ASRS Database Report Set

Inflight Weather Encounters

Report Set Description.....A sampling of reports from both air carrier flight crews and GA pilots referencing encounters with severe or unforecast weather.

Update Number.....37

Date of Update.....July 9, 2024

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

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

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

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

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

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

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

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

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: 2085398 *(1 of 50)*

Synopsis

A300 flight crew reported loss of aircraft control and autopilot disconnect while flying through severe turbulence during cruise descent. Flight crew regained control and continued flight.

ACN: 2085091 *(2 of 50)*

Synopsis

General aviation pilot reported they failed to extend the landing gear resulting in a gear up landing.

ACN: 2085028 *(3 of 50)*

Synopsis

Flight Instructor with student reported a NMAC while maneuvering in a practice area. Flight Instructor took evasive action to avoid a collision.

ACN: 2084189 *(4 of 50)*

Synopsis

EMB-145 Captain reported entering an area of severe turbulence resulting in course and altitude deviations. The Captain regained control of the aircraft when the turbulence stopped, and they continued safely to destination.

ACN: 2079096 *(5 of 50)*

Synopsis

EMB-170 flight crew reported an electrical system failure in cruise affecting multiple aircraft systems. Flight crew diverted and landed safely.

ACN: 2078892 *(6 of 50)*

Synopsis

Air carrier flight crew reported airspeed exceedance due to wind shear and severe turbulence on final approach. Flight crew completed a go-around, diverted and landed safely.

ACN: 2077952 *(7 of 50)*

Synopsis

EMB170 First Officer reported a loss of airspeed resulting in an unstable approach in gusty wind conditions. The crew performed a go around and landed safely on a different runway.

ACN: 2077850 *(8 of 50)*

Synopsis

ERJ 170 flight crew reported loss of aircraft control due to microburst and windshear on final approach. Flight crew regained aircraft control and conducted a go-around.

ACN: 2077387 *(9 of 50)*

Synopsis

Pilot reported severe weather and hail during cruise flight leading to temporary loss of control.

ACN: 2076359 *(10 of 50)*

Synopsis

Air carrier flight crew reported receiving an aural alert tower advisory for an obstacle during approach in IMC. Flight crew entered visual conditions and continued to a landing.

ACN: 2075947 *(11 of 50)*

Synopsis

Air carrier flight crew reported obstacle alert while on approach to DCA.

ACN: 2075945 *(12 of 50)*

Synopsis

Air carrier flight crew received an obstacle alert while on approach to DCA airport. Flight crew did a go-around and landed uneventfully.

ACN: 2075614 *(13 of 50)*

Synopsis

Air Carrier A321 flight crew reported the aircraft had a lightning strike during arrival descent which disabled the weather radar system. Flight crew received vectors away from the area of weather and completed a diversion with safe landing.

ACN: 2074883 *(14 of 50)*

Synopsis

Air carrier flight crew reported encountering wind shear during round out/flare resulting in loss of control. Flight crew performed a go-around and landed safely.

ACN: 2074759 *(15 of 50)*

Synopsis

Air carrier Captain reported a performing a go-around as an aircraft was taking off on the runway while the flight crew was on final approach. ATC stated there was proper spacing, but the flight crew believed that with the poor visibility and weather, it was unsafe to continue with the approach.

ACN: 2074715 *(16 of 50)*

Synopsis

B737 Captain reported the trailing edge flaps got stuck at 15 degrees during flap extension on final approach. The flight crew performed a go-around, used an alternative solution that deviated from the QRH as it was not applicable, and safely landed.

ACN: 2073637 *(17 of 50)*

Synopsis

Fractional Captain reported there were no NOTAMs regarding LVM runway conditions where it had snowed heavily. Due to safety concerns with LVN runway and ramp conditions, Captain flew to a different airport.

ACN: 2073178 *(18 of 50)*

Synopsis

Recreational / Hobbyist UAS pilot reported flying in marginal VFR conditions and did not follow the cloud clearance requirements.

ACN: 2072681 *(19 of 50)*

Synopsis

Gulfstream GIV pilot reported failure of the Flight Guidance Computer during departure in IMC resulted in return to departure airport.

ACN: 2072501 *(20 of 50)*

Synopsis

BE-400 pilot reported horizontal stabilizer de-ice system failure in flight. Returned to departure airport and landed uneventfully.

ACN: 2072464 *(21 of 50)*

Synopsis

A320 pilot reported severe turbulence and wind shear in cruise flight without any warning from normal weather forecast sources.

ACN: 2072463 *(22 of 50)*

Synopsis

B737 First Officer reported a sudden loss in altitude of 500 feet during cruise while the aircraft was passing through turbulence. Captain recovered aircraft and flight continued with no injuries or damage reported.

ACN: 2072253 *(23 of 50)*

Synopsis

B737 MAX 8 crew reported the left wing anti ice failed and they landed with ice accumulation on the wing.

ACN: 2072243 *(24 of 50)*

Synopsis

EMB-145 Captain reported loss of aircraft control for a short period of time when they entered an area of severe turbulence.

ACN: 2072217 *(25 of 50)*

Synopsis

Air carrier pilot reported unable to maintain altitude for several minutes due to encountering downdrafts and turbulence.

ACN: 2072169 *(26 of 50)*

Synopsis

B737NG Captain reported an inflight upset occurred when they encountered significant turbulence after ATC vectored them into storm clouds.

ACN: 2072089 *(27 of 50)*

Synopsis

Air carrier flight crew reported receiving a GPWS terrain alert and a low altitude alert from ATC on approach to BOI when they misunderstood their descent clearance.

ACN: 2071904 *(28 of 50)*

Synopsis

Air carrier pilot reported during unstable approach and terrain warning they decided to land aircraft after making corrections.

ACN: 2071151 *(29 of 50)*

Synopsis

EMB-145 crew reported severe turbulence and altitude excursion at cruise when deviating around thunderstorms. The aircraft exited the area of weather and continued the flight without injuries.

ACN: 2071065 *(30 of 50)*

Synopsis

Air carrier flight crew reported exceeding bank angle during climbout in IMC. Flight crew corrected bank angle and continued flight uneventfully.

ACN: 2070497 *(31 of 50)*

Synopsis

GA pilot reported a momentary loss of aircraft control while on the RNAV 28 approach to C29 airport in IMC conditions.

ACN: 2070299 *(32 of 50)*

Synopsis

Air carrier flight crew reported GPWS alert on approach. Flight crew took evasive action and landed uneventfully.

ACN: 2037498 *(33 of 50)*

Synopsis

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

ACN: 2034009 *(34 of 50)*

Synopsis

CRJ900 Captain reported encountering severe turbulence despite rerouting to avoid storms that were seen in the distance. As there was nothing showing up on radar, the reporter and Center did not know which direction would lead to flying in better weather. The severe turbulence eventually subsided and there were no injuries noted.

ACN: 2033866 *(35 of 50)*

Synopsis

Air carrier Captain reported they were assigned a heading for weather avoidance and an altitude to maintain. After reaching the initial assigned altitude, ATC issued them a Low Altitude Alert and a climb.

ACN: 2032995 *(36 of 50)*

Synopsis

C172 pilot reported taxiway excursion onto grass area while turning on a wet taxiway. Pilot regained control and returned to paved surface. Post flight inspection revealed damage to propeller.

ACN: 2032898 *(37 of 50)*

Synopsis

B737-800 First Officer reported the Captain overbanked the aircraft during arrival while maneuvering away from an area of severe weather. Captain corrected overbank and flight continued on approach to landing.

ACN: 2032837 *(38 of 50)*

Synopsis

Two air carrier pilots on break reported noticing the effects of possible wake turbulence on their trans-Pacific flight.

ACN: 2032768 *(39 of 50)*

Synopsis

Government UAS pilot reported conducting operations in deteriorating conditions. They chose to land after they were unable to comply with VFR cloud clearance requirements.

ACN: 2032767 *(40 of 50)*

Synopsis

Air taxi First Officer reported an unstabilized approach resulting in a CFTT event in inclement weather with close to zero reported visibility. The First Officer repeatedly asked the Captain to execute a go-around, yet the Captain ignored the requests. Post landing, Captain admitted a go-around would have been the best decision.

ACN: 2032417 *(41 of 50)*

Synopsis

Air Carrier flight crew reported ATC told them they took a similar sounding call sign's descent clearance and descended below the minimum altitude for terrain obstruction.

ACN: 2028890 *(42 of 50)*

Synopsis

Tower Controllers and a flight school instructor reported the instructor initiated a go around from short final due to another flight school aircraft being on the runway. The Controllers reported a mix up in communications, their inability to see the runway involved, and no ground radar contributed to their lack of awareness of an aircraft on the runway.

ACN: 2028563 *(43 of 50)*

Synopsis

Cessna 182 pilot reported becoming distracted during single pilot operation in IMC on approach and entering an unusual attitude. The pilot took immediate actions to recover the aircraft and elected to do an approach into a nearby airport.

ACN: 2028114 *(44 of 50)*

Synopsis

Epic E1000 pilot reported ATC did not approve their weather deviation request which resulted in them encountering Wind Shear and an uncontrolled 3000 ft. climb. Pilot regained control of aircraft and returned to assigned altitude.

ACN: 2027515 *(45 of 50)*

Synopsis

Pilot reported a runway excursion during gusty wind conditions while receiving training in a tail-wheel aircraft. The instructor took over the controls as the aircraft rolled into a grass area undamaged, then taxied to the hangar.

ACN: 2027345 *(46 of 50)*

Synopsis

Air carrier flight crew reported during climb out in turbulence they were below a crossing restriction on the SID and received a Low Altitude Alert from ATC.

ACN: 2027140 *(47 of 50)*

Synopsis

B737 Captain reported an engine vibration and EGT exceedance during climb. The crew returned to the departure airport and landed safely.

ACN: 2027095 *(48 of 50)*

Synopsis

ACRJ-700 flight crew reported an APU door malfunction, and subsequent Anti-Ice Duct warning, which precluded the ability to operate in icing conditions.

ACN: 2027067 *(49 of 50)*

Synopsis

Air carrier flight crew reported a radio altimeter "call-out" that contradicted the radio altitude displayed in the cockpit. The flight crew suspected possible 5G radio interference and continued the CAT III approach to a normal landing.

ACN: 2026967 *(50 of 50)*

Synopsis

Pilot reported a propeller strike in his tail-wheel aircraft after a sudden gust of wind lifted the tail off the ground causing contact with surface. No injuries or damage to plane except for the propeller.

Report Narratives

ACN: 2085398 *(1 of 50)*

Time / Day

Date : 202402
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Turbulence

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A300
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Flight Phase : Descent
Airspace.Class A : ZZZ

Component : 1

Aircraft Component : Hydraulic System
Aircraft Reference : X
Problem : Malfunctioning

Component : 2

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 Not 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 : 2085398
Human Factors : Workload
Human Factors : Time Pressure

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)
ASRS Report Number.Accession Number : 2085399
Human Factors : Time Pressure
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

While navigating direct ZZZ [VOR] from ZZZZZ1 at FL300, ATC ZZZ Center notified us, Aircraft X, of two areas of convective activity along our route of flight to ZZZ. We requested and were approved a left 10-degree deviation for weather. Our heading, 180, kept us outside of 20 NM from thunderstorms. ATC cleared us "when able" direct ZZZZZ - fix on the ZZZZZ STAR into ZZZ. Once proceeding direct ZZZZZ, ATC cleared us to cross 70 NM north of ZZZZZ at FL280. Approximately 100 NM north of ZZZZZ, we commenced our descent to FL280 from FL300 at 280 KIAS in LEVEL/CHANGE - autothrottles maintain speed on pitch. While IMC, clear of any convective activity we encountered severe turbulence for approximately 30 seconds while descending through FL295 until FL285. We experienced a momentary downdraft with 2000 FPM rate-of-descent, displayed on the Vertical Speed Indicator, VSI, followed by a momentary updraft with approximately 500 FPM rate-of-climb, on the VSI. During this excessive altitude oscillation, the aircraft's ATS (Autothrottle System) Arming Lever and the #2 Yaw Damper Arming Lever disengaged and were immediately manually reengaged and remained armed/engaged for the remainder of the flight. The Left ECAM also momentarily displayed YELLOW HYD SYS LO PR, but then extinguished without any corrective action. During level-off at FL280 the Autopilot #2, AP2, lever also disengaged, but was reengaged without issue for the remainder of the flight. We advised ATC that we were experiencing extreme/severe turbulence during the event. ATC then queried if there were any injuries or damage to the aircraft and we advised ATC there were no injuries or damage. Our filed route of flight was ZZZZZ1, RNAV SID from ZZZ1, to ZZZZZ2 for forecast thunderstorm development. Dispatcher annotated on the Flight Plan/Release, that "direct routing may be available after departure." Based upon the northeasterly movement of the surrounding weather,

ZZZ1 Center had us proceed behind, west, the majority of the convective activity and cleared us direct ZZZ [VOR] before reaching ZZZZZ1 on the SID. I think the flight crew, Dispatcher, and ATC properly managed the probable risks for the flight. Once we encountered the turbulence, we had few options but to continue to fly through it. The onset of the event happened so fast and was experienced so briefly, that other options for prevention were not available.

Narrative: 2

While encountering to ZZZ [VOR], ATC told us about some convective weather ahead. We chose to make a 10-degree left deviation in order to avoid it. This put us on a heading of 180 that would keep us further than 20 NM from both convective weather events. Once past the weather cells, ATC cleared us direct to ZZZZZ intersection and to cross 70 NM north of ZZZZZ at FL280. We began to descend to FL280 at 280 KIAS in LVL CHG. During the descent, close to level-off at FL280, we encountered severe turbulence. The turbulence lasted around 30 seconds. I watched the VSI go from a 2000 FPM descent and abruptly change to a 500 FPM climb. At that time the ATS (Autothrottle System) LEVER and Yaw Damper #2 and the Autopilot #2 turned off and we got a yellow hydraulic system LO PR ECAM message. We notified ATC of the severe turbulence event and told them there were no injuries or suspected aircraft damage. Cause: Weather/turbulence. Routing was good for flight. The weather/turbulence event was abrupt and couldn't be recognized before it happened. We continued to fly through it once it happened because there were no other options.

Synopsis

A300 flight crew reported loss of aircraft control and autopilot disconnect while flying through severe turbulence during cruise descent. Flight crew regained control and continued flight.

ACN: 2085091 *(2 of 50)*

Time / Day

Date : 202402
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 0
Altitude.MSL.Single Value : 9

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 10000

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Personal
Make Model Name : Small Aircraft, High Wing, 1 Eng, Retractable Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Personal
Flight Phase : Landing
Route In Use : Visual Approach
Airspace.Class D : ZZZ

Component

Aircraft Component : Landing Gear
Aircraft Reference : X
Problem : Improperly Operated

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 588
Experience.Flight Crew.Last 90 Days : 9
Experience.Flight Crew.Type : 37
ASRS Report Number.Accession Number : 2085091

Human Factors : Situational Awareness
Human Factors : Distraction

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Loss Of Aircraft Control
Anomaly.Ground Event / Encounter : Gear Up Landing
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

Approaching ZZZ [airport] ZZZ Approach handed me over to ZZZ tower. Upon initial contact with ZZZ tower they requested that I enter a left downwind for runway XXL and report 3 miles southeast of the field. ATC issued several traffic advisories due to traffic in the immediate area. The weather was reporting winds out of the southeast with gusts up to 19 knots. Due to the gusty winds, I opted for a flaps 20 approach and landing. While configuring, I ran the checklists but became distracted with ATC communications and somehow missed landing gear extension. Approach was bumpy with fluctuating airspeeds requiring more power than normal. During the approach the gear up warning system did not activate. Everything seamed normal until flare and touchdown when I quickly became aware the gear was not extended. I secured the aircraft and waited for emergency services to arrive. As a result of this incident no injuries were sustained. In retrospect, I believe the contributing factors were the wind conditions requiring lower flap setting and higher power setting for the approach and landing, which may explain why the gear warning system did not activate. In addition with my distraction with ATC and traffic, I did not back up the landing checklist with a GUMPS check technic (GAS, UNDERCARRIAGE, MIXTURE, PROPELLER.) I allowed myself to deviate from the number one priority-FLY THE AIRPLANE. In other words aviate navigate communicate. Reflecting on the occurrence, I believe I selected the correct approach and landing configuration for the existing conditions, however, I allowed myself to become distracted with traffic and ATC communications causing me to deviate from the number one priority- FLY THE AIRPLANE. Besides going through all checklists in the future, I will also as a final safety check, conduct the GUMPS technic at a minimum of 1000 feet, 500 feet, and prior to touchdown. This is a humbling and painful experience, which I feel in the long run will make me a better pilot. A valuable lesson I will never forget. I will always apply the three basic rules of flying, Aviate Navigate, Communicate as well as the proven GUMPS technic.

Synopsis

General aviation pilot reported they failed to extend the landing gear resulting in a gear up landing.

ACN: 2085028 *(3 of 50)*

Time / Day

Date : 202402
Local Time Of Day : 1201-1800

Place

Relative Position.Angle.Radial : 170
Relative Position.Distance.Nautical Miles : 11
Altitude.MSL.Single Value : 5500

Environment

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

Aircraft : 1

Reference : X
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 : None
Mission : Training
Flight Phase : Cruise

Aircraft : 2

Reference : Y
Aircraft Operator : FBO
Make Model Name : Small Aircraft, Low Wing, 2 Eng, Retractable Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Cruise

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 400
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 370
ASRS Report Number.Accession Number : 2085028
Human Factors : Situational Awareness

Events

Anomaly.Conflict : Airborne Conflict
Anomaly.Conflict : NMAC
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Miss Distance.Horizontal : 6000
Miss Distance.Vertical : 50
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

During a routine training flight in an Aircraft X with a private pilot student and myself, a Flight Instructor, a near mid-air collision (NMAC) situation occurred. The following details the chain of events, human performance considerations, contributing factors, discovery, corrective actions, and additional post-flight findings: Departing from BTL airspace, we leveled off at 3000 feet before ascending to 5500 feet MSL after exiting the lateral boundaries of the class D airspace. Moderate turbulence and wind speeds prompted our climb to 5500 feet MSL during the southbound departure. Upon entering our designated practice area, we made an entry call on the radio, announcing our altitude of 5500 feet MSL to alert other aircraft in the vicinity. I instructed the student to initiate a left climbing turn to a northerly heading to avoid cloud development and turbulence in the southeast. As the student began the turn, they spotted nearby traffic to the southeast (traffic heading westbound and our approx. heading of 150), and the SkyWatch system alerted us to the presence of the same altitude traffic. Although I hadn't initially sighted the traffic, I assumed control from the student and expedited the turn and climb away from the other aircraft. We continued our climb to 6500 feet MSL to maintain separation, with the other aircraft observed in a steep-banked left turn away from us. The decision to initiate a left climbing turn to avoid turbulence and cloud development was appropriate given the weather conditions. However, incomplete situational awareness led to potential conflict with nearby traffic. Moderate turbulence and wind speeds increased workload and distracted attention from scanning for traffic. Lack of visual confirmation of nearby traffic highlighted a lapse in situational awareness. Assuming control from the student and rapidly expediting the turn and climb away from the traffic demonstrated decisive action in mitigating the risk of a mid-air collision. Weather conditions prompted a decision to maneuver away from turbulence and cloud development, leading to potential conflict with nearby traffic. The other aircraft's failure to initiate communication to ease separation heightened the potential for a conflict. The presence of nearby traffic was initially spotted by the student pilot, and the SkyWatch system alerted us to the same altitude traffic. Visual confirmation of the other aircraft was made by the student pilot before I took control and expedited the turn and climb away from the potential conflict. Enhanced emphasis on situational awareness and scanning techniques will be incorporated into future flight training sessions to mitigate the risk of similar incidents. Review of procedures for communication and evasive action in the event of traffic conflicts will be conducted to ensure appropriate responses in similar situations. Continued reinforcement of the importance of effective communication and vigilance during flight operations will be emphasized to prevent future near mid-air collisions. Upon post-flight review, it was

determined that the NMAC distance was approximately 6000-7000 feet horizontally and 50-100 feet vertically. While this distance may not strictly qualify as an NMAC, the evasive action taken was deemed necessary considering the potential hazards involved had there been any further delay in action.

Synopsis

Flight Instructor with student reported a NMAC while maneuvering in a practice area. Flight Instructor took evasive action to avoid a collision.

ACN: 2084189 *(4 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

Altitude.MSL.Single Value : 13000

Environment

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

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 : Cruise

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 : 2084189
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

We were in cruise flight at 13000 ft, operating a Flight from ZZZ to ZZZ1. There had been a lot of bad weather in the area all day. We passed through some clouds that appeared to have tops of about 15000 ft. The radar was not indicating anything but very light scattered precipitation. As we entered the clouds we encountered severe turbulence. The aircraft was thrown down about 400 feet instantly with about twenty degrees of bank to the left. Speed increased towards the red line, 320 knots, and I deployed the spoilers. As we tried to climb back to our assigned altitude of 13000 ft we were continually thrown back down in altitude. After about a minute, the turbulence subsided to light turbulence and we proceeded to climb back to our assigned altitude and on course. We reported the severe turbulence and the deviation to ATC and continued to our destination without further incident. Suggestion: Possibly request a deviation around clouds when widespread bad weather has been occurring in the area.

Synopsis

EMB-145 Captain reported entering an area of severe turbulence resulting in course and altitude deviations. The Captain regained control of the aircraft when the turbulence stopped, and they continued safely to destination.

ACN: 2079096 *(5 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 35000

Environment

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

Aircraft

Reference : X
ATC / Advisory.Center : 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 : Cruise
Airspace.Class A : ZZZ

Component

Aircraft Component : Electrical Power
Aircraft Reference : X
Problem : Failed

Person : 1

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2079096
Human Factors : Workload
Human Factors : Troubleshooting

Person : 2

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

Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2079107
Human Factors : Troubleshooting
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Automation : Aircraft Other Automation
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Diverted
Result.Flight Crew : Landed in Emergency Condition
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

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

Narrative: 1

First officer was PF and after reaching cruise altitude FL350 for approximately 15 minutes, we had multiple IECAS messages including A-I ENG 1 FAIL, AC BUS 1 OFF, DC BUS 1 OFF, ICE DETECTOR 1 FAIL, IDG 1 OFF BUS, VHF 3 FAIL, ADS 1 FAIL, AVNX MAU 1B FAIL, AP FAIL, SPOILER FAULT, EMER LT ON, SLAT LO RATE, TAT 1 FAIL, CCD 2 FAULT. Additionally the following items were effected: ADS3 Reversion, EFIS SCREEN DU 1 and 4 fail, Autopilot fail, auto-throttle fail, MCDU 1 fail, CCD 2 fail, A-I MODE NOT AUTO. We had approximately 18 irregular conditions. After assessing that our remaining reliable flight instruments including the IESS were on my (Captain) side, I announced my flight controls and took the flight controls. As I continued to hand fly the aircraft the FO initiated QRH procedures for AC BUS 1 OFF, DC BUS 1 OFF. After that we told ZZZ center that we had an electrical failure and we were [requesting priority handling]. It appeared that we were experiencing conditions similar to an electrical emergency, but IDG 2 was working, the RAT had not deployed, and DU panel 5 was working. Wanting to start the APU, we requested FL 300. Reaching FL 300 we successfully started the APU, and continued to asses our multiple irregular conditions. We were unable to view the electrical synoptic page. The FO also completed QRH procedure for AVNX MAU 1B FAIL. Assessment included that with IDG 2 operating, normal electrical transfer of power to restore AC BUS 1 and DC BUS 1 should have occurred but this had not happened. This lead me to believe there was a fault in system 1. We notified the flight attendants and passengers that because of an electrical problem, we would likely be diverting to an alternate airport. The QRH warned us that flight in icing conditions required selecting ice protection mode selector to on which we did, and this also made staying clear of icing conditions or remaining in VMC a priority as we determined a suitable diversion airport. Most airports behind us had been experiencing IFR, rain and freezing rain. ATC assisted in finding a diversion airport. Initially ATC said that ZZZ was VFR so we requested diversion to ZZZ. We communicated to the FA′s and Passengers that due to an electrical issue, we would be diverting to ZZZ but then several minutes later ATC said ZZZ was marginal and reporting icing conditions. We asked about ZZZ1 and ATC said ZZZ1 was VFR and negative icing reports. We

confirmed with ATC that we were [requesting priority handling] and requested CFR (crash fire rescue) for ZZZ1. We were cleared direct to ZZZ1 which the FO loaded into his and the only operable MCDU. The FO did all communications with #2 MCDU including trying to ACARS dispatch but that was inoperative. I concentrated on hand flying the aircraft in IMC conditions the entire descent. Finding a nearest suitable alternate was difficult since neither Nav Display worked and #1 MCDU was inoperative, so I used my tablet map for situational awareness. Via the intercom I told the FA′s that because of poor weather in ZZZ we would now be diverting to ZZZ1, landing in 20 minutes, they did not need to brace. I also made another announcement to the passengers that due to poor weather in ZZZ we would now be landing in ZZZ1 and please pay attention to the FA′s as they prepare the cabin for landing. An attempt was made to communicate to dispatch through different means but that was unsuccessful. We advised ATC to communicate to dispatch of our situation and diversion to ZZZ1. 10 minutes prior to landing we notified the FA′s that we would be landing in 10 minutes. We completed our primary QRH procedures setting up for full flap landing on runway XX at ZZZ1. After an uneventful landing we stopped on the runway and confirmed that we could safely taxi clear of the runway. After stopping on the taxiway we confirmed that we could safely taxi to the gate. We taxied to gate and deplaned our passengers. CFR confirmed that everything was OK. I contacted dispatch, Maintenance control, and Chief Pilot. I also wanted to take a moment to mention what a great job my supporting crewmembers did. First Officer is still a low time First Officer, but he did an extraordinary job in this [priority] situation. Flight attendants, with their many, many years of experience helped keep the passengers safe and calm in the [priority handling] diversion.

Narrative: 2

[Report narrative contained no additional information]

Synopsis

EMB-170 flight crew reported an electrical system failure in cruise affecting multiple aircraft systems. Flight crew diverted and landed safely.

ACN: 2078892 *(6 of 50)*

Time / Day

Date : 202312
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : MYR.Airport
State Reference : SC
Altitude.AGL.Single Value : 800

Environment

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

Aircraft

Reference : X
ATC / Advisory.Tower : MYR
Aircraft Operator : Air Carrier
Make Model Name : Medium Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class C : MYR

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 : 2078892
Human Factors : Workload
Human Factors : Situational Awareness

Person : 2

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

ASRS Report Number.Accession Number : 2078937
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Maintenance Action
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Diverted

Assessments

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

Narrative: 1

We were dispatched to MYR when the weather was forecasted to be the worst at MYR. It had remarks on the release that the wind gusts could exceed our cross wind component. We looked through the FOM and SOP for the wind shear guidance on cross wind winds but couldn′t find the tables for dry runway, wet runway, braking action less than good that used to be in the SOP so we felt pressured to go. The severe weather at the time of departure was south and west of MYR so again we had no reason to delay the flight. We knew there was going to be turbulence along the route so we made the FA′s remain seated. We were in heavy rain and moderate turbulence for the last 15 minutes of the descent into the MYR area. We were set up for [Runway] 36 and getting vectors to the southeast for a right downwind when we heard another company aircraft go missed approach and get vectored back around. The controller asked him the reason for the go around and all he said was they were unstable. While both of us were getting vectored to final the controller advised that the wind was favoring runway 18 , that they had 2 minutes of steady wind favoring 18. We ran the numbers again and found we couldn′t do 36 so we asked for 18. The other aircraft continued for 36. They made it in but didn′t give a pirep . While getting vectored for 18 ATC told us there was extreme precipitation 4 miles to the west and 6 miles to the north of the FAF so we asked for a turn just outside the FAF. We were configured at the marker. At 800 ft we got the wind shear warning and did the escape maneuver and encountered severe turbulence. When I thought we were out of the windshear I asked for recover flaps 2 positive rate gear up. FLch 210 then we hit the wind shift at 2000 ft msl and our airspeed went up 100knts to 285knts the FMS guidance went up to 40 degrees pitch up but to get the 210 knots but I kept the nose about 20 degrees we were in severe turbulence until we got east of the airport by 5 miles or so. We then diverted to ZZZ and landed safely without any injuries. I wrote the airplane up for the severe turbulence and airspeed exceedance. When I was checking the weather before departure I don′t recall seeing any weather with tops above FL210 when we landed in ZZZ I checked the weather and saw radar tops were FL340 to FL400 in the MYR area also I was told that passengers who had their cell phones on were receiving emergency alerts for a

tornado warning in the MYR area. I think the dispatcher following the flight could have warned us about the weather. Do dispatchers know there is a difference between summertime and wintertime storms due to the sinking of the troposphere? A wintertime storm above 30,000 ft is equivalent to a 45,000 storm? On the flight back from ZZZ to MYR the dispatcher wanted to file us straight through a line of fl340 to fl400 cells. I had to make him plan a different route to avoid all the weather with higher tops.

Narrative: 2

Flap overspeed on climb out. Wind shear events resulting in flap overspeed. 800 AGL - severe turbulence and windshear. Preformed windshear events in order. Then once recovering from windshear, flaps 2 gear up. Then 50 knots gust around 2.5 thousand feet resulting in flap overspeed and in addition exceeding of 250knots under 10k feet. Pilot flying captain reduced thrust out of max thrust and Flch 210 was bugged. Approach was not attempted again and diversion was made to ZZZ. Pilots should attempt to recognize the importance of speed management and importance during windshear events and the likelihood of overspending due to gusts. Reducing power earlier once out of windshear event could have helped with speed management in addition reducing flaps on F bug speed will help with overspeed mitigation.

Synopsis

Air carrier flight crew reported airspeed exceedance due to wind shear and severe turbulence on final approach. Flight crew completed a go-around, diverted and landed safely.

ACN: 2077952 *(7 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Altitude.AGL.Single Value : 1200

Environment

Weather Elements / Visibility : Icing
Weather Elements / Visibility : Turbulence
Light : Daylight

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2077952
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach

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

Assessments

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

Narrative: 1

Flight from ZZZ to ZZZ1 as pilot monitoring we were descending through 5000 ft direct ZZZZZ (FAF). We received clearance for visual approach runway XX. We were close to the airport and realized we were high and fast. We turned away to the West to lose altitude and speed. AP (autopilot) and AT (autothrottles) were turned off. Started turn to airport in order to not overshoot localizer. We then put the gear down to help slow. While in turn back to final approach course we slowed to put out flaps 1. Continuing turn to final about 1300 ft., I stated "watch your speed." I also stated "watch your speed" again as the speed was dropping closer to stall around 1200 ft. We were still in the turn and we hit gusts of wind and our speed dropped quickly, we got a stick shaker briefly for a second or two with very quick recovery. Within a few seconds called for go-around, which we executed. During the go-around we realized the speed brakes were not stowed. We cleaned up the aircraft and were vectored to land runway XYL. We landed safely. Suggestion: Always stay situationally aware. Take whatever actions necessary in order to execute a stable approach. Don't rush an approach. It is already a task saturated phase of flight and rushing the event can add tasks that weren't anticipated.

Synopsis

EMB170 First Officer reported a loss of airspeed resulting in an unstable approach in gusty wind conditions. The crew performed a go around and landed safely on a different runway.

ACN: 2077850 *(8 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 3800

Environment

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

Aircraft

Reference : X
ATC / Advisory.Tower : 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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2077850
Human Factors : Communication Breakdown
Human Factors : Workload
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

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

Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2077855
Human Factors : Communication Breakdown
Human Factors : Workload
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

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

Narrative: 1

During our 3rd leg of the day from ZZZ1 to ZZZ we encountered a microburst while on the missed approach for Runway XXL in ZZZ. The following is a narrative of this event. I was the pilot flying and the FO (First Officer) was pilot monitoring. Momentarily after being given the approach clearance for Runway XXL into ZZZ and being told to switch to Tower, a microburst alert came across for the Approach frequency for Runway XXL. The First Officer on my command immediately canceled the approach clearance. We were given a heading of 220 and instructions to climb to 5000 ft. The heading didn't turn us away from the weather and then subsequently flew us through the weather. I asked the FO to get a heading away from the weather to avoid the microburst. However, he was unable to get a word in with ATC as he tried to call them at least 4 times and due to the fact that we were in IMC conditions in one of the world's busiest airspace and surrounded by weather, I was reluctant to turn more than a few degrees without permission. After initiating the go-around as instructed we initiated the climb and go-around procedures. I selected the heading of 220, dialed in 5000 ft., selected flight level change speed 210. We were already at flaps 2 so we went to flaps 1 and while climbing through 3800 ft. the plane encountered a microburst and lost all lift. I announced windshear and commanded max thrust and pushed the nose forward to gain airspeed and prevent a full stall. I will note we never received an annunciated winds shear alert nor did we get a shaker or a pusher indication. I will also note the exact altitude loss and airspeed loss is unknown. I estimate the altitude loss was around 2000 ft. and the airspeed loss was around 50 kt. Once I recovered to the point where the plane regained lift, we initiated a climb back to our assigned altitude of 5000 ft. and entered a severe updraft that made us blow through 5000 ft. up to 8000 ft.

before I was able to regain control of the aircraft. Once control was regained I commanded the FO to "recover." It took several minutes for the FD (Flight Director) to become useful again. The FO during the windshear recovery and on my command informed ATC as to the fact that we were recovering from windshear. Once we were at a safe altitude and I was able to get the autopilot on, I made an announcement on the radio to help articulate how bad the microburst and windshear were in hopes of stopping other planes from flying through it. In closing, this situation could have been minimized had the ATC controller turned us away from the weather on the missed. We were able to recover control of the aircraft with no injuries or aircraft damage of any sort. In the future I will instruct the FO to tell ATC we need an immediate heading away from the weather when on a missed approach anywhere near a microburst.

Narrative: 2

We were enroute from ZZZ1 to ZZZ and getting vectored for the ILS XXL. I was pilot monitoring and the Captain was pilot flying. The controller told us, "Aircraft X, maintain 180 kt. until ZZZZZ and contact Tower XXX.X." I repeated the clearance back, then literally 1 second after my repeat and before I switched to Tower the controller announced, "Attention all aircraft, low level microburst alert, 30-kt. loss on 3-mile final." My Captain told me to cancel our approach clearance and without wasting any time, after an aircraft had already asked to cancel theirs, I said "we can't take that either" and "we'd like to cancel our approach due to the microburst." Then the controller instructed us to "fly heading 220 and maintain 5000." The final approach course to the ILS XXL is a 219 heading so the 220 heading sent us straight into the weather. My Captain asked me to get a different heading to avoid the weather. I called about 4 times before we were finally told, "I gave you a heading of 220, but you can have whatever heading you want," a few moments later. At that point we had already flown through the worst of the weather. Being in the position that we were, ZZZ2, and ZZZ3 to our left and ZZZ4 traffic to our right, we were hesitant to deviate from our instructions more than a few degrees given it's one of the busiest airspace in the world with jets everywhere. We initiated a soft go-around and climbed to 5000 with flight level change 210, and selected a heading of 220. We were slightly configured with flaps 2 and in our climb we selected flaps 1. Around 4000 ft. or so we encountered a microburst. The aircraft lost an incredible amount of lift and we began to lose altitude fast. The Captain announced wind shear and moved the thrust levers to max. I announced what altitude we were at during the microburst and looked at our airspeed and was shocked to see how much airspeed we had lost. I told him we need to push the nose down more and I looked to left left and saw the yoke full forward. After about 20 seconds we were out of it and hit an updraft and shot up to 8000 ft. before we could start to recover. After that the Captain told me to "recover" and I selected heading and we cleaned up the aircraft and regained control. After going through the microburst, the flight director automation of the aircraft was not cooperating with our inputs and he hand-flew the aircraft until we got it to work. Towards the end of the ordeal I told ATC we were recovering from wind shear. The Captain made a comment to air traffic control of what we had went through in hopes of not sending any more aircraft through the weather we went in. My suggestion is that air traffic controller should've realized the heading of 220 was essentially our current heading into the weather and thus given us a different heading. Also, given the microburst alert, they should've alerted us better and given us instructions to avoid the weather. Had we switched over to Tower and not heard the microburst alert on the Approach frequency we might've been in an even more dire situation.

Synopsis

ERJ 170 flight crew reported loss of aircraft control due to microburst and windshear on final approach. Flight crew regained aircraft control and conducted a go-around.

ACN: 2077387 *(9 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 288
Relative Position.Distance.Nautical Miles : 18
Altitude.MSL.Single Value : 11000

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility : Hail
Weather Elements / Visibility.Visibility : 9
Light : Night
Ceiling.Single Value : 0

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Personal
Make Model Name : Baron 58/58TC
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Cruise
Route In Use : Direct
Route In Use : Vectors
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Function.Flight Crew : Captain
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Other
Experience.Flight Crew.Total : 30000
Experience.Flight Crew.Last 90 Days : 100

Experience.Flight Crew.Type : 1000
ASRS Report Number.Accession Number : 2077387

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Landed As Precaution
Result.Flight Crew : Diverted

Assessments

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

Narrative: 1

During cruise flight en-route to destination ZZZ1 at 11,000 MSL and in the vicinity of Location A, scattered convective activity persisted along our cleared route of flight. In an effort to deviate away from a visually acquired build up ahead, I requested a radar vector away from ground radar returns. ZZZ Center issued a heading of 075 to avoid weather which was consistent with the visual picture we had while in VMC. Within a few minutes on the vector, the aircraft re-entered IMC and with in approximately 1-2 minutes experienced a strong updraft followed by heavy rain and then hail which lasted for 30-60 seconds. Severe turbulence made altitude control not possible and I obtained clearance from ZZZ [Center] for any altitude. Upon exiting the hail encounter, I requested the field conditions at the nearest airports and ZZZ2 was suggested. Due to local knowledge and lack of emergency services however, a diversion to the nearest suitable field with an ILS and CFR resulted in selection and uneventful approach and landing to ZZZ3. This aircraft was not equipped with airborne weather radar. This could have been a primary tool that might have depicted the threat of hail or heavy precipitation on the vectored heading and in IMC.

Synopsis

Pilot reported severe weather and hail during cruise flight leading to temporary loss of control.

ACN: 2076359 *(10 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : DCA.Airport
State Reference : DC
Altitude.MSL.Single Value : 800

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Cloudy

Aircraft

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

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 : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Type : 1500
ASRS Report Number.Accession Number : 2076359
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface
Human Factors : Workload
Human Factors : Distraction
Human Factors : Fatigue

Person : 2

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

Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Type : 600
ASRS Report Number.Accession Number : 2076360
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

On the approach into DCA we received a " Caution obstacle" aural. The visibility was improving from 1/4NM to 7, but the ceiling was still BKN 00 according to the ATIS, which required the use of the LDA Z. FO (First Officer) was flying and briefed the approach, during the briefing we set 720 as the MDA, unfortunately I did not verify this as I was task saturated due to the early morning, fatigue, a significant tail wind and some late approach briefing. Once cleared for the approach we were given direct to FERGI, 3K until established cleared for the LDA. During the approach we had a significant x-wind of roughly 47 knots from the right, roughly 180, which put us left of the 147 degree approach course. I noticed that we were quite far to the left of course and was focused on correcting this. FO switched to white needles to try and get the auto pilot to recapture the Localizer course which helped a bit, but I felt that we were still too far left of course and in danger of encroaching on PLVIA. FO started descending just after FERGI and was using the direct intercept page as his vertical guidance. Unfortunately a combination of task saturation, my target fixation and lack of situational awareness lead to us being right around 800 ft right over WEVPU. We broke out at roughly 1000 ft which is when I saw the buildings we were descending near. Once I heard the aural as well as the tower's advisory, I asked the FO to turn off the auto pilot and start following the river so as to avoid any further conflict, we had the runway and PAPIs in sight at this time. We continued following the river and landed without further incident. Cause: This was a combination of situational awareness, task saturation, fatigue and target fixation. The low Ceilings were a concern and I was fixated on the thought that we were going to have to go around or divert to ZZZ. Once we got to the approach I was further fixated on the fact that the plane was not following the localizer course very accurately and in fact putting us in line with a restricted area. I have been crediting an average of 100 hrs a month and can certainly feel the fatigue, the early morning combined with my commute further exacerbates this issue. Suggestion: More details for this approach in the company pages would be very helpful. Due to a lack of glide-slope as well as the runway not on the approach a procedure to set the field altitude, much like a localizer approach, would be helpful. I debriefed with the FO how we needed

to utilize the special procedures manual for an approach such as this, which we do very infrequently.

Narrative: 2

We followed the LDA Z 19 in DCA and received an obstacle alert. We set 800 ft and the autopilot followed the vertical speed set by the PF to comply with the altitude restrictions set forth in the procedure. Just before leveling off at 800 ft the aircraft issued an obstacle alert. The autopilot leveled at 800 ft and the PF disengaged the autopilot, turned away from the building, and followed the river to land uneventfully from a stabilized descent. Cause: The procedure has us descend directly toward a building on the approach course. The altitude selection is to be set at 800 ft and the building has a height of 470 ft.

Synopsis

Air carrier flight crew reported receiving an aural alert tower advisory for an obstacle during approach in IMC. Flight crew entered visual conditions and continued to a landing.

ACN: 2075947 *(11 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : DCA.Airport
State Reference : DC

Environment

Flight Conditions : IMC
Weather Elements / Visibility.Visibility : 2

Aircraft

Reference : X
ATC / Advisory.TRACON : PCT
Aircraft Operator : Air Carrier
Make Model Name : Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : DCA

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 4
ASRS Report Number.Accession Number : 2075947

Events

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

Assessments

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

Narrative: 1

Ceilings in DCA were near the MDA for the LDA Z 19 Approach. Visibility was roughly 2 SM. We knew there would be a possibility to go missed due to inability to see the runway. At the MDA, we still could not identify the runway. By the time we saw the runway, we were too close for a stable landing. We decided to go around, and ATC gave us a 250 vector and 3,000 altitude to set up for another try. On the second time around for the LDA Z approach, ATC notified us the prior three aircraft went missed as well. After the step-down fix, WEVPU, around 1,000 MSL, we still had not identified the runway and we received and obstacle alert. We decided to go around once more. ATC vectored us to the ILS 1 and landing was normal. Cloud ceilings were around 700 AGL, 40 kt winds aloft around 2,000 ft., calm on the runway. Procedures were followed. We briefed the strong possibility of a go around before the approach due to the weather. Both go arounds were performed as briefed.

Synopsis

Air carrier flight crew reported obstacle alert while on approach to DCA.

ACN: 2075945 *(12 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : DCA.Airport
State Reference : DC

Environment

Flight Conditions : Marginal

Aircraft

Reference : X
ATC / Advisory.TRACON : PCT
Aircraft Operator : Air Carrier
Make Model Name : Medium Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : DCA

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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2075945

Events

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

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure

Contributing Factors / Situations : Weather
Primary Problem : Weather

Narrative: 1

First approach to Runway 19 LDA Z ended with missed approach due to weather at minimums. Vectored back again and at approximately 200 feet above MDA we received an obstacle alert. We went around and were vectored to Runway 1 ILS. Rest of flight normal. NOTE: Weather was at minimums and 40 knot corsswind. Three flights in front of us had also just gone missed. All considerations for missed approach were briefed prior and executed as briefed.

Synopsis

Air carrier flight crew received an obstacle alert while on approach to DCA airport. Flight crew did a go-around and landed uneventfully.

ACN: 2075614 *(13 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 13000

Environment

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

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 : Descent
Route In Use.STAR : ZZZZZ
Airspace.Class C : ZZZ

Component

Aircraft Component : Weather Radar
Aircraft Reference : X
Problem : Failed

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2075614

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 : 2075632
Human Factors : Troubleshooting
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Diverted
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

On decent on STAR into ZZZ at 13k we had a lighting strike that disabled our weather radar. There were thunderstorms in the area that we were diverting around. We leveled off at 12k and asked for diversion to ZZZ1 airport which was reporting 7 miles vis. ZZZ was 3/4 mile and 100 overcast with thunderstorms. we received diversion headings from ATC. Approximately 10 minutes after the lightning strike the radar came back on. We continued with vectors from ATC to ZZZ1 to stay clear of heavy rain and thunderstorms that were now moving into the ZZZ1 area. We landed on Runway XX in heavy rain and reduced visibility with 400 overcast. Cause: Being dispatched to an airport with forecast bad weather. Suggestions: Cancel flight.

Narrative: 2

Operating from ZZZ1 to ZZZ flying the ZZZZZ arrival, we encountered moderate/severe turbulence and a lightning strike originating on the nose of the aircraft which resulted in the immediate loss of our radar system. Some active weather near the arrival corridor had been monitored prior to and throughout the flight, flight was Dispatched with plenty of holding/alternate fuel. We proactively updated weather and arrival information into the ZZZ airport, the weather forecast and observations pointed to the need for an autoland setup which required the Captain to be the Pilot Flying. We also coordinated with Dispatch regarding alternate planning, originally listed as ZZZ2, the weather situation prompted an update to ZZZ3. We briefed and programmed the corresponding approach into the FMS and elected as a crew to transfer the aircraft to the Captain as Flying Pilot for the remainder of the flight (originally planned as FO (First Officer) leg) given the high probability of a required autoland. We were cleared to descend via the arrival landing to the north. Radar returns appeared stronger during a portion of the arrival between ZZZZZ1 and ZZZZZ2, ATC had previously indicated that a regional aircraft has just traversed this area with light/moderate turbulence and heavy rain. As we began to descend, I inquired again about this specific sector and altitude based on the radar observations to which the controller again indicated the report from the previous airplane.

As we approached this area of weather, radar returns appeared to intensify and we requested deviations to avoid the area of strongest returns, as we began to deviate, turbulence increased rapidly and, suddenly and without any static buildup on the radio, we were struck by a very large lightning bolt which immediately disabled the radar system. At this point we reported to ATC that we needed to level off and fly away from the weather, reporting the lightning strike and loss of radar, we then requested a climb and diversion to ZZZ3 as previously discussed and coordinated with Dispatch and briefed as a possible outcome in case of an unsuccessful approach into ZZZ. We informed the next ATC controller about the loss of our radar and requested vectors around stronger returns, ultimately assigned an arrival into ZZZ3 and eventual vectors for ILS [Runway] XX. We also updated the Dispatcher about our diversion. Our radar came back on its own approximately 10 minutes after the lightning strike, however we requested vectors away from stronger returns due to lack of certainty of radar information being displayed. We briefed the ILS XX and flew it to a safe landing in ZZZ3 and proceeded to the gate once it became available. Cause: Rapidly changing weather conditions. Suggestions: Weather is unpredictable and dynamic, it is possible that weather deteriorated faster than it would′ve been reasonably expected, lightning was not present during our descent into the airport.

Synopsis

Air Carrier A321 flight crew reported the aircraft had a lightning strike during arrival descent which disabled the weather radar system. Flight crew received vectors away from the area of weather and completed a diversion with safe landing.

ACN: 2074883 *(14 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1801-2400

Place

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

Environment

Weather Elements / Visibility : Windshear

Aircraft

Reference : X
ATC / Advisory.Tower : 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 : VFR
Mission : Passenger
Flight Phase : Landing
Airspace.Class B : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2074883
Human Factors : Workload

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 : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2074385

Events

Anomaly.Deviation - Speed : All Types
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

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

Narrative: 1

We circled to land RWY XX in ZZZ. We were fully configured before crossing the visual reference point at 1200 ft. Crossed over the second visual reference point at 500 ft and maintained the GSI (Glide Slope Indicator). At 100 ft call, I verbalized check. At minimums call, I verbalized landing. We experienced wind shear caution at a very low altitude, probably at 75 ft. We gained 20-25 knots, sink rate was abrupt and increasing. I had to maintain extra power to be able to compensate for gust and almost reached APR. The PM called a go-around. I performed the go-around using APR. The right wing dropped significantly, but we did not feel or hear anything. We were vectored around for a visual to RWY XY. Landed on RWY XY uneventfully. Cause: Wind shear very close to the ground. Wind shear caution appeared just before round out to flare.

Narrative: 2

Circled to land on RWY XX in ZZZ. We were fully configured prior to reaching 1000ft. Had a 20-25 knot speed gain on final which brought our speed to about 160 knots. PF got it back to slightly above Vref and was bracketing. PF called "landing" at minimums. We were close to the RWY in the round out/ flare portion. I saw the wind shear advisory caution on the PFD and called it out. Then the right wing dropped/banked hard to the right, followed by a sharp bank to the left. I called out a go around. We went around and landed on RWY XY.

Synopsis

Air carrier flight crew reported encountering wind shear during round out/flare resulting in loss of control. Flight crew performed a go-around and landed safely.

ACN: 2074759 *(15 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : AUS.Airport
State Reference : TX
Altitude.AGL.Single Value : 200

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Windshear
Light : Night

Aircraft : 1

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

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : AUS
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Crew Size.Number Of Crew : 1

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 101
Experience.Flight Crew.Type : 1097
ASRS Report Number.Accession Number : 2074759
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Ground Conflict, Critical
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

Aircraft X was from ZZZ to AUS. AUS weather OVC012 3 SM -RA. Weird weather with 45 - 50 tailwinds until 800 ft. on approach and huge temperature inversion where temps at 2000 ft. were 17°C and at 500 ft. were 6°C. At 1000 ft. we were still fighting tailwinds and calling landing checklist complete, while breaking out of the clouds with limited visibility. Runway lights were then in sight. At 500 ft. "stable" call was completed, at which point I focused on the runway and at 400 ft. stated that I believed an aircraft was on the runway. The FO (First Officer) believed it was the runway approach lights. At 300 ft. I stated again that it was indeed an aircraft. He called the Tower and told them we had an aircraft on the approach end of the runway. Tower told us they were a midfield departure. As Tower was stating this the aircraft was noticeably starting its departure roll. At 200 ft. I called and executed a go-around. At that point I suspect the aircraft was about 3000 - 4000 ft. down the runway, but my focus was on flying the aircraft and executing procedures for the go-around. The go-around was flown and executed well. We were vectored around for a second approach that was uneventful, except for the significant abnormal weather - tailwinds and temps on final. After landing, Ground asked us to call TRACON to inform him of what triggered our go-around. After parking, I discussed everything that I've stated here with TRACON. He told me that Tower Controller stated we had approximately 6100 ft. of spacing and the minimum allowed is 6000 ft. I do not believe that we had that spacing. With the poor visibility and abnormal weather, the very close spacing felt unsafe and uncomfortable. During the debrief, we both agreed that the go-around was a good safe conservative call and were both concerned about the tight landing to departure spacing. I feel that the significant tailwinds on final were the causal factor. The 45- - 50-kt. tailwinds would have accelerated our ground speeds and caused problems for ATC when trying to time aircraft arrivals, especially when sequencing them with departures. Likely they cleared the departure aircraft to takeoff when we were about 4-mile final, which usually might be sufficient. If we carried that huge tailwind, our ground speed would've been 45 - 50 kt. faster than usual and would've compressed the timing. Furthermore, the departure aircraft likely was being diligent in their operations and not rushing things as it was nighttime and the weather was rather poor.

Synopsis

Air carrier Captain reported a performing a go-around as an aircraft was taking off on the runway while the flight crew was on final approach. ATC stated there was proper spacing, but the flight crew believed that with the poor visibility and weather, it was unsafe to continue with the approach.

ACN: 2074715 *(16 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZZ.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
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

Component

Aircraft Component : Flap Control (Trailing & Leading Edge)
Aircraft Reference : X
Problem : Malfunctioning

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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 93
Experience.Flight Crew.Type : 1177
ASRS Report Number.Accession Number : 2074715
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew

When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Landed in Emergency Condition

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Weather
Primary Problem : Aircraft

Narrative: 1

During Captain OE (Operating Experience), we set up for an autoland into ZZZZ as the weather was 1,200 ft. RVR. After a thorough brief and setup, we decided to land flaps 40 for a little more visibility. During flaps extension on final approach, the pilot monitoring selected flaps to 30°, then 40°, and ran the Landing Checklist. At that time the pilot monitoring saw the trailing edge flaps were stuck at 15° and verbalized the configuration. The pilot flying spun the speed bug back up so we didn't get too slow and said during the debrief he noticed the PFD's (Primary Flight Display) speed tape looked different that normal, but hadn't realized why until the pilot monitoring called out the failure. A missed approach was executed and [priority handling was requested]. Once the missed was completed and the aircraft stable, the pilot flying continued flying and took radio duties, while the pilot monitoring ran the QRH for Trailing Edge Flaps Disagree. That concluded that the flap handle did nothing to alter the flap position. Because of the weather in ZZZZ, the crew discussed going to the listed alternate airport of ZZZ. However, with the current fuel on board and the flaps stuck extended, decided that would not be prudent as we would land in a very low fuel state. While conducting the QRH, the procedure set us up for a flaps 15 landing. With the weather still at 1,200 ft. RVR in ZZZZ and an autoland required, we elected to use the alternate flap extension system to attempt to get the flaps to 30 as we didn't know how the aircraft would react to a flaps 15 autoland, or even if it would do an autoland at all. We deviated from the QRH to make this happen as it seems the procedure never planned on a requirement of a CAT III autoland after a flap malfunction. The flight attendants were briefed with the brief items, and a passenger announcement was made. Once realigned with final, the flap handle was moved to the 30 detent, the alternate extension was used, and the flaps and slats extended. The pilot monitoring changed the landing speeds to flaps 30 speeds and an uneventful autoland was accomplished on Runway XXL. ZZZZ ARFF (Airport Rescue and Firefighting) was standing by to do an inspection which concluded with no issues and the aircraft taxied to the gate under its own power. The Chief Pilot and Dispatch were called and debriefed.

Synopsis

B737 Captain reported the trailing edge flaps got stuck at 15 degrees during flap extension on final approach. The flight crew performed a go-around, used an alternative solution that deviated from the QRH as it was not applicable, and safely landed.

ACN: 2073637 *(17 of 50)*

Time / Day

Date : 202310
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : LVM.Airport
State Reference : MT
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Fractional
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Ferry / Re-Positioning
Flight Phase : Parked

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2073637
Human Factors : Workload
Human Factors : Troubleshooting
Human Factors : Communication Breakdown
Human Factors : Time Pressure
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Dispatch

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : Pre-flight
Result.General : Flight Cancelled / Delayed

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Weather
Primary Problem : Company Policy

Narrative: 1

I am submitting this report for informational purposes because I believe some lessons can be derived that can improve safety for not only Company but also aviation in general. Day 0 was the day before the beginning of my work week. At XO:00, I received my next day brief, which was to ferry from ZZZ to LVM Livingston, Montana, departing XB:00 and landing LVM at XD:00, to pick up a passenger and take him to ZZZ1. Taking in consideration my previous experience with LVM and what I knew to be the current and future weather that day in LVM, I knew I would not be able to land in LVM the next day. The evening of Day 0, it had been snowing in LVM for about 12 - 18 hours nonstop and was forecast to be snowing all night. I checked the NOTAMs for LVM and it caught my attention that there were no runway conditions reported for LVM. From previous experience flying into LVM, I knew the services were limited and I suspected that the runway at LVM had not been plowed, and would not be plowed in the morning. I called the FBO the evening of Day 0 and spoke with the person on duty. They told me that the runway had not been plowed since it had started snowing, that it wouldn't be plowed in time for our arrival the next day, and probably would not be plowed for some time as the city does a "quick going over, when they get around to it." They also added that the runway had been wet with puddles and standing water prior to the freezing air arriving, so that the runway had flash frozen and was ice, that was then covered with snow. They told me straight out, "Do not come here, go to ZZZ2." ZZZ2 is a full service airport that is about an hour drive away from Livingston. After speaking with the LVM FBO, I knew I should let Company know what was going on and try to get them to switch the trip from LVM to ZZZ2. I spoke with Operations, Scheduling, and the Chief Pilot in three separate phone calls relaying the data that I had collected. All three departments declined to make any decisions that evening and punted the decision the next morning. I then called the FBO in LVM back and asked them if they would mind heading out to the airport at XB:30 on Day 1 to give me a runway condition report, to which they agreed to do. The next morning we showed at XA:00 to prep for our ferry to LVM. I checked the weather, including the observations over the previous night, which showed snow with low visibility all night. Additionally, the airport NOTAMs for LVM did not show any runway condition NOTAMs. The airport appeared open and normal operations, and the snow was forecast to end later that morning. For someone with no experience with LVM and no data beyond current and forecast weather, and current NOTAMS, it would seem that LVM would be a go for launch. However, it was not. I made a call to the Dispatcher who was working us that morning and relayed what I knew about LVM from the night before. She listened to what I had to say, but was reluctant to change the destination to ZZZ2 based on what I had relayed. She told me that looking at the data she had, the airport looked okay, other than it snowing all night. She wanted to wait until we got a runway condition report from the FBO that morning before changing the flight. At XB:30, I called the FBO to get the report. They told me the runway was snow over ice and that they had lost control of a vehicle while driving down the runway. That was enough for me, I knew I would not go to LVM that morning regardless of what Company or the owner wanted to do. I called the Dispatcher, relayed what I heard, and she told me she wanted to hear it herself. She called me back and told me that the FBO said it was snow over ice and that he had lost control of his truck. She said we will send you to ZZZ2. We ended up flying to ZZZ2 to pick up the passenger and landed in low visibility and snow. The owner had told us the drive from LVM was harrowing and the road conditions terrible. He also relayed that he had also called the FBO and the FBO had told him not to come to LVM, all the while he had been pressuring Operations to get us to pick him up in LVM. On the flight to ZZZ1 from ZZZ2, my second in command, who was a brand new, recently upgraded Captain, told me he was glad I had previous experience with LVM and that I had done all that extra work on the phones the night prior and that morning. He told me, initially he thought it was odd

that I was making all these calls, but now looking back he realized that I was doing the prep work required of a diligent Captain. He told me, that if he had been the Captain that morning, he probably would have looked at the NOTAMs and saw no runway condition reports and launched from LVM. He said, "Hopefully, someone would have been there on the UNICOM to tell us that the runway was contaminated with snow over ice, otherwise we probably would have discovered it on approach, or perhaps even touchdown!" He seemed to be a bit alarmed by the whole situation, but it seemed to be a good learning experience for him as a new Captain. We completed our duty day safely and I didn't really think about this experience for several months, until a few months later. I saw that Aircraft Y ran off the runway in Livingston Montana in wintery conditions. I couldn't help but think that perhaps that crew had run into a similar situation as we had, but had pressed on in their mission believing that the runway conditions were normal. I checked the NOTAMs for LVM for that day and saw no runway condition reports. It makes me wonder if I had relayed my experiences earlier, perhaps I could have helped prevent the Aircraft Y incident? I would like to know what the requirements for an Airport Manager or Operator is to report runway conditions? It seems to me, that I've had similar experiences at other Montana uncontrolled fields. Specific examples of similar airports are Anaconda 3U3, Deer Lodge 38S, Ennis Keks, Dillon DLN. It seems surprising to me that whole days can pass at LVM of snow and winter weather and no runway condition NOTAMs are issued. I would like to know what the regulatory requirements are for an Airport Manager / Operator to issue runway condition NOTAMs. I wonder if even the minimal issuing of runway condition NOTAMs at LVM, or even a "runway condition not reported" note on the Jepp chart would have saved Aircraft Y? I would like to suggest more intensive training for new hire pilots, recent upgrades, dispatchers and schedulers here at Company regarding the lack of runway condition NOTAMs at some of these airports. I am scared that the influx of inexperience at Company might result in a similar accident as to Aircraft Y. As relayed by my second in command, he didn't know what he didn't know, and probably would have only looked at weather and NOTAMs. I would suggest that the Company emphasize getting on-the-ground runway reports, rather than just rely on issued NOTAMs. And this emphasis can't be through comply messages or newsletters, it has to be in ground school and IOE and mentoring. I also feel that the company culture that I experienced, of being skeptical of the info that I was trying to relay, as being a safety issue. I know Operations, Management, and even the Dispatcher were under pressure from a difficult owner to pick him up at LVM, but their unwillingness to listen to me, and also their unwillingness to make a decision until the last minute removes important barriers that block unsafe operations from proceeding - thinking of Swiss cheese model here. Waiting until the last minute only increases the urgency of the decision making and increases pressure on those decision makers. The Company should be striving to reduce pressure rather than increasing it.

Synopsis

Fractional Captain reported there were no NOTAMs regarding LVM runway conditions where it had snowed heavily. Due to safety concerns with LVN runway and ramp conditions, Captain flew to a different airport.

ACN: 2073178 *(18 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : EZF.Airport
State Reference : VA
Relative Position.Distance.Nautical Miles : 12.7
Altitude.AGL.Single Value : 390

Environment

Flight Conditions : Mixed
Weather Elements / Visibility : Icing
Weather Elements / Visibility : Cloudy
Weather Elements / Visibility.Visibility : 7
Light : Daylight
Ceiling.Single Value : 384

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : Small UAS (At or above 0.55 lbs and less than 55 lbs)
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Recreational Operations / Section 44809 (UAS)
Mission : Recreational / Hobbyist (UAS)
Flight Phase : Cruise
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Private
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 134.8
Experience.Flight Crew.Total (UAS) : 20.4
Experience.Flight Crew.Last 90 Days (UAS) : 3.7
Experience.Flight Crew.Type (UAS) : 20.4
ASRS Report Number.Accession Number : 2073178
Human Factors : Training / Qualification

Human Factors : Situational Awareness
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : UAS Crew
When Detected : In-flight
Result.Flight Crew : Landed As Precaution

Assessments

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

Narrative: 1

When preparing for my flight, the Dronecast app indicated clouds, but not cloud ceiling. I misjudged the height of the cloud base and when ascending to 390 ft. AGL began to experience reduced visibility. I reduced altitude to remain clear of the clouds, forgetting that I had to remain 500 ft. below. Aircraft was about 600 meters away. I flew back and landed without incident. Total flight time was 11 minutes. After landing I checked Air Control app which did provide ceiling height. It was then that I realized that I should not have taken off in the first place. I also noticed very slight icing on the prop leading edges. This was a learning experience. I now know not to try to judge cloud height visually and to confirm cloud height before takeoff to ensure I can maintain 500 ft. vertical distance from cloud base.

Synopsis

Recreational / Hobbyist UAS pilot reported flying in marginal VFR conditions and did not follow the cloud clearance requirements.

ACN: 2072681 *(19 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 20
Altitude.MSL.Single Value : 1400

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Snow
Weather Elements / Visibility : Icing
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 5
Light : Daylight
Ceiling.Single Value : 800

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Gulfstream IV / G350 / G450
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Climb
Route In Use : Direct
Route In Use : Vectors
Route In Use.SID : ZZZZZ
Airspace.Class B : ZZZ

Component : 1

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

Component : 2

Aircraft Component : FCC (Flight Control Computer)
Aircraft Reference : X
Problem : Failed

Person

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

Reporter Organization : Air Taxi
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 4650
Experience.Flight Crew.Last 90 Days : 90
Experience.Flight Crew.Type : 1350
ASRS Report Number.Accession Number : 2072681
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Result.Flight Crew : Landed in Emergency Condition
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

During a right-seat takeoff from Runway XX, following the ZZZZZ departure protocol, the aircraft encountered a severe systems malfunction. At approximately 1400 feet altitude, the Flight Guidance Computer (FGC) 1-2 failed, resulting in the loss of both the Flight Director Control Unit and the display units. The incident occurred under Instrument Meteorological Conditions (IMC) with prevalent icing conditions, significantly impairing visibility and navigational capabilities. As the Pilot in Command, I observed an inability to reduce power effectively; despite attempts to do so, the aircraft continued to gain speed. This unusual behavior was noted by ZZZ Departure Control, who inquired if [priority handling] was necessary due to the increasing speed and altitude. Acknowledging the severity of the situation, I [requested priority]. Following the [request], ZZZ Departure provided vectors for an approach to Runway XY. I instructed the First Officer to run the approach and pre-landing checklist to ensure all safety protocols were followed. Upon approach to Runway XY, the IFR conditions rendered the runway invisible. A go-around procedure was initiated. During the ascent, we gained visual contact with the runway environment. Seizing the moment, I requested permission from ZZZ Tower to perform a 360-degree maneuver for a safer approach and landing on Runway XX. The tower approved this request. The aircraft successfully executed the maneuver and safely landed on Runway XX. The dynamic response to the unfolding events by the flight crew was instrumental in the safe resolution of this event.

Synopsis

Gulfstream GIV pilot reported failure of the Flight Guidance Computer during departure in IMC resulted in return to departure airport.

ACN: 2072501 *(20 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

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

Environment

Flight Conditions : Marginal
Weather Elements / Visibility : Icing

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Make Model Name : Beechjet 400
Crew Size.Number Of Crew : 2
Flight Phase : Initial Climb
Flight Phase : Climb
Airspace.Class C : ZZZ

Component

Aircraft Component : Ice/Rain Protection System
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2072501
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Diverted
Result.Flight Crew : Returned To Departure Airport
Result.Flight Crew : Landed in Emergency Condition

Assessments

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

Narrative: 1

Suffered delayed departure due to weather, once the active precipitation at the surface stopped we dispatched. We conducted a full ops check of aircraft anti icing equipment in taxi and all systems checked good. Conducted a normal takeoff with initial clearance to climb to 4000 ft. In climb between 500 and 1000 ft. we activated all aircraft anti ice equipment and received an immediate 'H stab ice fail' annunciation. We leveled at 4000 ft. momentarily where we were below the ceiling but in significant mixed icing conditions, probably moderate icing. We [requested priority] with ATC and requested a lower altitude, were cleared down to 2000 ft. We then requested and received vectors to the ILS XXL at ZZZ. We conducted the "H stab de-ice system failure" checklist and conducted a flap 10 landing with no further issues. Post flight inspection we found trace ice on the leading edge of the tail. We conducted the ground checks of tail de-ice system in taxi and it passed. We used the tail de-ice system inbound the night prior with no issues. The aircraft was kept in a hangar overnight. I am not aware of any further actions we could reasonably take that would prevent this mechanical failure or help us become aware of it prior to takeoff. MVFR at the surface, approximately 4000 ft. ceiling with light to moderate icing conditions up to around 8000 ft. or higher.

Synopsis

BE-400 pilot reported horizontal stabilizer de-ice system failure in flight. Returned to departure airport and landed uneventfully.

ACN: 2072464 *(21 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

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

Environment

Weather Elements / Visibility : Windshear
Weather Elements / Visibility : Turbulence

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A320
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Cruise
Airspace.Class A : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
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 : 2072464

Events

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

Encountered Sudden Severe Turbulence - Followed guidance for Severe Turbulence Procedure. Announced be leaving autopilot on per Sever Turbulence Procedure BUT after

encountering vertical shear updraft plus 300 feet followed by loss 20 KTS and downdraft shear loss of 600 feet announce and disengaged autopilot and followed manual to ride out shear and regained control after loosing 1000 feet. After exiting downdraft selected speed green (best lift/drag) dot plus 10 since Severe Turbulent Speed MACH .76 aircraft was not climbing. Recovered climb to 30,000 preciously assigned established altitude. No conflict with any other traffic. No damage. No injuries. Total surprise severe turbulence encounter. Nothing from my electronic flight bag, WSI, or ATC reports of any severe or moderate turbulence in our area. All resources were used.. nothing on radar.. tried to be aware of any turbulence and preventive 1.3 g speed rename was determined in case as a practice all the time to be ready just in case but with all the technology this vertical shear upward 300 feet followed by immediate downdraft loss 1000 feet first time this bad in my XX year 121 career.

Synopsis

A320 pilot reported severe turbulence and wind shear in cruise flight without any warning from normal weather forecast sources.

ACN: 2072463 *(22 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 35000

Aircraft

Reference : X
ATC / Advisory.Center : 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 : Cruise

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 : 2072463
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

We were cruising at Flight Level 350 approaching waypoint ZZZZZ enroute to ZZZZ. I had just return to my seat after retrieving a crew meal and the Captain was coordinating with ZZZ Radio to deviate from course due to some weather that had popped up on the radar. He requested 5 miles left of course to traverse the weather at a gap that was both visually clear and clear on the radar return. ZZZ radio cleared us up to 10 miles left of course and the Captain selected another larger gap a little further left than the original 5-mile space selected. The Captain called the Flight Attendants and informed them that we were about to encounter some weather and to stop any service taking place and to take their seats for a few minutes. When we entered the weather there was some light chop and as we were about to exit, we hit some turbulence which caused an immediate loss of altitude of almost 500 feet. The autopilot kicked off and the Captain immediately took control of the aircraft, ensured the autopilot was off and reduced airspeed to .76M then recovered the aircraft to its original airspeed and altitude before reengaging the autopilot. The entire event was about 15-20 seconds in duration. What was weird was that the turbulence that caused the altitude deviation was not extreme or severe and was barely moderate. But it was like we hit a road bump then just dropped in altitude like in an elevator quickly and it was over. Following recovery, I heard the Flight Attendants checking in with each other in the back and while it caught everyone off guard no injuries or damages were reported. The rest of the flight continued normally. The Captain and I did some research to see how best to report the incident and what additional actions might be required and determined that we would each submit a report and that the Captain would submit an additional report for the altitude deviation. Cause: Weather event, possibly clear air turbulence associate with the weather we deviated for. Suggestions: Possibly making an even greater deviation for the weather?

Synopsis

B737 First Officer reported a sudden loss in altitude of 500 feet during cruise while the aircraft was passing through turbulence. Captain recovered aircraft and flight continued with no injuries or damage reported.

ACN: 2072253 *(23 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 10000

Environment

Flight Conditions : IMC
Weather Elements / Visibility.Visibility : 2
Light : Daylight
Ceiling.Single Value : 500

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737 MAX 8
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

Component

Aircraft Component : Aerofoil Ice System
Aircraft Reference : X
Problem : Failed

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 : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 120
Experience.Flight Crew.Type : 52000
ASRS Report Number.Accession Number : 2072253
Human Factors : Troubleshooting
Human Factors : Workload
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 240
ASRS Report Number.Accession Number : 2072279
Human Factors : Time Pressure
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

Passing 10,000 ft. into ZZZ, both pilots noticed ice accumulation on the windshield wipers. The Captain then looked out his window and noticed a slight amount of ice on the left wing. He announced that he was turning on the Wing A/I. Upon further descent, somewhere between 8,000 ft. and 6,000 ft. the left-wing A/I light illuminated. We were being vectored for final but still had time to open the QRH. The Captain ran the QRH as directed, and we complied with the final step to get out of the icing condition. ATC advised us that they had icing reported all the way down to 5,000 ft. and we asked to get below that. ATC then gave us a descent to 4,000 ft. where the ice accumulation abated. We flew the rest of the approach uneventfully and landed on Runway XXR. Once we got to the gate, the oncoming Captain began his walkaround. I met him in the jetway and advised him what happened and that my Captain had called maintenance and was writing up the Wing A/I System. That is when he notified me that there was significant ice on the left wing. I went to inspect the wing myself and noticed a significant, almost clear layer of ice on the middle of the left wing. The Captain completed the writeup and briefed the situation to maintenance. We turned the aircraft over to the outbound crew. We did not know we had a problem until the Wing A/I failed while we were in icing conditions. Other than getting out of the icing condition per the QRH, it would be nice to know if there was a reset or way to know if the valve had actually failed.

Narrative: 2

While being vectored for an ILS approach, at 8,000 ft. we encountered moderate rime ice. At that point I turned on the wing anti-ice switch. Shortly after doing so, a Master Caution light illuminated, indicating a left valve issue. We ran the appropriate QRH Checklist and realized we indeed had a failure of that system. We notified ATC that we were encountering moderate rime ice and were told that no icing was reported below 5,000 ft. We descended to 4,000 ft. There was no further accumulation of ice below 5,000 ft. and

we continued the approach and landed without any further incident. After this incident I was informed that this may be a possible known issue with the MAX 8. Wing anti-ice (left valve) failed to work.

Synopsis

B737 MAX 8 crew reported the left wing anti ice failed and they landed with ice accumulation on the wing.

ACN: 2072243 *(24 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 13000

Environment

Flight Conditions : IMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 145 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise

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 : 2072243
Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

We were in cruise at 13,000 feet, coming from ZZZ, and about to begin our descent into ZZZ1. There had been a lot of bad weather in the general area all day. We passed through some clouds that appeared to have tops of about 15,000 feet. The radar was not indicating anything but very light scattered precipitation. As we entered the clouds, we encountered severe turbulence. The aircraft was thrown down about 400 feet instantly with about 20 degrees of bank to the left. Speed increased towards red line, 320 knots, and I deployed the spoilers. As we climbed back up towards 13,000 feet the aircraft was repeatedly thrown down to a lower altitude. After about a minute, the turbulence subsided to light turbulence and we climbed back to our assigned altitude of 13,000 feet and on course. We reported the severe turbulence and the deviation to ATC and continued on to our destination. Suggestion: Possibly request a deviation around clouds when widespread bad weather has been occurring for a prolonged period of time.

Synopsis

EMB-145 Captain reported loss of aircraft control for a short period of time when they entered an area of severe turbulence.

ACN: 2072217 *(25 of 50)*

Time / Day

Date : 202401

Place

Altitude.MSL.Single Value : 30200

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A320
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Airspace.Class A : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2072217
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Overrode Automation

Assessments

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

Narrative: 1

Upon reaching cruise flight (FL300), the CA and myself noticed we were entering an area of light radar returns. Above us (at FL340) and ahead of us (10-20 nm) an aircraft reported to ATC they were unable to maintain altitude, and were in a climb above FL340. Within seconds of that call, we entered an area of moderate turbulence and an updraft. We too, were unable to maintain altitude and began to climb. To the best of my recollection, we climbed to FL302 before we entered the subsequent downdraft. Once the altitude came back down through FL300, the autopilot attempted to maintain the altitude, but the airspeed degraded below green dot and all the way to Alpha Protection (a-prot). Once at a-prot, we began to sink, to the best of my recollection, at about 800-1000 FPM to FL290. The entire time we were in moderate turbulence. Somewhere before reaching FL290, I reported to ATC the turbulence as well as the inability to maintain altitude. I had my eye on the TCAS as well, and the aircraft above was the only one that was nearby. There were no lower aircraft we could see that would be an issue. ATC gave us a 30 degree left turn for traffic (assuming it was for the aircraft above also sinking ahead of us). However, at this point, the autopilot had been disconnected and we did not make the turn. Everything happened incredibly quickly, and we were able to return to FL300 before making the turn. I advised ATC that we were back at assigned altitude, and I think we were recleared direct to a fix. By my best estimate, we initially descended out of FL300 to FL290 and back to FL300 in less than 2 minutes. The main cause of this event was the large cell of weather we flew through. We did not have a good picture of it with the onboard weather radar, as there was nothing other than green that I remember. I was rotating through several radar apps, and saw nothing alarming about our route. If I was presented with the information we had again, I don't think I would have done much different to avoid the weather. We simply did not know the weather was there. Once the event began, however, I could have done a better job helping the PF with making sure we made the turn as instructed by ATC. I was definitively task saturated making sure the airplane was still flying (aviating), and did not do as good at navigating and communicating as I could have.

Synopsis

Air carrier pilot reported unable to maintain altitude for several minutes due to encountering downdrafts and turbulence.

ACN: 2072169 *(26 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 7500

Environment

Flight Conditions : IMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737 Next Generation Undifferentiated
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Climb

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 98.57
Experience.Flight Crew.Type : 399.02
ASRS Report Number.Accession Number : 2072169

Events

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

Assessments

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

Narrative: 1

While we were climbing, the ATC vectored us turning into a CB clouds for separation. I was hand flying expecting better handling the airplane if encounter unexpected turbulence. During the climbing turn around 7000 ft. we encountered sudden uplifting air, causing the "bank angle" warning announcement, followed by the temporary stick shaker activation. We immediately initiated Undesired Aircraft State recovery [and] the aircraft returned to normal state of climb. The whole event only lasted a few seconds, no noticeable altitude drop during climbing.

Synopsis

B737NG Captain reported an inflight upset occurred when they encountered significant turbulence after ATC vectored them into storm clouds.

ACN: 2072089 *(27 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : BOI.TRACON
State Reference : ID
Altitude.MSL.Single Value : 8200

Environment

Flight Conditions : IMC
Light : Daylight

Aircraft

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

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 : 2072089
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

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

Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2072087
Human Factors : Workload
Human Factors : Distraction
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

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

Assessments

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

Narrative: 1

I was Pilot Flying and PIC (Pilot in Command) on this flight and we were cleared to descend via our arrival that we had briefed. The bottom altitude of the arrival was 8000ft so 8000 was set in the altitude selector and confirmed by both myself and the FO (First Officer) who was PM (Pilot Monitoring). The aircraft was in LNAV/VNAV modes and descending on profile. The weather at our destination had not been good all morning and the current conditions had 1 1/4 visibility, gusty winds, and snow. I had briefed the existence of terrain in the north east vicinity of the airport and the highest MSA of 9500ft. I had a terrain map page displayed on my MFD (Multi-Function Display). The runway condition codes had just been updated in the ATIS and I was trying to figure out if I could use ILS CAT I mins because I was still on high PIC mins. We were handed off to Approach Control who then gave us a heading of 130 and to descend and maintain 9000ft. I selected heading mode and selected 130. I remember my FO (First Officer) reading back 8000 for the altitude and I saw that 8000 was still bugged. We both paused and confirmed 8000ft at the same time. We continued descending and built the approach straight out in the downwind, anticipating the base turn. I noticed afterwards that I was high on profile and deployed speed brakes to return to profile. At around 8600ft, ATC issued an altitude alert and advised us to check our altitude at once. A few seconds later, we get a terrain caution, followed by an EGPWS warning at the same time ATC demanded we return to 9000ft. I executed the CFIT escape maneuver immediately and leveled at 9300ft. After regaining control of the aircraft we returned to 9000 and reengaged the automation. I was later informed the lowest ATC recorded us was 8200ft. We joined the approach and landed without further incident. The primary cause of this event was task saturation on both pilots during a critical phase of flight while receiving ATC instructions. Factors also include poor

weather. Suggestions: Immediate confirmation of ATC instructions and asking for clarification when there is any doubt from either crew member.

Narrative: 2

We were originally cleared on the arrival to 8000, but then we were vectored off and then told to descend 9000 instead. As Pilot Monitoring I read back 9000 to ATC. We got distracted with other tasks right after I read 9000, and the Pilot Flying forgot to set 9000. We then looked up from distractions and saw 8000 and just said 8000 out loud for our altitude. We descended below 9000 and got a warning from ATC about altitude, and then we got a EGPWS warning from terrain and the Pilot Flying immediately flew the CFIT escape maneuver correctly. We got back up to 9000 and flew the rest of the flight normally The cause of event would probably be high task saturation with being on the descent, and about to turn to final. We also both got distracted with other tasks getting ready for the approach. The weather was also a strong snow storm which played a factor. I would suggest anytime a new altitude is assigned, that unless it is an emergency situation or maneuver, to always read back the altitude out loud right away. If unsure ask ATC

Synopsis

Air carrier flight crew reported receiving a GPWS terrain alert and a low altitude alert from ATC on approach to BOI when they misunderstood their descent clearance.

ACN: 2071904 *(28 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 2
Light : Daylight
Ceiling.Single Value : 800

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B747-400
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Ferry / Re-Positioning
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 : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2071904

Events

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

Assessments

Contributing Factors / Situations : Weather
Primary Problem : Weather

Narrative: 1

The approach was flown with gusty winds resulting in some airspeed fluctuations. At about 700 ft. out of the clouds in the rain with windshield wipers on and the Runway in sight we received a GPWS indication of sink rate I stated disregard continue as I made the correction because it was safe to pursue the landing.

Synopsis

Air carrier pilot reported during unstable approach and terrain warning they decided to land aircraft after making corrections.

ACN: 2071151 *(29 of 50)*

Time / Day

Date : 202312
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 36000

Environment

Weather Elements / Visibility : Thunderstorm
Weather Elements / Visibility : Turbulence
Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Taxi
Make Model Name : EMB ERJ 145 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Commercial
ASRS Report Number.Accession Number : 2071151
Human Factors : Situational Awareness
Human Factors : Troubleshooting
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 Taxi
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
ASRS Report Number.Accession Number : 2070719
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Communication Breakdown

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

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

In between waypoints ZZZZZ and ZZZZZ1 intersection at FL360, PF (Pilot Flying) and PM (Pilot Monitoring) have been keeping a close eye on a squall line passing through the sector. After some discussion we decided we would stay the course but looking for an opening that would provide the least turbulence. We heard a radio call between an Aircraft Y flight and ATC advising them that storms are below FL330 and that FL360 is fine. Upon hearing that we became sure of our decision to press on. About 10-15 mins later Aircraft Y had alerted ATC that they were experiencing moderate to severe turbulence and requested deviation to the right. We checked our radar and saw in the direction of our route that there was a section of the squall line with tops at FL400. We then discussed and agreed to also deviate to our right to avoid that section. About 10 mins after we encountered severe updraft with severe turbulence, showing extensive airspeed fluctuations, VSI +6000fpm for about 20 secs. AP (Autopilot) kicked off and we were unable to maintain altitude to a point we briefly hit FL390 before immediately pushed back down to FL360. We acted on training and PF flew the aircraft while I handled all other responsibilities. We asked ATC immediately for altitude relief which we got, deviated to our left to avoid the situation. CA (Captain) side PFD (Primary Flight Display) lost airspeed/altitude/VS information after about 1min with EICAS message showing IC1WOW INOP and SPS ADVANCED. We consulted the QRH on the two issues while hand flying with ISIS. Problem did not resolve following QRH. FO (First Officer) side instruments were working in conjunction with ISIS so we selected ADC2 and changed the AP couple side to FO side. Exited the storm and was able to continue enroute to our destination. No injuries reported. Cause: Inadvertent entry into an active developing cell with the information at hand. Suggestions: Choose the best path of least turbulence, stay at least 5000 ft. from top of cells to clear the storm, stay 20 NM away from storm cells. Make decision early to deviate for the best path as early as possible.

Narrative: 2

We were between ZZZZZ and ZZZZZ1 intersection at FL360 above the storm cells. We discussed about deviation plans and consulted ATC. ATC advised storms are below FL330 and previous traffic stayed on course at FL360, so we decided to stay and keep monitoring the situation. Minutes later Aircraft Y in front of us at FL360 reported moderate turbulence and asked for higher, ATC told them unable FL370. Moments later we got into IMC and started moderate chops. We immediately asked for right deviation based on the info we had. After we turned, we encountered severe updraft showing extensive airspeed fluctuations, VSI +6000 fpm momentarily. Auto pilot kicked off. We were unable to maintain altitude so we immediately asked for and got the altitude relief from ATC. CA (Captain) side PFD (Primary Flight Display) lost airspeed/altitude/vs information. We hand flew using ISIS. Once airplane stabilized, PM (Pilot Monitoring) run QRH on the two EICAS messages IC1 WOW INOP & SPS ADVANCED, did not fix the issue. We saw FO (First Officer) side instruments are working so we selected ADC2 and changed the AP (Autopilot) couple side to FO side. This time autopilot stayed, we exit storm and were able to continue enroute. We advised ATC about the event and we were able to continue the flight. FA was in her seat during the event, no injuries and no object fell in cabin. Cause: We went into an activity developing cell inadvertently Suggestions: Stay at least 20 NM away from storm cell. If have to cross, make sure to clear the storm at least 5000 ft. Make decision to deviate as early as possible.

Synopsis

EMB-145 crew reported severe turbulence and altitude excursion at cruise when deviating around thunderstorms. The aircraft exited the area of weather and continued the flight without injuries.

ACN: 2071065 *(30 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility : Windshear
Weather Elements / Visibility : Thunderstorm

Aircraft

Reference : X
ATC / Advisory.Tower : 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
Mission : Passenger
Flight Phase : Takeoff / Launch
Airspace.Class C : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 811
ASRS Report Number.Accession Number : 2071065
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 : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 8
ASRS Report Number.Accession Number : 2073292
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Workload

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

We departed ZZZ at around XA:01. As instructed, we departed on runway heading up to 3000 ft. During the climb, which was significantly bumpy and in IMC conditions, we were given a left turn. As the Pilot Flying, I noticed that the FO (First Officer), Pilot Monitoring, was a bit task-saturated cleaning up the configuration, talking to departure, tuning in a new altitude, and turning my heading bug. While banking left, I noticed that the windshield wipers were still on, so I quickly reached up to shut them off. As I shut off both wipers, I heard the audio warning 'bank angle, bank angle.' I quickly corrected the bank and continued the flight with no further incidents. The bank angle caution message was triggered when, I, flying in IMC conditions with no outside horizon reference, was momentarily distracted by turning off the windshield wipers. This led to an excessive banking angle during the left turn. Suggestions: To prevent such incidents in the future, it is crucial to maintain focus on the primary task of flying the aircraft, especially during critical phases of flight such as takeoff and climb. As the Pilot Flying, I should prioritize aircraft control and navigation over secondary tasks. The windshield wipers could have been turned off once the aircraft was stabilized on its new heading and altitude. If the pilot monitoring is task-saturated, I could assist in managing the workload, but not at the expense of aircraft control.

Narrative: 2

While Departing Runway XX on our initial climb, we got a "bank angle" warning. Captain was Pilot Flying and I was Pilot Monitoring as First Officer. This was a very high workload situation as we lifted off. At approximately 500ft we got windshear, although no caution or warning came up. We continued to climb in moderate turbulence and IMC conditions when we got a turn to a heading from Departure. At this time we had both side windshield wipers on. I was very overloaded at this time, and the Captain reached up to turn off the wipers as to not exceed a limitation. When he reached up to turn them off is when we got the bank angle audible warning. The Captain immediately corrected the bank and the flight continued on as normal. The main cause was pilot saturation, which in hand caused the

Pilot Flying to aid the Pilot Monitoring ultimately leading to taking eyes off the flight controls momentarily. Other factors involved were weather (moderate turbulence, IMC, windshear), and an MEL for the boom MIC being INOP on the FO (First Officer) side. As Pilot Monitoring, this caused me to have to use the handheld as my only source talking to ATC. My hot mic of being able to communicate with the CA (Captain) was also inop as part of the MEL. I believe these factors, especially the latter played a huge part in pilot saturation on my side. Suggestions: Keep flying the aircraft- Captain did a fantastic job flying the aircraft and showed great airmanship on the departure aside from the conditions and corrected Immediately. I would also suggest a change to the MEL we had, as it caused quite a delay for me to perform my duties as Pilot Monitoring.

Synopsis

Air carrier flight crew reported exceeding bank angle during climbout in IMC. Flight crew corrected bank angle and continued flight uneventfully.

ACN: 2070497 *(31 of 50)*

Time / Day

Date : 202301
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : C29.Airport
State Reference : WI
Altitude.MSL.Single Value : 40

Environment

Weather Elements / Visibility : Icing
Weather Elements / Visibility.Visibility : 10
Ceiling.Single Value : 2800

Aircraft

Reference : X
ATC / Advisory.TRACON : MSN
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 Approach
Route In Use : Vectors
Airspace.Class C : MSN
Airspace.Class G : C29

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 1000
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 50
ASRS Report Number.Accession Number : 2070497
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

The event occurred while on the RNAV 28 approach into Morey Field (C29). The flight originated from ZZZ under MVFR conditions. I did not file a flight plan. While enroute, ceilings were lower than I expected so I requested, and received, a pop up IFR clearance direct to C29. The flight enroute was uneventful. Upon contact with Madison Approach I requested the RNAV 28 approach into C29 and was told to expect the approach. I received a vector assignment of 050 degrees. At that time I assumed I would receive vectors to the final approach fix and set the GPS (Garmin 530) for vectors to final. I then received an altitude assignment that put me into actual IMC conditions. I was then approved for the RNAV 29 approach via the IAF EXIDE. This was my first time flying in the area and I had to confirm the IAF name. I received a vector to the IAF and while updating the GPS route I entered an unusual attitude. Once I recovered from the unusual attitude I already passed the IAF and instead of flying the appropriate approach via a course reversal I immediately turned inbound which took me out of the protected airspace and close to Madison (MSN). I then continued the approach without incident and cancelled my IFR flight plan in the air.

Synopsis

GA pilot reported a momentary loss of aircraft control while on the RNAV 28 approach to C29 airport in IMC conditions.

ACN: 2070299 *(32 of 50)*

Time / Day

Date : 202401
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : SCT.TRACON
State Reference : CA
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : SCT
Aircraft Operator : Air Carrier
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class C : SCT

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 : 2070299
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

Receiving vectors for the visual approach to Runway 33 after concluding Janny5 arrival. Heading 160, ATC says maintain 3000 until abeam of Van Nuys airport, which would then be to our North when turning towards BUR. We were not yet cleared for the visual approach. Just as I am questioning our vector towards the South of our desired track to the visual approach towards BUR and our altitude clearance of 3000, we have a "TERRAIN, TERRAIN, CLIMB, CLIMB alert from our GPWS. Our altitude was then 3200. Disconnected the autopilot and climbed, received our cleared for the visual approach, Runway 33. We could now fly back to our desired track well to the North of us and concluded the visual approach to the runway. I believe the Controller thought they had another minute or two before they could steer us to the visual track, however we had a substantial tailwind from the North that took us further South than the Controller had counted on. Sure glad this was under VFR. ATC failure to understand our track, altitude and ground speed. Suggestions: Have similar things happen in the past where the Controllers do not understand wind effect on ground speed. To me obviously Controllers are not briefed on winds aloft in a quantitative measure.

Synopsis

Air carrier flight crew reported GPWS alert on approach. Flight crew took evasive action and landed uneventfully.

ACN: 2037498 *(33 of 50)*

Time / Day

Date : 202309
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : D01.TRACON
State Reference : CO
Altitude.MSL.Single Value : 10500

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
ATC / Advisory.TRACON : D01
Aircraft Operator : Air Carrier
Make Model Name : Medium Large Transport
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Route In Use : Visual Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 12500
Experience.Flight Crew.Last 90 Days : 143
Experience.Flight Crew.Type : 1967
ASRS Report Number.Accession Number : 2037498
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

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

Synopsis

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

ACN: 2034009 *(34 of 50)*

Time / Day

Date : 202309
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 34000

Environment

Flight Conditions : IMC

Aircraft

Reference : X
ATC / Advisory.Center : 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 : Cruise
Airspace.Class A : 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 : 2034009
Human Factors : Troubleshooting
Human Factors : Time Pressure
Human Factors : Confusion

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Weather
Primary Problem : Weather

Narrative: 1

While level at FL340 we could see in the distance about 50 miles away several thunderstorms starting to form a solid line. Our radar confirmed what we were seeing and I decided that going through that area was not an option. We asked for a 90-degree turn to the right or a western heading. After getting our reroute to the west, parallel to the storms we encountered a layer of hazy skies and some moderate chop. Our radar was not hitting any precipitation and our track looked decent. To be safe we started slowing the aircraft for our turbulence procedures. I already had the FAs (Flight Attendant) sitting down and everything seemed fine. The moderate chop suddenly turned into to light turbulence and shortly after severe turbulence. The plane climbed up and down about 1000 ft. and I saw our VSI was up and down about 1200 ft. I immediately told Center and requested a turn back to the north but without anything showing on the radar, Center or ourselves really had no idea which direction would get us clear of the turbulent weather. Eventually the severe turbulence returned back to moderate chop, I called the FAs, they said no injuries and everyone was OK. At that point I made an announcement and we continued to ZZZ.

Synopsis

CRJ900 Captain reported encountering severe turbulence despite rerouting to avoid storms that were seen in the distance. As there was nothing showing up on radar, the reporter and Center did not know which direction would lead to flying in better weather. The severe turbulence eventually subsided and there were no injuries noted.

ACN: 2033866 *(35 of 50)*

Time / Day

Date : 202309
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Thunderstorm

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 171
Experience.Flight Crew.Type : 1212
ASRS Report Number.Accession Number : 2033866
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : Air Traffic Control
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Operating to ZZZ, Runway XX. Tower amended the take-off clearance from FL230 to heading 280 at 10,000 ft. After take-off, the FO (First Officer) checked in and ATC adjusted the heading to 260 degrees for weather avoidance. We climbed to and leveled off at 10,000 ft. Captain was the PF (Pilot Flying) and it sounded busy so I turned the AP (Autopilot) on at 7,000 ft. to be sure that I caught all ATC transmissions. At 10,000 ft. ATC radio traffic got extremely busy as we were waiting for a clearance to a higher altitude. Then ATC gave us a Terrain Altitude alert, and a climbing turn with a heading. The FO tried to acknowledge and the Captain immediately turned and climbed. The aircraft indicated a single call-out of 2500 ft. once and as the aircraft was climbing/turning the lowest recorded Radar Altimeter was 2120 ft for 5 seconds. No aircraft damage, no terrain contact and no passengers were injured during the maneuvers. ATC reiterated the heading and climb but the ATC frequency was flooded with requests. We managed to acknowledge and then we were handed off to en-route ATC, and requested a further climb. Captain requested the ATC phone number after a few minutes. The Captain notified dispatch during the flight and pilot manager after landing. And then called and spoke with the Approach Control Supervisor and reviewed the situation. I gave the Supervisor the time to mark the tapes. He took my information and indicated that they will be calling me as they begin their investigation.

Synopsis

Air carrier Captain reported they were assigned a heading for weather avoidance and an altitude to maintain. After reaching the initial assigned altitude, ATC issued them a Low Altitude Alert and a climb.

ACN: 2032995 *(36 of 50)*

Time / Day

Date : 202309
Local Time Of Day : 0601-1200

Place

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

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 4500

Aircraft

Reference : X
ATC / Advisory.Ground : ZZZ
Aircraft Operator : Personal
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Personal
Flight Phase : Taxi
Route In Use : None

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 : Commercial
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 1062
Experience.Flight Crew.Last 90 Days : 271
Experience.Flight Crew.Type : 874
ASRS Report Number.Accession Number : 2032995
Human Factors : Time Pressure
Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Ground Excursion : Taxiway

Anomaly.Ground Event / Encounter : Weather / Turbulence
Anomaly.Ground Event / Encounter : Loss Of Aircraft Control
Anomaly.Ground Event / Encounter : Ground Strike - Aircraft
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : Taxi
Result.General : Maintenance Action
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Regained Aircraft Control
Result.Aircraft : Aircraft Damaged

Assessments

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

Narrative: 1

On Day 0, I rented the aircraft aforementioned from flight school for a VFR flight in the vicinity between XB30 to XE00. The runway and taxiway conditions were wet according to the XA:21 meteorological report, in which the airport reported heavy rain and thunderstorms, ending at XA:47. Preflight and runup checks were completed as normal and all systems showed safe parameters. Coming to a full stop landing after performing 11 touch and go practice approaches, ZZZ Ground Control instructed to taxi back to spot X ramp via: taxiway 1, 2, Runway XX, and taxiway 3 to ramp parking. When turning right into taxiway 3 from Runway XX, I missed the corner entrance of taxiway 3 and overrun the grass area further ahead of the same taxiway, as a result of aircraft speed and wet taxiway conditions that affected traction and consequently rate of turn. I instantly applied idle power and right brake to increase the rate of turn, but the aircraft momentum allowed it to come back at the taxiway pavement. Engine and rudder controls were still operating normally, therefore I proceeded to park the aircraft at the ramp area. After grounding the aircraft and notifying the flight school, significant damage was visible to the propeller blade during an inspection with the flight school's mechanic.

Synopsis

C172 pilot reported taxiway excursion onto grass area while turning on a wet taxiway. Pilot regained control and returned to paved surface. Post flight inspection revealed damage to propeller.

ACN: 2032898 *(37 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 8000

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use.Localizer/Glideslope/ILS : ILS XX
Flight Phase : Initial 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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2032898
Human Factors : Workload
Human Factors : Situational Awareness

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 : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Aircraft Other Automation
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

I was the PM (Pilot Monitoring) on a flight XXXX ZZZ1- ZZZ. We were descending through approximately 8000 ft prepared for the ILS RWY XX in ZZZ. The ATC changed our runway and approach for RNAV XYR. We received a vector to the new approach and I loaded the new RWY and approach into the FMS. I then realized that the vector takes us through a large thunderstorm cell that was located between the final courses of RWY XX and XYR. We had the discussion about it with the CA (PF) and I expressed my concern to the ATC. I told the ATC that that the vector they gave us takes us right into the cell, that we are not able to continue on that heading and need a new vector around it. The ATC was not cooperative, and even after suggesting a heading that we knew that would work for us, they kept refusing it and gave us vectors back into the severe weather. At this point we had reached the edge of the cell with heavy precipitation and moderate turbulence. We [requested priority] as we needed to turn away from the weather. The CA (PF) disconnected the AP and took a right turn taking us out of the cell. The CA (PF) over banked the aircraft which he immediately corrected for after the over-bank warning. Upon several back and forth communication with the ATC we got cleared back to the ILS RWY XX. We requested extra time to prepare for the approach. The approach to ILS XX and landing commenced without issues. We should have had a better situational awareness about the weather and not accepted the runway change that late on the arrival in these circumstances at first place. I did not realize the severity of the weather and its location until we had already accepted the RWY change. It was surprising to us that the ATC attempted to vector us straight into the bad weather and that they were not helpful finding a way around it. It caught us off guard because ZZZ ATC is usually experienced and extremely cooperative helping to cope with weather in the area. We also speculated that the ZZZ ATCs radars could have not portrayed the same info we had. We should always maintain a good situational awareness and never rely on ATC doing a right thing.

Synopsis

B737-800 First Officer reported the Captain overbanked the aircraft during arrival while maneuvering away from an area of severe weather. Captain corrected overbank and flight continued on approach to landing.

ACN: 2032837 *(38 of 50)*

Time / Day

Date : 202309

Place

Locale Reference.ATC Facility : ZOA.ARTCC
State Reference : CA

Aircraft : 1

Reference : X
ATC / Advisory.Center : ZOA
Aircraft Operator : Air Carrier
Make Model Name : B777 Undifferentiated or Other Model
Crew Size.Number Of Crew : 4
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Airspace.Class A : ZOA

Aircraft : 2

Reference : Y
ATC / Advisory.Center : ZOA
Make Model Name : A380
Flight Plan : IFR
Flight Phase : Cruise
Airspace.Class A : ZOA

Person : 1

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 191
Experience.Flight Crew.Type : 349
ASRS Report Number.Accession Number : 2032837

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 251

Experience.Flight Crew.Type : 984
ASRS Report Number.Accession Number : 2032836

Events

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Wake Vortex Encounter
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

We were flying over the Pacific Ocean where we were on a filed track that everyone else seemed to be on. We had noticed a few other aircraft in front of us at differing altitudes through at least the first half of the flight. While I was upfront for the first half, we had to adjust our SLOP (Strategic Lateral Offset Procedure) a few times to account for the winds and what we can see the other aircraft doing utilizing TCAS and their respective contrails. Prior to the event, we had swapped in the [Relief Pilot] so that the Captain (CA) and I can take our break prior to landing. At the time of the swap, the weather outside was VMC and we were clear of any clouds nearby. We were cruising at FL350, having stepped climbed according to the VNAV CRZ page, at the filed cost index ECON speeds. However, there was a bend in the jet stream right around that time to swap. I had just laid down and strapped myself in when we hit the first bump. I did hear a PA be made within a second of it which I presume is the turbulence PA for the Flight Attendants (FAs). I am not sure which one since it wasn't broadcasted into the bunk room so it was muffled. It was clearly in the moderate category maybe a bit higher at certain points of the event based off of my motion laying down under the seat belt in a dark bunk. The motion of the turbulence did feel like wake turbulence to me and therefore, out of curiosity and since I was on break, I utilized the WIFI to see what was up in front of us. On the app, I saw that there was an aircraft in front of us and only 1,000 feet above our current altitude. I heard the Captain (CA) pick the phone up in the seating area and I told him about what I had found to suggest that we could've possibly had a wake turbulence encounter and to maybe relay to the [Relief Pilot] in the flight deck for increased situational awareness.

Narrative: 2

Just after the half way point in our flight, and shortly after the relief pilots took over, during my rest, the aircraft experienced abrupt moderate or greater turbulence that lasted about 30 to 40 seconds. I had just gotten into the overhead crew rest area and was able to buckle into one of the Jump seats. After the ride smoothed out, I went into the cabin to check on the Flight Attendants and Passengers. The Flight Attendants were shaken, but there were no injuries. I called the flight deck and talked to the relief pilots, who had taken the correct action and had requested a lower altitude to get a smoother ride. The Relief Pilots had contacted Dispatch to report the turbulence and while discussing it they determined that it was possibly wake turbulence from an aircraft that was higher and ahead of us. At the time we were in an area of no forecasted or reported turbulence, we were, however, following SOP and (Strategic Lateral Offset Procedure) SLOP 1 mile right of course. The area we were crossing had multiple fragmented jet streams depicted along our route at different altitudes. During the event, the auto pilot remained engaged, and the

aircraft maintained altitude. considering the circumstances, the Relief Pilots did an excellent job and the flight continued without further issue.

Synopsis

Two air carrier pilots on break reported noticing the effects of possible wake turbulence on their trans-Pacific flight.

ACN: 2032768 *(39 of 50)*

Time / Day

Date : 202309
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 270
Relative Position.Distance.Nautical Miles : 1.0
Altitude.AGL.Single Value : 1500

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 6
Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Government
Make Model Name : Large UAS, Fixed Wing
Crew Size.Number Of Crew : 4
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Descent
Route In Use : Visual Approach
Airspace.Class D : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : Y
Weight Category (UAS) : Large
Configuration (UAS) : Fixed Wing
Flight Operated As (UAS) : BVLOS
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Indoor / Ground Control Station (UAS)
Reporter Organization : Government
Function.Flight Crew : Instructor
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 2500
Experience.Flight Crew.Last 90 Days : 30
Experience.Flight Crew.Type : 700
ASRS Report Number.Accession Number : 2032768
Human Factors : Situational Awareness
Analyst Callback : Attempted

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : VFR In IMC
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Landed As Precaution

Assessments

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

Narrative: 1

Conducting training flight as instructor pilot in an unmanned Aircraft X. Tower weather per ATIS was reported as Few clouds 1100 ft. Prior to that, skies had been reported as clear. Took off planning on VFR pattern work and found that the clouds had thickened and pushed in. Decision was made and communicated to tower that we would make a full stop landing. VFR cloud clearances were not maintained at times during the pattern. Full stop landing was successfully completed after which Tower stated that clouds were now Broken at 1200 ft. AGL.

Synopsis

Government UAS pilot reported conducting operations in deteriorating conditions. They chose to land after they were unable to comply with VFR cloud clearance requirements.

ACN: 2032767 *(40 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 300

Environment

Weather Elements / Visibility : Fog
Weather Elements / Visibility : Rain
Weather Elements / Visibility.Visibility : 0
Light : Daylight
Ceiling.Single Value : 300

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
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 : Final Approach
Route In Use : Direct
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 1523
Experience.Flight Crew.Last 90 Days : 368
Experience.Flight Crew.Type : 678
ASRS Report Number.Accession Number : 2032767
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot

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

Assessments

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

Narrative: 1

While on the RNAV approach to ZZZ Airport visibility deteriorated rapidly as the descent into the final approach segment of the RNAV XX. Heavy rain began prior to the arrival of the minimum approach altitude and continued until nearly reaching the field. Visibility deteriorated to the point of almost zero, yet the Captain continued the approach in belief the rain would clear up. At the missed approach altitude I called "go missed" approximately 3 times in an effort to get the Captain to discontinue the approach, yet the Captain continued his descent into the field. As he continued I continued to called negative contact, "GO missed". The Captain ignored all calls and continued until breaking out at an altitude of nearly 200 ft. AGL, which was an extremely low altitude so to the point we were short of the field and well below the glide path. The "break out" altitude was approximately 300 ft. bellow the appropriate ceiling requirements for the RNAV XX at ZZZ. Upon landing the Captain remarked "you were right, we should have went missed, I thought we were going to break out just below". I have never been more afraid for my life and terror than on that approach into ZZZ to the point I feared for my life as the Captain ignored all my pleas to go around. I reported this incident to the training Captain. This is not the first time this has happened while flying with other captains at Company X and the conduct has been reported to the director of operations and chief pilot multiple times and was told to "not make waves". The safety culture at Company X presents a serious risk to aviation safety as a whole.

Synopsis

Air taxi First Officer reported an unstabilized approach resulting in a CFTT event in inclement weather with close to zero reported visibility. The First Officer repeatedly asked the Captain to execute a go-around, yet the Captain ignored the requests. Post landing, Captain admitted a go-around would have been the best decision.

ACN: 2032417 *(41 of 50)*

Time / Day

Date : 202309

Place

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

Environment

Weather Elements / Visibility : Thunderstorm

Aircraft : 1

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

Aircraft : 2

Reference : Y
ATC / Advisory.Center : ZZZ
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Airspace.Class E : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2032417
Human Factors : Confusion
Human Factors : Distraction
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Communication Breakdown

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

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot 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 : 2032418
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Distraction
Human Factors : Confusion
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 3

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) : 9
ASRS Report Number.Accession Number : 2031405
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Person : 4

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) : 2
ASRS Report Number.Accession Number : 2031406
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
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 : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

We had been picking our way through thunderstorms and were heading towards ZZZZZ into ZZZ at 12,000 ft. We had been talking with ATC about the deviations for weather and had just let them know we were back towards ZZZZZ. Shortly after this radio call ATC called us and said descend and maintain 10,000 ft. I read this back to them with our call sign. The Captain put 10,000 ft. into the FCU and we started down. When we started down I was thinking we are still a ways from ZZZZZ and we normally cross ZZZZZ at 14,000 ft. We were off our normal course into ZZZ because of the deviations and I thought maybe this is what the controller wanted? As we descended though I thought the terrain looked to close. I was about to key up the mic and ask ATC to confirm the altitude they wanted us to descend too when they called us back and told us we took another aircraft's clearance and we needed to climb back to 12,000 ft. It seemed that this controller was training because another voice came on and asked us if we had been told there was a similar call sign on frequency? We had not been told this we said. The flight continued without incident. Having two flights with similar sounding call signs arriving at the same time into ZZZ is a threat. Hopefully planning can work on changing this.

Narrative: 2

As we descended into the ZZZ area we responded to an ATC call to descend to and maintain 10000 ft. The First Officer (FO) who was the pilot monitoring read back this clearance with our call sign. I put the altitude in the FCU and we both verified on the FMA. We didn′t hear anything else from ATC until we were given a frequency change. We checked into the new frequency with our call sign and descent altitude. As we descend through 11000 ft. I cross referenced my GPWS terrain indication on my ND. The assigned altitude seemed lower than what I remembered in the past and there was some terrain ahead that was now appearing yellow. Our routing was still a few thousand feet above the terrain along our route however and we were VMC so I didn′t immediately have concerns and thought ATC had stepped us down a bit early. Descending through 10700 ft. ATC radioed and said to immediately climb to 12000 ft. and that we had taken our company aircraft′s descent. Until now we had not been advised of a similar sounding call sign on frequency. ATC now informed us Aircraft Y was also on frequency and in the descent to ZZZ. The flight was completed without incident, but we were informed by ZZZ tower to contact TRACON of a possible pilot deviation. In doing so I had to call back multiple times as they informed me they were unable to access the recordings. Ultimately they called me

back and said they were still working out the details but they believed we had taken another aircraft's frequency change but they couldn't say definitively. We never received a similar sounding call sign notification from ATC nor were we corrected during the initial read back or the new frequency check in. Both these things could have trapped this error. In addition having two company flights with similar call signs arriving at the same time should be avoided in the planning phase by the company. While we are not sure if we actually took the other aircraft's altitude assignment or ATC gave the altitude to the wrong similar call sign we admit it was possible that we made an error which we didn't catch.

Narrative: 3

Aircraft Y began flashing on my scope around 15000 [ft.] and I accepted a radar handoff. Shortly thereafter company Aircraft X checks in. Aircraft X was not on my scope and I missed that an incorrect call sign had checked in. Assuming Aircraft Y was the one who checked in, I instructed Aircraft Y (correct aircraft) to descend and maintain 10000 and advise when they got the current ATIS. The Aircraft X pilot read back the control instructions with out using a their call sign. Meanwhile, Aircraft Y whom I thought I was talking to continues to descend, making me believe he has received my instructions. Center then gives me a call and asks if I am talking to Aircraft X and I respond that I have Aircraft Y on frequency. He then explains that he believes the wrong aircraft switched to me and I have Aircraft X and not Aircraft Y. I scroll out and see that Aircraft X is flashing to me and is at an unsafe altitude (10700) for the MVA's (12000). Not yet sure if I do in fact have the wrong aircraft I reach out and instruct Aircraft X to climb immediately to 12000 to which he replies. Traffic was slow and I let expectation bias and a lack of catching the incorrect call sign on initial contact to place aircraft in an unsafe situation. This was a perfect swiss cheese model where multiple controllers and the pilots failed to catch a developing situation. I failed to catch the incorrect call sign on initial check-in. Aircraft X continued to take control instructions when all instructions were given to Aircraft Y. Center shipped me the incorrect aircraft, never told the two aircraft about similar sounding call signs, and did not catch that they had Aircraft X descending in their airspace to an unsafe altitude until well below the MVA. I missed that the wrong aircraft checked in and let expectation bias and lack of proper hearback/readback contribute to an unsafe situation. I assigned all control instructions to the correct intended aircraft but failed to verify when the pilot was responding without using their call sign. This was definitely a wake up call to be more vigilant.

Narrative: 4

I was working Aircraft X and Aircraft Y from the east and west respectively into ZZZ via LOA (Letter of Authorization) routing. Aircraft Y was issued a descent to 13000 ft. and was routed ZZZ1-ZZZ. Approach had accepted the handoff. Aircraft X was issued a descent to 14000 ft. on the east side of ZZZ1 via ZZZZZ-ZZZ1-ZZZ. I coordinated the ZZZ arrival from the east side of ZZZ1 as directed by Center and Approach LOA to which the Approach Controller acknowledged and approved. Aircraft X was just clear of weather after deviating right of course and proceeded direct ZZZZZ. I issued a frequency change to Aircraft Y to Approach and I received a readback that sounded correct at that moment but wasn't. Approach had not yet accepted the handoff on Aircraft X. Aircraft X was still descending below 14000 ft. into lower terrain of 12300 ft. I then issued a control instruction to Aircraft X to maintain 14000 ft. with no response. I then issued a low altitude alert to Aircraft X with no response. Aircraft Y responded to me on frequency and then I realized that Aircraft X took the frequency from Aircraft Y. I believe that the Approach Controller was mistakenly giving instructions to Aircraft X who kept taking instructions for Aircraft Y. The Approach Controller did not have a hand off on Aircraft X yet. I called the Approach Controller to inform him that there may have been a confusion between the two aircraft.

He told me he was talking to Aircraft Y and I said that Aircraft Y was on my frequency still. I called the Approach Controller and asked him if Aircraft X was climbing up to 14000 ft. and he said that he was climbing him up to 12000 ft. and told me that was his MVA for that area. The controller still did not have radar contact until I called him back and asked him to accept the hand off. The call signs were not that similar but to listen to read backs and similar call signs is very important. In hindsight, I should have called the call signs to each aircraft to have them listen carefully to prevent this error from happening to me and the Approach Controller.

Synopsis

Air Carrier flight crew reported ATC told them they took a similar sounding call sign's descent clearance and descended below the minimum altitude for terrain obstruction.

ACN: 2028890 *(42 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 1201-1800

Place

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

Environment

Weather Elements / Visibility : Haze / Smoke

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : FBO
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Takeoff / Launch
Route In Use : Vectors
Airspace.Class C : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : ZZZ
Aircraft Operator : FBO
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Final Approach
Airspace.Class C : ZZZ

Aircraft : 3

Reference : Z
ATC / Advisory.Tower : ZZZ
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 : VFR
Mission : Training
Flight Phase : Final Approach
Airspace.Class C : ZZZ

Person : 1

Location Of Person.Facility : ZZZ.Tower
Reporter Organization : Government
Function.Air Traffic Control : Local
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 21
ASRS Report Number.Accession Number : 2028890
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Workload
Human Factors : Situational Awareness
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Facility : ZZZ.Tower
Reporter Organization : Government
Function.Air Traffic Control : Local
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 9
ASRS Report Number.Accession Number : 2028900
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Confusion
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Person : 3

Location Of Person.Aircraft : Y
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 798
Experience.Flight Crew.Last 90 Days : 132
Experience.Flight Crew.Type : 132
ASRS Report Number.Accession Number : 2031122
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Ground Conflict, Critical
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Airspace Structure
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

I was the relieving controller on local control. I had just accepted the position. There were two flight school aircraft on final to runway XX. There were at least 5 aircraft waiting to go at runway XL. Weather was hazy and could not see the aircraft. I cleared Aircraft Y to land runway XX. He was about 2 miles out. Another flight school aircraft keyed up and said he was on runway XX. I had no idea what was going on, as I was just briefed and nothing was said about an aircraft being on that runway. The controller being relieved was still plugged in with me and he explained that it was probably the previous aircraft that he thought he had cleared for takeoff and departed a few minutes previous. That aircraft was still on the runway holding in position at hotel intersection. I told the Aircraft Y on final to go-around, then went back and started asking Aircraft X where he was and to exit the runway. I could not see Aircraft X on the runway due to the haze and how far away that runway is from the tower. I thought the runway was clear because I was never briefed on any aircraft still holding in position. I still felt uncomfortable as to where Aircraft X was, so I sent Aircraft Y on final to go-around. There was some back and forth communications with Aircraft X on the runway. He finally cleared the runway and decided to taxi back to parking. We really need ground radar at this facility. It is just a matter of time before a catastrophic event happens involving all of these aircraft. We just cannot see them! We are running a one runway operation here most of the time because we always have one of the parallels closed due to various reasons.

Narrative: 2

I instructed Aircraft X to LUAW (Line Up and Wait) RWY XX at intersection [taxiway] 1 to ensure they were lining up in the correct direction. I then turned my attention to the active RWY which was RWY XL and cleared numerous A/C to land and take off. I believed I cleared Aircraft X for takeoff and either did not or transmission was blocked or did not go out. I then vectored 2 flight school a/c off the RWY XL final to RWY XX to accommodate IFR departures off RWY XL. After departures cleared, I then cleared to two flight school A/C to land on RWY XX. When the first Aircraft Y was an estimated 2 mile final, Aircraft X advised tower that they were still on the RWY XX. As I was performing my 2 minute overlap the relieving controller instructed Aircraft Y and Aircraft Z to go around for re-sequencing and taxied Aircraft X off RWY XX and back to their ramp. Surface detection equipment and having sufficient help would have helped greatly in this situation.

Narrative: 3

Was flying radar vectors for the visual Runway XX into ZZZ. Tower cleared me and my student to land Runway XX. We flew the Visual Approach straight on. On short Final, I noticed Aircraft X on the Runway, halfway down the Runway. I was waiting to see if it was going to exit the Runway, as it was almost parallel to an exit of Runway XX. We continued to fly the visual down, while I told my student to prepare for a go around. Aircraft X on the Runway keyed up his microphone and asked if he was cleared to leave the Runway. At this point, the Controller sounded confused and asked for clarification. They were talking, and I told my student to go around as the Controller told us to go around. I was waiting to see if we could tell the Controller were were going around as I was not sure if there was a plane taking of Runway XL straight into us at the time. On the go around, Aircraft Z behind us was also told to go around. The Controller told us to fly right downwind for Runway XX. We complied and noticed that we would be overflying Runway XL which was the active runway for commercial traffic. The Controller then told us we were cleared for Runway XL. Based on our position, we were overflying the departure end of Runway XL. I asked if she wanted us to make a left turn for Runway XL. She confused me with Aircraft Z, even after I corrected her with our call sign. She then made some comments and vectored us outbound before establishing us on final for XL.

Synopsis

Tower Controllers and a flight school instructor reported the instructor initiated a go around from short final due to another flight school aircraft being on the runway. The Controllers reported a mix up in communications, their inability to see the runway involved, and no ground radar contributed to their lack of awareness of an aircraft on the runway.

ACN: 2028563 *(43 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 0601-1200

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 3
Light : Daylight
Ceiling.Single Value : 1400

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : Skylane 182/RG Turbo Skylane/RG
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : ILS ZZL
Flight Phase : Final Approach
Route In Use : Direct
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Function.Flight Crew : Captain
Qualification.Flight Crew : Private
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 400
ASRS Report Number.Accession Number : 2028563
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Other / Unknown
Human Factors : Distraction

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

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Air Traffic Control
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

In the morning, I started a VFR flight from ZZZ1 to ZZZ. I departed VFR knowing that the weather at ZZZ was marginal but possibly improving. As I approached ZZZ, I could see that that ceilings were not as forecast. Approaching, I decided to file a pop-up IFR flight plan with Center, who at the time, was monitoring my flight through flight following. As I approached ZZZ, I was handed off to Approach close to ZZZ2. At the time of hand off, ATC asked me what approach I would like and I choose the ILS for XXL, circle XXR. I choose this by default as I always will choose the ILS when able, due to the accuracy and the ability to provided a lower DA. My error in choosing this approach, was that this certain approach was in-operative at the time I requested. I was aware of the notam being ZZZ is my home airport. For reason's listed above, I choose this approach subconsciously making a critical error. I was allowed to continue on for the ILS at ZZZ. As I entered in to the nearby Class C airspace, I could see that the ceilings were possibly lower than what may have been originally forecast. As I approached north of the airport, I went to Ident the LOC frequency and did not get a tone. Although concerning, I thought maybe it was my location relative to the airport and had planned to check again as I got closer to the approach. As I entered the approach, ATC cleared me for the ILS XXL, circle XXR. As I was cleared for the approach, I went to test the identifier for the LOC once again. As I was doing this, I received communication from Approach that the ILS was inoperative at ZZZ. They changed my approach to the RNAV YYL Circle XXR. Being in full IMC, and as I already had the airplane set-up for the ILS, I struggled getting the information into the GPS and pulling the new approach plate so that I could properly brief the approach. As I approached the IF assigned, I was having issues putting the IF in the GPS. At this point, I had the AP (Autopilot) off as I always hand fly all approaches. As I blew the RNAV intercept, I attempted to turn back into it. Being distracted by my GPS, I inadvertently

took my eyes off the instruments and did not have my AP engaged. At this point, I noticed a concerning sound in my headset, knowing it was wind caused by increased speed, looked at my VSI and seen a 1500 FPM descent. I was still in full IMC and took evasive actions to correct the attitude of the airplane. In addition to being in a dive, I was in a right banking turn. I was able to get the power pulled out, level the wings, and ultimately, able to stop the descent. During this time, ZZZ Approach broadcast an altitude alert. After getting the airplane stabilized, I reengaged the auto pilot and climbed to 3000 ft. At this point, I was given the option to reattempt the previous botched approach and I mentioned that I was not comfortable with the ceilings and would like to go to a VFR airport if possible. With nothing VFR available, I choose to set up for the RNAV XYL at ZZZ3. In the seconds that I experienced the incident, I lost close to 1200 ft in just a few seconds increasing my airspeed close to 180 kts. Everything leading up to the approach was comfortable, manageable, and for the most part, normal. I have re-ran the entire situation over and over in my mind, as well as reviewing ADSB data. After extensive review, I feel the point where things started to go south, was when I transitioned from the ILS to RNAV. I spent to much valuable time setting up the approach which led me not to take me eyes of my instruments, which is key to instrument flight. Knowing how to recover from an unusual attitude in IMC, ultimately saved my life!

Synopsis

Cessna 182 pilot reported becoming distracted during single pilot operation in IMC on approach and entering an unusual attitude. The pilot took immediate actions to recover the aircraft and elected to do an approach into a nearby airport.

ACN: 2028114 *(44 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 19000

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility : Thunderstorm
Weather Elements / Visibility : Windshear
Weather Elements / Visibility.Visibility : 0
Light : Daylight
Ceiling.Single Value : 12000

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Personal
Make Model Name : Epic Aircraft Undifferentiated or Other Model
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Cruise
Airspace.Class A : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 2285
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 1235
ASRS Report Number.Accession Number : 2028114
Human Factors : Communication Breakdown
Human Factors : Time Pressure
Human Factors : Workload
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.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Regained Aircraft Control
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
Contributing Factors / Situations : Weather
Primary Problem : Weather

Narrative: 1

Adverse Clearance Revision without timely modification resulted in encounter with severe convective vertical wind shear. Departed ZZZ on IFR clearance to ZZZ1 at 33000 ft. via the ZZZZZ1 arrival. Preflight briefing showed route of flight through convective outlook area. Upon handoff to center, and to my dismay, ATC cleared us only to FL190 and said to expect no higher (14,000 feet below cleared flight plan route). With lots of deep moist convection in sight ahead I asked for higher and was denied. It was necessary to request multiple lateral deviations to avoid buildups. Other aircraft were doing the same. Repeated request for higher and was told airspace above too congested though we could see very few aircraft on TCAS within 40 miles of our position. A 40 degree right turn from ZZZZZ to ZZZ [VOR] had us pointed directly into fast rising convective clouds - towering cumulus. Again asked for immediate climb or turn back to the left to avoid weather. No response from ATC. We entered the cloud and experienced an uncommanded ascent above our selected altitude which the autopilot could not correct. There was intense convective vertical wind shear in excess of 6000 feet per minute. The plane experienced a 5000+FPM instantaneous rate of ascent and inside of 32 seconds had ascended nearly 3,000 feet, far beyond the climb capability of the airplane. I disconnected the autopilot and began roll and pitch changes to arrest the climb, get the aircraft under control and back down to its assigned altitude. The downward descent rate was nearly as high, exceeding 4000 FPM. Within the ensuring minute we were back down to 19000 ft, out of the clouds and headed toward ZZZ [VOR]. But the route ahead looked worse despite ATC saying they could see no weather. Not a surprise because the developing thunderstorm clouds had not reached full maturation. Our datalink weather display was showing severe weather along our route ahead. So I asked again for higher and, when handed off to the next controller, requested vectors to the north. We were cleared to FL230 and were given vectors all the way to ZZZ1. The remainder of the flight was uneventful. The cause of the adverse weather encounter was a result of a controller at workload saturation managing congested airspace full of threatening weather who was unable to provide a timely deviation clearance. My deviation request came too late to avoid the severe convective vertical shear present in developing deep moist convective atmosphere. As soon as I was advised that my route would take me through, rather than over, an area of developing thunderstorm clouds I should have rejected the clearance and negotiated a different route as I ultimately did. I

also believe that more ARTCC personnel should be assigned to work busy airspaces when unusually severe weather (Hurricane was in area) is expected. That would make provide more time and flexibility to direct traffic safely through such areas.

Synopsis

Epic E1000 pilot reported ATC did not approve their weather deviation request which resulted in them encountering Wind Shear and an uncontrolled 3000 ft. climb. Pilot regained control of aircraft and returned to assigned altitude.

ACN: 2027515 *(45 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 0601-1200

Place

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

Environment

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

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : FBO
Make Model Name : J3 Cub
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Landing
Route In Use : Visual Approach
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Trainee
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 2793
Experience.Flight Crew.Last 90 Days : 11
Experience.Flight Crew.Type : 8
ASRS Report Number.Accession Number : 2027515
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Other / Unknown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Excursion : Runway
Anomaly.Ground Incursion : Taxiway
Anomaly.Ground Event / Encounter : Loss Of Aircraft Control
Anomaly.Ground Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control

Assessments

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

Narrative: 1

As a 2900+ hour CFII who had always flown tricycle gear aircraft, I decided to receive training towards a tailwheel endorsement. I proceeded to receive training in a PA-11 at ZZZ. From the beginning I had difficulties with rudder control, resulting in overcorrections. With practice, these became less troublesome, but I still had difficulties making consistent wheel landings. On the morning of the incident, we had a left crosswind of about 40 degrees with winds gusting up to 15 kt. I questioned the [instructor] if it would be appropriate at my stage of training to fly. The instructor said we could proceed. The initial takeoff was uneventful, but on climb out I noticed moderate turbulence. We remained in the pattern to practice wheel landings. On my first approach and landing, the gusty crosswinds were difficult to deal. My rudder control was adequate but I bounced the landing and finally settled it on the runway further down before adding power for the touch and go. The second landing attempt was better but I still bounced slightly and had difficulty getting the stick forward to keep the airplane on the ground. On the third attempt, I succeeded in maintaining good runway alignment, was able to plant the airplane on the ground without bouncing and continued to track down the runway. I decided that I should declare success, added power for the touch and go and lifted off the runway. The instructor thought otherwise and pulled the power back so that I could make a second touchdown. The change in plans took me by surprise. We touched down and as I was trying to get the tail back up, I must have inadvertently added too much right rudder. The airplane started to head for the side of the runway, so the instructor yelled for me to let go of all the controls. He added power but the aircraft veered further right towards the the edge of the runway. He pulled the power back and we rolled across the grass area and slowly reentered the taxi ramp. We requested taxi clearance back to hangars to inspect the aircraft. I taxied the aircraft back with no further problems. We detected no damage to the aircraft. As we approached the parking area Ground Control asked us to contact them or Tower about the runway excursion The instructor thought that I may have inadvertently applied the right brake as he was adding power. I told him I didn't think I had because since the aircraft has heel brakes, I always have to work hard to reposition my heels to apply the brakes. I suspect the problem was a combination of an already deflected rudder, a gust of wind, and the yaw from suddenly adding power. On reflection, it probably wasn't a good decision to attempt training in gusty wind conditions without first having mastered tailwheel flying under normal circumstances. The instructor said he would contact the Tower.

Synopsis

Pilot reported a runway excursion during gusty wind conditions while receiving training in a tail-wheel aircraft. The instructor took over the controls as the aircraft rolled into a grass area undamaged, then taxied to the hangar.

ACN: 2027345 *(46 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 8900

Environment

Weather Elements / Visibility : Turbulence

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 Climb
Route In Use.SID : ZZZZZ
Airspace.Class C : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2027345
Human Factors : Workload
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2027347
Human Factors : Time Pressure

Human Factors : Situational Awareness
Human Factors : Workload

Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Departed ZZZ on the ZZZZZ departure. Standard departure procedures. When climbing on the departure we were in VFR conditions with a fair amount of turbulence but weren't concerned about any terrain as we picked up airspeed for to 250 knots. It seemed initially we would be above 9800 ft. at ZZZZZ but as we climbed it became apparent we were not going to meet the crossing restriction and did not have time to correct pitch enough and ended up around 300 feet low. We did receive a low altitude warning from ATC but informed them at that time we would be above terrain and any other crossing restriction wouldn't be a problem. Cause: Not paying enough attention to climb performance during a turbulent climb out early enough to take corrective action to increase climb rate enough to be at or above a departure crossing restriction. Suggestions: Keep the pitch off the aircraft up with a lower climb out speed to have a higher climb rate necessary for crossing restriction instead of making sure the aircraft is accelerating to 250 knots. Especially in turbulent wind conditions.

Narrative: 2

Taking off [Runway] XXR ZZZ. I've taken off and landed several times through the year. But it was definitely hotter at this time of year. So when we took off we got into some light to moderate turbulence coming out bouncing around. We cleaned the plane up as soon as we could and went to climb 1 so that we could have the extra power climbing out. Well the plane wanted to pitch over to meet the preset airspeed. I was hand flying at this point for better control through the bumps. As we were climb I became aware too late to realize we weren't going to make 9200 ft. on the ZZZZZ [arrival] at ZZZ. We cross it at about 8900 ft. We met all other altitudes easily. Thinking about potential causes. A slower power setting for the altitude and temperature than what we should have had. Then the next issue was me not adjusting the planes pitch. What I should have done is taken off with max to1 vs to1 with flex power. And adjusted the pitch so that the climb was made vs following the pitch that the plane wanted to do for the airspeed set in.

Synopsis

Air carrier flight crew reported during climb out in turbulence they were below a crossing restriction on the SID and received a Low Altitude Alert from ATC.

ACN: 2027140 *(47 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 10
Altitude.MSL.Single Value : 3000

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.Localizer/Glideslope/ILS : ILSXX
Flight Phase : Climb
Route In Use : Visual Approach
Route In Use : Vectors

Component

Aircraft Component : Engine Indications
Aircraft Reference : X
Problem : Malfunctioning

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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 250
Experience.Flight Crew.Type : 19000
ASRS Report Number.Accession Number : 2027140
Human Factors : Situational Awareness
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Departure Airport

Assessments

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

Narrative: 1

Taxi and takeoff were uneventful, although on taxi-out, ZZZ Tower advised us of LLWS +/- 20 knots on final for [Runway] XXL. the FO (First Officer) was PF (Pilot Flying), and I was PM. The FO asked how ATC had that information in the absence of a PIREP. ATC explained that they used technology. We departed XXL with an assigned heading of 150 and a clearance to climb to 3000 ft. On a right downwind, were switched to departure. At that moment, just south of ZZZ1, the right engine experienced severe vibration accompanied with abnormal N1 and EGT indications. The EGT indicated an exceedance and displayed a red "disk". ATC cleared us to 6000 ft, but I set the altitude in the MCP (Mode Control Panel) to 3000 ft and advised Captain to maintain heading. It took several seconds to transmit to ATC, due to multiple aircraft in the approach/departure corridor. I advised ATC and requested immediate return to ZZZ. ATC asked if we were ready to return right away, and I informed them that we needed vectors to a safe area to allow us to run a checklist, then we would advise them. I started the Engine Vibration Checklist, then stopped. I reminded Captain that we had an exceedance, and the correct checklist was the Engine Fire, Failure, Severe Damage, or Separation QRC, followed by the QRH. We followed both the QRC and QRH deliberately and methodically, and once we were on the Deferred Items of the Engine Inoperative Landing Checklist, I requested vectors to the ILS XY Approach, and briefed the visual approach backed up by the ILS. We were landing Flaps 15, using speed off the INIT REF page, after verifying that we were not overweight. ATC advised us of LLWS on final approach. I referred to PROG PAGE 2 to ensure that we were not landing with a tailwind component. It was difficult to slow the aircraft down to VREF at Flaps 15, so I extended the speedbrake 30% to create drag. (The limitation for use of speedbrakes are up to Flaps 10). I explained to Captain that I had to "hang some tin" to get the speed under control, and we did not want excess kinetic energy. We landed with Autobrakes 3, taxied off at taxiway 1, and were instructed to wait at the holding pad. The ARFF (Airport Rescue and Firefighting) inspected the exterior of the aircraft, especially the right engine, then took the brake temperature (700C). After 30 minutes, we were cleared to be towed to the ramp. The Flight Attendants performed an excellent job of controlling the Passengers and keeping them calm. There were only XX people onboard, but not everyone spoke English, so that was a challenge. I kept the Passengers and Crew informed during the whole adventure, explaining that we would return to ZZZ and exchange this aircraft for a "newer one". I did this in English and in Spanish. My F/O performed his PF tasks flawlessly, displaying superb airmanship and reflecting the quality of his training. The Flight Attendants are to be commended on their professionalism and actions, which kept all of our customers safe from the moment of the fire to the deplaning at the gate. Good

preparation and constant drills in the simulator, along with standardized briefings and adherence to SOPs made this event resemble a training exercise rather than a full-blown emergency. Every Crew Member did their jobs flawlessly. My only exception was the deliberate use of speedbrakes at Flaps 15, when the SOP prohibits their use above flaps 10. I chose this course of action because the risk of damaging the flap/speedbrakes was outweighed by the risk of a high-energy touchdown and a possible overrun, or the risk of a single-engine go-around in conditions of low-level windshear.

Synopsis

B737 Captain reported an engine vibration and EGT exceedance during climb. The crew returned to the departure airport and landed safely.

ACN: 2027095 *(48 of 50)*

Time / Day

Date : 202308

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 31000

Environment

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

Aircraft

Reference : X
ATC / Advisory.Center : 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
Flight Phase : Cruise
Airspace.Class A : ZZZ

Component : 1

Aircraft Component : APU
Problem : Malfunctioning

Component : 2

Aircraft Component : Ice/Rain Protection System
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 : 2027095
Human Factors : Workload
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 : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2027104
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance

Assessments

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

Narrative: 1

Leaving originating airport, APU door would not close. Speed thereafter was limited to 220 KIAS. Altitude initially limited to FL240 but later was able to climb to FL310 as our weight decreased. En route we ran into inclement weather and were unable to climb above it. In icing conditions, we utilized our wing and cowl anti ice. A few moments after, we received a Master warning "Anti Ice Duct". As led by the QRH, we turned off our anti ice equipment and searched for our closest option out of icing. As the Captain queried ATC as to the bases of the clouds, we saw a brief opening of clear air off to our right. There was some initial confusion with ATC as to why we needed to deviate from our current flight path. In effort to not lose the opportunity we began our turn just prior to ATC clearing us to do so. We were able to parallel our course for a short time and return soon after. After this, and still with our speed and altitude restrictions, ATC [requested priority handling] on our behalf to our limitations, sequencing into destination and VIP presence in there. From then on the flight continued safely and a normal landing was made. Cause: APU door failed in an unknown position limiting speed and altitude. Anti Ice duct prohibited us from flying in icing conditions. Additional factors as to why [priority handling was requested] include large flow of traffic going into destination and heightened security measures at the airport. Suggestions: I think it would be tough to predict either failure. Continuing to destination seemed like the best decision based on icing forecasts and reported weather.

Narrative: 2

APU door failed to close on departure giving us APU door open caution and APU door status. Altitude limited to FL240 due to weight at APU door speed. Lower altitude left us in IMC avoiding weather. Once at FL310 as we had burned off weight to climb, the Anti ice duct master warning EICAS populated. The QRH told us to turn off the wing anti ice and

leave icing conditions. I queried ATC for bases and they were confused by our requests so I told them we were turning right to leave the icing where the First Officer and I had last seen clear air. While ATC did eventually come to understand the situation, I believe my turn to exit may have been just prior to them clearing us to do so. We rejoined our course when it would not have required flying into further icing conditions. ATC [requested priority handling] on our behalf for our inability to go faster, higher, remain perfectly on course, and for a small mention of potential VIP movement. We continued to our destination safely. Cause: APU DOOR failure to show closed and associated APU door open caution restricted speed and altitude. ANTI ICE DUCT master warning restricted ability to fly in icing conditions. Suggestions: No simple solution due to limited divert options given weather conditions and inability to fly through ice normally. Safest course of action as determined by us at the time was to continue to our destination as it was known to be warm enough to not have ice.

Synopsis

ACRJ-700 flight crew reported an APU door malfunction, and subsequent Anti-Ice Duct warning, which precluded the ability to operate in icing conditions.

ACN: 2027067 *(49 of 50)*

Time / Day

Date : 202308
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : CLT.Tower
State Reference : NC
Altitude.MSL.Single Value : 1200

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Cloudy

Aircraft

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

Component

Aircraft Component : Radio Altimeter
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2027067
Human Factors : Human-Machine Interface
Human Factors : Confusion

Person : 2

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

Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2026449
Human Factors : Confusion
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

During the approach, flight crew was actively configuring the aircraft to Flaps 30 and reducing speed to achieve the stable approach criteria by 1000 ft. AGL. However, in the process of introducing our final flaps of 30 degrees, the aircraft made RA call of "One thousand." However, we looked at our radio altimeter and it read 1200-1300. We confirmed all three barometric altimeters read approximately 1730 MSL. After a brief discussion of a go-around, Captain determined it was safe to introduce flaps 30 at that time 1100-1200 AGL and continue the final items of the landing checklist below 1000 ft. AGL. We later discussed the possibility the Radio Altimeter was experiencing interference. The remainder of the approach was safely flown to a completed landing. Cause- We anticipated the morning low level cloud layer to lift prior to conducting the approach to 36R at CLT. However, the clouds did not lift and the First Officer, with prior discussion, relinquished the flight controls to the Captain on radar downwind. The reason for the exchange was so the Captain could fly the aircraft using CAT III criteria to ensure our arrival into CLT. We later discussed possible Radio Altimeter interference as causal on our delay to call our approach stable just under 1000 ft. AGL. Suggestions- Control Radio Altimeter spectrum interference in the vicinity of CLT airport.

Narrative: 2

During the approach, flight crew was actively configuring the aircraft to Flaps 30 and reducing speed to achieve the stable approach criteria by 1000 ft. above ground. However, in the process of introducing our final flaps of 30 degrees, the aircraft made the "One thousand," call. However, we looked at our radio altimeter and it read 1200-1300. After a brief discussion of a go-around, Captain determined it was safe to introduce flaps 30 at that time 1100-1200 RA and continue the final items of the landing checklist below 1000 ft. RA. Cause- We anticipated the morning low level cloud layer to lift prior to conducting the approach to 36R at CLT. However, the clouds did not lift and the First Officer, with prior discussion, relinquished the flight controls to the Captain prior to being vectored onto the final approach course. The reason for the exchange was so the pilot flying could execute a CAT III landing to ensure our arrival into CLT. Suggestions- The event could

have been mitigated with a discussion and response to the task before entering the final phases of the descent/approach.

Synopsis

Air carrier flight crew reported a radio altimeter "call-out" that contradicted the radio altitude displayed in the cockpit. The flight crew suspected possible 5G radio interference and continued the CAT III approach to a normal landing.

ACN: 2026967 *(50 of 50)*

Time / Day

Date : 202307
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 3300

Aircraft

Reference : X
Aircraft Operator : Personal
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Personal
Flight Phase : Taxi

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 : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 1250
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 220
ASRS Report Number.Accession Number : 2026967

Events

Anomaly.Ground Event / Encounter : Weather / Turbulence
Anomaly.Ground Event / Encounter : Ground Strike - Aircraft
Detector.Person : Flight Crew
When Detected : Taxi
Result.Flight Crew : Took Evasive Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Weather
Primary Problem : Weather

Narrative: 1

Sudden gust of (tail) wind lifted tail of tailwheel aircraft. Propeller struck sauciest surface and damaged propeller. Engine RPM approx 400-500 at time of impact, engine did not shut down. Engine was stopped after tail settled back to ground. No vibration noted before engine shutdown. Aircraft pulled to ramp area. No damage to any components besides propeller. No injury.

Synopsis

Pilot reported a propeller strike in his tail-wheel aircraft after a sudden gust of wind lifted the tail off the ground causing contact with surface. No injuries or damage to plane except for the propeller.