. Prior to XXXXX ATC requested we make a short approach. As we made the turn towards the runway ATC mentioned a low altitude alert and verified we had the current altimeter. The PF (Pilot Flying) arrested the descent and leveled off momentarily. After realizing our altimeter was showing the current setting we opted to continue the approach and landing as we both believed it would be accomplished safely. The momentary level off had placed us slightly high over the landmark. The PF corrected the descent profile and we landed without incident. If unsure about a procedure that ATC is requesting to mention "unable". I think this would prevent the second guess of if we had done something wrong.

Synopsis

EMB-170 First Officer reported during a short approach to landing that ATC issued a low altitude alert, resulting in a momentary level off and being slightly high on approach. The pilot flying corrected and continued to a landing.

ACN: 1847874 *(43 of 50)*

Time / Day

Date : 202108
Local Time Of Day : 1201-1800

Place

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

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 170/175 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1847874
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

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

Narrative: 1

Hot temperatures and thunderstorms in ZZZ2 required us to have a very quick flight from ZZZ-ZZZ1 for a fuel stop. We were cleared to the initial approach fix for the RNAV XX. As we approached the fix I realized that the vertical NAV was still thinking we were climbing to a higher altitude (an issue with TOC and TOD). I asked the PM to reload the approach and try and fix the issue. As we got closer, ZZZ approach asked if we had the field? We said we did and they cleared us for the visual approach to [Runway] XX. Not having a clear glide path I clicked off the guidance and automation and proceeded to fly the visual approach. We were still high and I pitched down to get back on the slope, we were then alerted to an aural obstacle caution message. For the dock cranes along the approach path. I added power and climbed back up. We were well clear of the obstacles and back on vertical path we continued the visual to land Runway XX with no further incident. The flight was only 10 minutes long. We were task saturated and while I tried to slow down and configure early, it was not enough and I should have delayed starting the approach. We discussed and decided that we needed to spend more time on the ground in ZZZ briefing and setting up everything we can for the quick flight to ZZZ1. Including briefing the full approach and getting landing numbers before we take off. So that we are not task saturated. I felt pressured to accept the visual approach when I should have asked for delay vectors. And lastly we should have gone around when we got the obstacle warning, that would have been the safest option at that point.

Synopsis

EMB-175 Captain reported getting an aural obstacle alert while descending on visual approach. The flight crew climbed back up to altitude and continued the approach to landing. Reporter cited a short flight and task saturation contributed to accepting the visual approach before being ready.

ACN: 1847586 *(44 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : PSP.Airport
State Reference : CA
Relative Position.Angle.Radial : 313
Relative Position.Distance.Nautical Miles : 0.8
Altitude.AGL.Single Value : 400

Environment

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

Aircraft

Reference : X
ATC / Advisory.Tower : PSP
ATC / Advisory.TRACON : SCT
Aircraft Operator : Personal
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Initial Climb
Route In Use.SID : CATH1
Airspace.Class D : PSP
Airspace.Class E : SCT

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 800
Experience.Flight Crew.Last 90 Days : 58.5
Experience.Flight Crew.Type : 260
ASRS Report Number.Accession Number : 1847586
Human Factors : Situational Awareness

Events

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 : Took Evasive Action
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

I was departing PSP at night and decided to file IFR due to high terrain. Weather was unlimited ceiling, visibility >10 SM, light winds. I reviewed the CATH1 Departure procedure the day before and in mid afternoon before filing. I did not review the procedure again immediately before takeoff. On takeoff, I maintained heading of 310 degrees. However, at 400 feet AGL, I commenced a right turn towards PSP, instead of climbing until crossing the PSP R-268. PSP Tower transferred me to SoCal approach. Approach reported radar contact. They noted I had "turned early, do you have terrain in sight". Due to extreme clear desert VMC conditions, many lights and no dark spots ahead I reported "terrain in sight". ATC provided vectors for the climb, climb and maintain 10,000 feet which I complied with. No further action was taken. Flight continued uneventfully thereafter. Factors contributing were: 1) Over confidence in pilots' memory and successful completion of departure procedure at least 2 times in previous 6 months. 2) Possible light fatigue due to flight after a long work day (computer/desk job). 3) Flying passenger back to ZZZ and driving to ZZZ1 for an XApm flight to the east coast. Very minor get there itis. 4) Not following printed procedure card which calls for reviewing the departure procedure prior to take off.

Synopsis

GA pilot reported a heading deviation while on the CATHEDRAL ONE Departure from PSP airport resulting in a CFTT event.

ACN: 1847492 *(45 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : VNY.Airport
State Reference : CA
Altitude.MSL.Single Value : 1000

Environment

Flight Conditions : Marginal
Weather Elements / Visibility : Cloudy
Ceiling.Single Value : 2000

Aircraft

Reference : X
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Crew Size.Number Of Crew : 2
Flight Phase : Final Approach
Airspace.Class D : VNY

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
ASRS Report Number.Accession Number : 1847492
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
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 : Human Factors
Primary Problem : Human Factors

Narrative: 1

Landing in VNY, pilot flying was the PIC which was very quiet and tired had a difficult time to do a VOR-B approach in Van Nuys since we had 2,000 BKN we end up too high short final and no ground contact. 119.3 advise him to do the published miss and PF asked the guy to circle over the airport opposite direction of the MAP turn. Finally after loosing 1,000 feet from 2,000 we saw the ground over top of the airport and he just pretended that we

were doing a visual approach with full landing configuration Flap 30+ landing gear for 10 minutes from the beginning of the first VOR-B approach to overhead and wrong turn to join the beginning of the downwind leg Runway 16R at 1,000 feet to finally turn to land while in and out of clouds even though so dangerously close to ground.

Synopsis

Pilot reported a CFTT event during a visual approach in marginal weather conditions when the co-pilot turned the wrong way on a published missed approach procedure, lost 1,000 feet of altitude, and joined the traffic pattern while flying in and out of clouds.

ACN: 1846994 *(46 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 090
Relative Position.Distance.Nautical Miles : 5
Altitude.MSL.Single Value : 5800

Environment

Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
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
Nav In Use : FMS Or FMC
Flight Phase : Descent
Route In Use.STAR : ZZZZZ
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 : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 154
Experience.Flight Crew.Type : 7000
ASRS Report Number.Accession Number : 1846994
Human Factors : Situational Awareness
Human Factors : Training / Qualification
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 : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1847002
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

While descending on the ZZZZZ Arrival into ZZZ Airport we were given a heading off of the arrival and a speed and altitude. We were previously cleared to descend via the ZZZZZ [arrival]. Approach gave us a heading and a descent to 8,000 feet and slow to 220 knots. The First Officer (FO) dialed in the heading, set the speed and engaged Level Change. Shortly thereafter Approach re-cleared us direct to ZZZZZ [fix] and descend via. The First Officer selected direct ZZZZZ set 4,000 feet (the bottom altitude on the arrival) and engaged LNAV. I did not notice that we were still in Level Change or if they selected VNAV. I looked out the window and commented that the arrival really brought [us] close to the terrain on this arrival. I crosschecked the VNAV PATH on my display and noticed we were well below the path. I told this to the Pilot Flying and they immediately went to Vertical Speed, set the min altitude for ZZZZZ1 and started a slow climb. I called Approach to let them know and I believe at the same time they were calling us. A few seconds later we were all on the same page, so to speak, and we were given the clearance descend via and landed in ZZZ uneventfully. It wasn't immediately apparent to me that we were below the path as I have flown into ZZZ1 many times, and ATC step-descends us fairly close to the same hills. I have only been into ZZZ once before over a year ago. We never received any Terrain Alerts and there was no yellow or red on my ND. The radar altimeter was not registering yet. Approach did inform us that we had gone below their minimum vectoring altitude. There was no unnecessary conversation going on that I can recall, I just missed the fact the we did not re-engage VNAV when re-cleared to descend via. More diligence in confirming MCP selections on the FMA.

Narrative: 2

On the ZZZZZ Arrival in to ZZZ we were descending via, then Approach changed the clearance to a heading and descent to 8,000 feet. I selected the heading, airspeed, and altitude assigned using Level Change. We were then cleared direct ZZZZZ [fix] and descend via again. I selected 4,000 feet as the bottom of the arrival and continued in

Level Change instead of reselecting VNAV. Before reaching ZZZZZ1, we realized we were off the VNAV PATH and immediately stopped the descent and started a climb back to path. We told ATC what we were doing and they said we were below the minimum vectoring altitude and assigned 7,000 feet. Once we reached 7,000 feet, we were back on path and continued the arrival. There was a breakdown of [CRM]. I failed to recognize the improper descent when selecting a new altitude.

Synopsis

B737 flight crew reported they inadvertently descended below minimum vectoring altitude during arrival due to not recognizing that the MCP had been incorrectly set. The flight crew subsequently climbed back to the correct altitude.

ACN: 1844445 *(47 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : UES.Airport
State Reference : WI
Relative Position.Distance.Nautical Miles : 3
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : Mixed
Weather Elements / Visibility.Visibility : 10
Ceiling.Single Value : 1300

Aircraft

Reference : X
ATC / Advisory.Tower : UES
Aircraft Operator : FBO
Make Model Name : PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Final Approach
Route In Use : Vectors
Airspace.Class D : UES

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 270
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 270
ASRS Report Number.Accession Number : 1844445
Human Factors : Troubleshooting
Human Factors : Confusion

Human Factors : Distraction
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

Vectored to ILS/LOC 10 into UES, had base of clouds around 2,300 AGL, the at or above altitude for our final approach fix. I entered flight plan into top Garmin unit and had user error. I was expecting G430's to be in cooperation with one another after entering flight plan and programming. In the moment forgetting this morning we encountered an updating information error in one of our G430's. While being vectored, I spent too much time trying to problem solve why my G430's weren't in unison rather than paying attention to my altitude. I flew below my final approach fix altitude before arriving at way point. At this time, we were below the clouds and I had visual of Runway 10. I noticed my glide slope was well above me and then re-looked at my plate realizing my error. The problem was in my scan, which I had just finished instructing my student about in our lesson. I spent too much time fixated on my attitude indicator and GPS that I failed to realize my glide slope was gradually raising above me. A very avoidable error.

Synopsis

GA flight instructor reported being distracted while trying to troubleshoot a GPS information error resulting in an altitude deviation and CFTT during final approach to UES airport.

ACN: 1844428 *(48 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : PWK.Airport
State Reference : IL
Relative Position.Angle.Radial : 340
Relative Position.Distance.Nautical Miles : 3
Altitude.MSL.Single Value : 1500

Environment

Weather Elements / Visibility.Visibility : 10
Ceiling.Single Value : 700

Aircraft

Reference : X
ATC / Advisory.Tower : PWK
Aircraft Operator : Personal
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Airspace.Class D : PWK

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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 30000
Experience.Flight Crew.Last 90 Days : 20
Experience.Flight Crew.Type : 350
ASRS Report Number.Accession Number : 1844428
Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

I was cleared the RNAV 16 approach to PWK. I had been proceeding direct to HIGUH and after passing HIGUH I descended to the MDA. I was supposed to descend to the MDA after passing PAMME, the next fix after HIGUH. The Control Tower called a Low Altitude Alert and I responded by climbing back up into the clouds to an altitude appropriate to the position I was located. I realized my error of descending too soon at about the same time as I received the alert from the Tower. This was totally an error on my part. I needed to pay more attention to the names of the fixes I was crossing, and the altitude I was supposed to be at crossing each fix. My GPS is a Garmin 430, non-WAAS, so I was executing this approach as a non-precision descent to an MDA. I am scheduled to have an improved GPS installed, which will have WAAS and therefore glide path capability, and an error such as I made will be less likely. In the meantime I will not make this error again. My life depends on it.

Synopsis

GA pilot reported an altitude deviation and CFTT while on the RNAV 16 Approach to PWK airport. The Tower Controller advised the pilot of a Low Altitude warning prompting the pilot to climb back to assigned altitude.

ACN: 1844391 *(49 of 50)*

Time / Day

Date : 202109
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : SAF.Tower
State Reference : NM
Altitude.MSL.Single Value : 6800

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
Aircraft Operator : Personal
Make Model Name : Amateur/Home Built/Experimental
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Personal
Flight Phase : Final Approach
Route In Use : Visual Approach
Airspace.Class D : SAF
Airspace.Class G : ZBQ

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 2400
Experience.Flight Crew.Last 90 Days : 87
Experience.Flight Crew.Type : 461
ASRS Report Number.Accession Number : 1844391
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

This report is for the dangerous situation of inadvertently approaching an airport in mountainous terrain. at night at too low of a height above the airport. This issue happened because I did not crosscheck information provided by the Garmin GTN 625 Navigator for VNAV profile with airport information. The button sequencing on the GTN "zeroed out" the 1,000ft AGL offset I programed into the VNAV feature. This appears to occur with all GTN 6xx/7xx navigators. I was flying a personal flight to SAF. I knew that I would be arriving at night, and planned to approach from the Albuquerque area to avoid terrain. In order to have a safe approach to the airport, I setup VNAV in my GPS Navigator, a Garmin GTN 625. I used the VNAV feature to give a 3 degree glide path to a point 1 mile from the airport at 1,000ft AGL. In setting up the VNAV, for altitude I entered a value of 1,000ft, then hit the MSL/AGL soft key to enable AGL. When I reviewed the added point VNAV waypoint in the flight plan on the GTN, it autofilled a crossing altitude of 6,349ft MSL. I had understood this to be the MSL altitude of 1,000 AGL. When approaching the airport, I descended through 7,000ft and noted that the terrain illuminated by city lights appeared closer than the approximately 1,600ft I was expecting. I arrested my descent, and climbed visually to an appropriate height visually with the airport in sight. I finished my traffic pattern and landed. I noted that the elevation of the field was 6,349 MSL. Later I tested my keystrokes in the GTN625. I tried to enter a VNAV waypoint with the following keystrokes: Enter 1,000ft Hit the MSL/AGL button Upon doing this, I noted that when you hit the MSL/AGL button, the altitude/height reverts to 0. I learned that you must enter the AGL value AFTER hitting the MSL/AGL value. I also learned to always check your VNAV crossing altitudes with the chart.

Synopsis

Pilot reported problems with setting up the Garmin Navigator correctly and almost having a CFIT encounter.

ACN: 1843411 *(50 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 1300

Environment

Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 200 ER/LR (CRJ200)
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Initial Approach
Route In Use : Visual Approach
Airspace.Class E : ZZZ
Airspace.Class G : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1843411
Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : Unstabilized Approach
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 : Became Reoriented

Assessments

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

Narrative: 1

Approaching ZZZ airport for Runway XX for a visual approach with the PAPI light out of service, there is a hill and the runway has a uprising slope. At 1,300 ft. AGL the system detected that we were at 1,000 ft. due to the terrain just before the airport when in reality we were 1,300 ft. I adjusted the rate of descent just over 1,000 ft to be stabilized for the approach. The aircraft EGPWS announced terrain terrain pull up, so I adjusted by vertical descent to 800 FPM then proceeded to land on a stabilize approach. Adjusting vertical rate of descent close to the airport with the uprising hill near the approach end of Runway XX at ZZZ. Being stabilized at 2,000 ft. for this approach will help avoiding the terrain occurrence.

Synopsis

CRJ-200 Captain reported getting an EGPWS alert due to the terrain during visual approach. The pilot decreased the rate of descent, stabilized the aircraft, and continued to landing.