ASRS Database Report Set

RNAV Arrival Reports

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

Update Number.....10.0

Date of Update.....March 24, 2022

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

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

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

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

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

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

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

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

B Hooey

Becky L. Hooey, Director
NASA Aviation Safety Reporting System

CAVEAT REGARDING USE OF ASRS DATA

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

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

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

Report Synopses

ACN: 1854859 *(1 of 50)*

Synopsis

A L30 TRACON Controller reported issuing vectors to avoid an NMAC between two aircraft flying published RNAV procedures when the arriving aircraft "stayed high" on the arrival to LAS airport. The reporter states the CHOWW RNAV arrival procedure conflicts with the GIDGT RNAV SID.

ACN: 1850995 *(2 of 50)*

Synopsis

ZLC Center Controller reported an aircraft descended below a crossing altitude at WARPU intersection.

ACN: 1849863 *(3 of 50)*

Synopsis

Air Carrier pilot landing DEN reported Denver Center advised them they had to wait until communicating with Denver TRACON to receive an arrival runway which caused confusion and uncertainty as to which transition to fly. The reporter heard other arriving aircraft experience the same confusion with Denver TRACON over the correct route to fly.

ACN: 1847217 *(4 of 50)*

Synopsis

Light Turbojet First Officer report the pilot crew was assigned a STAR but there was no descend via or transition route for their arrival airport OSU. Reporter stated they have experienced routing and clearance issues since the new STAR recently became effective.

ACN: 1840188 *(5 of 50)*

Synopsis

C560 Captain reported a TCAS RA with a helicopter while on approach. Captain further stated that ATC failed to provide traffic separation.

ACN: 1837293 *(6 of 50)*

Synopsis

Flight crew reported they failed to meet a crossing restriction while descending on a new arrival into TPA after misinterpreting the crossing restrictions and ATC clearance. Issue was further complicated by the use of the same fixes across multiple arrivals.

ACN: 1826118 *(7 of 50)*

Synopsis

Corporate Captain reported a hazardous arrival procedure and accompanying charts that require modification to conform more closely with safe air traffic control for arrival to MQY airport.

ACN: 1825720 *(8 of 50)*

Synopsis

An air carrier pilot conducting an approach at night to SKBO reported they were cleared for a "RNP Visual Flight Proc." approach but charts and the Flight Manual were not clear if they were authorized to fly this procedure.

ACN: 1823384 *(9 of 50)*

Synopsis

Falcon 2000 Captain reported momentary loss of control after encountering wake turbulence on approach to BFI airport.

ACN: 1821848 *(10 of 50)*

Synopsis

Reports of PAPI lights to PTKK inoperative but not NOTAM'd out of service. Reporter states PAPI and VASI do not operate at PGSN but Jeppesen charts state VASI is available.

ACN: 1821532 *(11 of 50)*

Synopsis

B737NG Captain reported encountering wake turbulence shortly before touchdown on Runway 29 at EWR from an A321 on short final to Runway 22R.

ACN: 1819532 *(12 of 50)*

Synopsis

Flight Instructor reported an NMAC when an aircraft they were following on an approach unexpectedly reversed course towards them.

ACN: 1819510 *(13 of 50)*

Synopsis

Pilot expressed concern that the top of the trees may be interfering with the approach clearance area while flying a visual approach to Runway 21 into FWB, triggering a GPWS terrain warning.

ACN: 1818334 *(14 of 50)*

Synopsis

Pilot reported issues related to flying into PTKK Chuuk International Airport, Weno Island, Micronesia, at night.

ACN: 1818115 *(15 of 50)*

Synopsis

Captain reported triggering a low terrain alert while flying below the normal glide path profile during an approach to the runway.

ACN: 1817367 *(16 of 50)*

Synopsis

PA-34 flight instructor reported an NMAC while on approach to a non-towered airport.

ACN: 1817229 *(17 of 50)*

Synopsis

B737-800 flight crew reported a clearance deviation due to automation mismanagement and CRM issues.

ACN: 1816689 *(18 of 50)*

Synopsis

Light aircraft instructor pilot reported an NMAC with opposite direction traffic at LKR non-towered airport.

ACN: 1815770 *(19 of 50)*

Synopsis

Air Carrier Pilots reported an un-stabilized approach that set off the EICAS warning "Don't Sink" near the runway threshold. An uneventful landing was accomplished.

ACN: 1815598 *(20 of 50)*

Synopsis

Wide body transport Captain reported receiving a low altitude alert from ATC on approach to ABQ when the flight crew missed a change in the FMS vertical navigation mode.

ACN: 1815151 *(21 of 50)*

Synopsis

Military Pilot reported an airborne conflict in the traffic pattern.

ACN: 1814638 *(22 of 50)*

Synopsis

GA pilot examiner reported that FSDO reported a near miss to the them three months after the incident and could not recall any details of it.

ACN: 1814633 *(23 of 50)*

Synopsis

A pilot flying an RNAV Approach into a non towered airport flew direct to the Final Approach Fix instead of the Initial Approach Fix as cleared. The fixes have similar sounding names which contributed to the navigation error.

ACN: 1813915 *(24 of 50)*

Synopsis

Air Carrier Pilots reported, after an unstable approach at night to an uncontrolled airport, not executing the published missed approach.

ACN: 1813366 *(25 of 50)*

Synopsis

Air carrier flight crew reported receiving an EGPWS terrain warning during descent on visual approach into RNO and subsequently performed a go-around. The crew stated they had not adequately reviewed the notes and restrictions for the runway and this may have contributed to the unstable approach.

ACN: 1812004 *(26 of 50)*

Synopsis

Air carrier Captain reported that VNAV suddenly indicated below glide path during approach to RNO airport. The approach became unstable, and the flight crew executed a go-around. Reporter stated that there was GPS testing in nearby area but the approach airport was not listed on the coverage area document.

ACN: 1811826 *(27 of 50)*

Synopsis

ERJ175 flight crew reported a clearance deviation due to flight crew communication breakdown during approach.

ACN: 1811820 *(28 of 50)*

Synopsis

ERJ-175 flight crew reported electing to land with a fuel imbalance rather than complete the QRH procedure.

ACN: 1811735 *(29 of 50)*

Synopsis

B767 flight crew reported a false windshear warning during fully configured and stable final approach to landing.

ACN: 1811552 *(30 of 50)*

Synopsis

EMB135 flight crew reported a deviation from assigned altitude caused by the FMS during autopilot mode led to a TCAS RA during approach.

ACN: 1811512 *(31 of 50)*

Synopsis

A-319 Captain reported a CFIT event during approach that was extended due to departure traffic.

ACN: 1810398 *(32 of 50)*

Synopsis

Air carrier Captain reported crossing restrictions and speed issues while flying into RIC airport on the RNAV (RNP) Y Runway 16 Approach.

ACN: 1809567 *(33 of 50)*

Synopsis

Air carrier Captain reported confusion and distractions when flying into Denver.

ACN: 1809079 *(34 of 50)*

Synopsis

Airbus Captain reported the STAR chart for the LAS RNDRZ 1 RNAV arrival is confusing and does not match the aircraft PFD.

ACN: 1808608 *(35 of 50)*

Synopsis

Air carrier flight crew reported executing a go-around at SAN when it became clear another air carrier aircraft was in position for takeoff on their landing runway.

ACN: 1808202 *(36 of 50)*

Synopsis

Pilot reported getting a terrain alert after not noticing the aircraft was not on glideslope. Reporter stated they were focused on the poor weather conditions and did not monitor the approach progress.

ACN: 1807543 *(37 of 50)*

Synopsis

Air carrier Captain reported TCAS RA Alert on approach to PSP airport.

ACN: 1807324 *(38 of 50)*

Synopsis

Air carrier Captain reported an NMAC during approach with an aircraft on approach on the parallel runway.

ACN: 1807082 *(39 of 50)*

Synopsis

Check Airman reported receiving a EGPWS Alert on approach.

ACN: 1806605 *(40 of 50)*

Synopsis

Air carrier Captain reported receiving a low altitude alert from ATC on approach into ROA even though it appeared there was no terrain conflict.

ACN: 1806222 *(41 of 50)*

Synopsis

Air carrier flight crew reported GPWS Alert on approach to TUS airport.

ACN: 1805558 *(42 of 50)*

Synopsis

Air carrier flight crew reported a CFTT event while on the RNAV (RNP) Y RWY 16L approach to RNO airport.

ACN: 1805443 *(43 of 50)*

Synopsis

PA-46 pilot reported difficulties with the Flight Director resulted in a momentary unusual attitude event in IMC conditions.

ACN: 1805426 *(44 of 50)*

Synopsis

GA flight instructor reported an NMAC during final approach to CVO non-towered airport. Reporter stated the other aircraft never made any radio calls during the approach which contributed to the event.

ACN: 1805216 *(45 of 50)*

Synopsis

GA pilot reported an altitude deviation during approach to HTS airport resulting in a low altitude alert from ATC.

ACN: 1804022 *(46 of 50)*

Synopsis

Flight crew reported receiving an RA caused by a VFR light twin, while they were on final approach .

ACN: 1804019 *(47 of 50)*

Synopsis

Instructor and student reported descending below Minimum Descent Altitude, which they attributed to an incorrect altimeter setting, and turbulence.

ACN: 1802822 *(48 of 50)*

Synopsis

Flight crew reported having a stick shaker activation during a go around, which was attributed to a hydraulic system failure.

ACN: 1802638 *(49 of 50)*

Synopsis

EUG TRACON Controller reported an airborne conflict between an air carrier aircraft and a VFR helicopter. Controller suggested EUG should be a Class C airport requiring VFR aircraft to be in contact with ATC while crossing air carrier approach/departure paths.

ACN: 1802626 *(50 of 50)*

Synopsis

Eugene TRACON Controller reported an unsafe operation with numerous VFR aircraft at the CVO uncontrolled airport.

Report Narratives

ACN: 1854859 *(1 of 50)*

Time / Day

Date : 202111
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : L30.TRACON
State Reference : NV
Altitude.MSL.Single Value : 11000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : L30
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Climb
Route In Use.SID : GIDGT RNAV
Airspace.Class B : LAS

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : L30
Aircraft Operator : Corporate
Make Model Name : Medium Transport
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.STAR : CHOWW RNAV
Airspace.Class B : LAS

Person

Location Of Person.Facility : L30.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 6
ASRS Report Number.Accession Number : 1854859
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Distraction

Events

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

Assessments

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

Narrative: 1

Aircraft X on the GIDGT RNAV departure. Aircraft Y on the CHOWW RNAV arrival. Aircraft Y stayed high on the arrival. The outer fix altitude is 19,000 feet. The next restriction is TATUU between 10,500 feet and 9,500 feet. Aircraft X had the restriction of AIRRO at or above 11,500 feet and 250 knots. A vector to Aircraft X southeast was necessary to avoid a loss or possible near midair collision with Aircraft Y. The fixes of TATUU and AIRRO are 8 miles from each other and converge. There is no fix beyond AIRRO for the GIDGT departure. This allows the departure to increase speed and climb slower leaving 11,500 feet. This source converges with the CHOWW arrival at 19,000 feet descending. This is very unsafe. Must lower the altitude at CHOWW to at least 17,000 feet. Also, another fix on the GIDGT beyond AIRRO is needed. This fix should be at least 15,000 feet with a speed not to exceed 250 knots.

Synopsis

A L30 TRACON Controller reported issuing vectors to avoid an NMAC between two aircraft flying published RNAV procedures when the arriving aircraft "stayed high" on the arrival to LAS airport. The reporter states the CHOWW RNAV arrival procedure conflicts with the GIDGT RNAV SID.

ACN: 1850995 *(2 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZLC.ARTCC
State Reference : UT
Altitude.MSL.Single Value : 12000

Aircraft

Reference : X
ATC / Advisory.Center : ZLC
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Flight Phase : Descent
Airspace.Class E : ZLC

Person

Location Of Person.Aircraft : X
Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 11
ASRS Report Number.Accession Number : 1850995
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

I thought I cleared Aircraft X to cross WARPU at or above 130 for the RNAV 16 at AFO. WARPU is on the border of 120 and 130 MIA (Minimum IFR Altitude) area. While calling traffic for other aircraft in the area, I noticed Aircraft X descending below 130. At the time

the other aircraft was responding and before the frequency was free Aircraft X was over WARPU at 120. Aircraft X continued on the approach. Prioritize watching aircraft that are descending close to the MIA and be ready to correct them if they go below their cleared altitude.

Synopsis

ZLC Center Controller reported an aircraft descended below a crossing altitude at WARPU intersection.

ACN: 1849863 *(3 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZDV.ARTCC
State Reference : CO
Altitude.MSL.Single Value : 17000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Center : ZDV
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
Route In Use.STAR : NIXX3
Airspace.Class E : ZDV

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 86
ASRS Report Number.Accession Number : 1849863
Human Factors : Distraction
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Troubleshooting
Human Factors : Workload
Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew

When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

On check in with Denver Center, while descending via the NIXX3 RNAV Arrival, I was told that "Denver is landing south". When I asked what runway to expect, Denver center responded that "we do not assign runways anymore, Denver Approach assigns your runway". I had not been handed off to approach when the aircraft was overhead JPAGE, still without a runway assignment. Because I was coming from the southeast, I made the decision to fly the Runway 17 transition. When I was finally handed off to approach control I informed them on initial check in that I had not yet received a runway assignment and that I was flying the 17 L/R transition. The Approach Controller was noticeably irritated and stated, "you are landing Runway 16R" then gave us a westerly heading and altitude to descend to. Based on the overheard communications from other aircraft arriving to Denver, there was much confusion on what STAR arrival transitions to fly. It is my understanding that, without further clarification from ATC Approach, I should have treated JPAGE as a "clearance limit" and entered the hold upon arrival. I decided against that drastic measure. This is yet an additional negative trend that I have observed upon arrival to Denver that should be addressed. Is this a recent change of procedures between Denver approach and Denver Center?

Synopsis

Air Carrier pilot landing DEN reported Denver Center advised them they had to wait until communicating with Denver TRACON to receive an arrival runway which caused confusion and uncertainty as to which transition to fly. The reporter heard other arriving aircraft experience the same confusion with Denver TRACON over the correct route to fly.

ACN: 1847217 *(4 of 50)*

Time / Day

Date : 202110
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : IND.TRACON
State Reference : IN
Altitude.MSL.Single Value : 14000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Fractional
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Ferry / Re-Positioning
Nav In Use : GPS
Nav In Use : FMS Or FMC
Flight Phase : Descent
Route In Use.STAR : JAKTZ.1

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Contracted Service
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 : 1847217
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight

Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

While on the initial descent into OSU airport from the southwest, Indianapolis Center issued a clearance to maintain 14,000 ft. and then descend via the JAKTZ.1 RNAV arrival landing west. As PNF (Pilot Not Flying), I was working the radios and responded that we could maintain 14,000 thousand, but unable to descend via the JAKTZ.1 because we are landing OSU and there is no descend via instructions on the current Jeppesen Chart for that airport. Controller sounded confused and then issued an alternative clearance. Since the new arrivals into the Columbus area became effective a month or so ago, we have experienced multiple issues with routing and descend via clearances from both, Indianapolis Center and Columbus Approach Control. Concerns exists as to whether the pilots and controllers are referencing the same information, the overall design of the new air traffic procedures, and training. Suggestions; seek comprehensive user input prior to redesigning air traffic procedures. Enhanced communications prior to releasing new air traffic procedures. Proper training prior to effected parties.

Synopsis

Light Turbojet First Officer report the pilot crew was assigned a STAR but there was no descend via or transition route for their arrival airport OSU. Reporter stated they have experienced routing and clearance issues since the new STAR recently became effective.

ACN: 1840188 *(5 of 50)*

Time / Day

Date : 202109

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 3
Altitude.AGL.Single Value : 1000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Corporate
Make Model Name : Citation V/Ultra/Encore (C560)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Airspace.Class C : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : Helicopter
Flight Plan : VFR
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 21500
Experience.Flight Crew.Last 90 Days : 280
Experience.Flight Crew.Type : 650
ASRS Report Number.Accession Number : 1840188
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Automation : Aircraft RA
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 400
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

During RNAV XXL ZZZ we had a TCAS RA with an VFR Rotary traffic @ approximately 3 NM from touch down. ATC didn't provide separation between IFR and VFR traffic in control airspace.

Synopsis

C560 Captain reported a TCAS RA with a helicopter while on approach. Captain further stated that ATC failed to provide traffic separation.

ACN: 1837293 *(6 of 50)*

Time / Day

Date : 202109
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZJX.ARTCC
State Reference : FL
Altitude.MSL.Single Value : 27000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Center : ZJX
Aircraft Operator : Corporate
Make Model Name : Light Transport
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.STAR : MAATY1
Airspace.Class E : ZJX

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 2800
Experience.Flight Crew.Last 90 Days : 60
Experience.Flight Crew.Type : 440
ASRS Report Number.Accession Number : 1837293
Human Factors : Confusion
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
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 : Corporate
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 7200
Experience.Flight Crew.Last 90 Days : 80
Experience.Flight Crew.Type : 420
ASRS Report Number.Accession Number : 1837489
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

We were proceeding direct to HEVVN when ATC instructed us to cross LEGGT at FL270. The RNAV arrival had already been loaded in the FMS and briefed with the altitude crossing restrictions confirmed in the flight plan. FL270 was set and confirmed in the Altitude Preselect and the VNAV was armed. The airplane intercepted the VPATH and we were given a frequency change. When the Pilot Monitoring (PM) checked in with the controller advising we were FL28.5 descending to cross LEGGT at FL270, the controller responded that we were past LEGGT and to confirm our crossing restriction. The PM advised ATC we had an issue/conflict with our FMS and ATC cleared us to expedite a descent to FL190. The rest of the flight was completed without further event. Reflecting back on the event, I think there are several factors that contributed. First, the MAATY1 RNAV Arrival is one of the new arrivals as part of the greater Florida Metroplex airspace revamp. However, the first two fixes in our flight plan on the arrival, HEVVN and LEGGT, are the same first two fixes on the FOOXX5 arrival. Up until the last month, we had routinely flown the FOOXX5 arrival into TPA numerous times each month for the last several years. From my perspective, one of the key important differences between the FOOXX5 and MAATY1 arrivals is that all the altitudes listed in the FOOXX5 are "expect", while in the MAATY1 they are published as mandatory (without "expect"). Another key

difference is that in the FOOXX5, the procedure calls for a crossing restriction "AT" LEGGT at FL270...The new MAATY1 procedure calls for a crossing restriction "AT OR ABOVE" LEGGT at FL270. When previously loading the FOOXX5 arrival into our FMS, we had to manually enter the crossing altitudes into the flight plan since all of the altitudes in the procedure were "expect". When loading the MAATY1 arrival into our FMS, all of the altitude restrictions are automatically loaded into the flight plan. So, today when we loaded the MAATY1 into the FMS, both the PM and myself saw the "at or above FL270" at LEGGT that was automatically loaded in the flight plan when the procedure was selected. We both mistook that as crossing "AT FL270". Hence, when our VNAV VPATH was intercepted, it had us crossing LEGGT "at or above FL270" as properly depicted in the published procedure - despite our ATC clearance to cross LEGGT "AT" FL270. In short summary the factors contributing to this event were: 1) New MAATY1 RNAV ARRIVAL in use with common fixes from FOOXX5. 2) Same altitude with difference constraints between MAATY1/FOOXX5 ("Expect" FL270 "AT" LEGGT in FOOXX5 vs. published "AT OR ABOVE" FL270 at LEGGT in MAATY1). 3) FMS programming error in FMS VNAV/lack of close cross-checking altitude constraints vs. ATC clearance by crew. 4) ATC issuing a crossing restriction at a fix (LEGGT "AT" FL270) on the assigned RNAV arrival that differed from the STAR published restriction (LEGGT "AT or ABOVE" FL270) without emphasizing the change. To prevent this recurrence, we as a crew will be much more diligent in cross-checking altitudes in the FMS flight plan whenever crossing restrictions are issued by ATC, specifically when differentiating between crossing "AT" vs "AT or ABOVE". We will also query ATC if there are any questions when the clearance issued by ATC contradicts published altitudes or crossing restrictions in a procedure. I also think it would be beneficial for all involved if there was a way for ATC to emphasize crossing altitude instructions whenever they differ from published altitudes or crossing restrictions in the SID/STAR. I think something along the lines of "descend via MAATY1 except cross LEGGT AT FL270" may have helped in this scenario, though it is possible that may be too redundant or possibly be cause for additional confusion for other crews/controllers. It comes down finding a way to differentiate between the assigned clearance of crossing a fix "AT" compared to the published restriction "AT or ABOVE".

Narrative: 2

While flying the MAATY1 arrival yesterday into TPA, we were given an altitude restrictions to "cross LEGGT at FL270." 27,000 was entered into the altitude preselector and FL270 was already pre-programmed into the FMS, as this is the altitude shown on the arrival. VNAV on the auto-pilot was armed, and we intercepted the VPATH to FL270. We were given a frequency change and when I checked in I said that we were "28,500 descending to 27,000 at LEGGT". The controller said that we had already crossed LEGGT and asked what our previously assigned altitude restriction was. I saw that we were on the Glide Path to 27,000 and wasn't sure immediately why we hadn't arrived at 27,000 at LEGGT. I said that "we were assigned 27,000 at LEGGT and that we were having an FMS issue." The detail that the crew failed to notice was that the FL270 is an AT OR ABOVE altitude as depicted on the arrival plate and as pre-programmed in the FMS. We used the VNAV mode on the autopilot and the display on the G5000 appeared to be bringing us to 27,000 at LEGGT. We were then cleared to FL190 and told to expedite, which we did. Later we were given MAATY at 13,000 and 250kts and the FMS functioned as expected. After taking some time to diagnose the issue, we learned that the FMS was pre-programmed to cross LEGGT AT OR ABOVE FL270. Not to cross AT FL270 as instructed. After thoroughly debriefing the flight, there are multiple factors as to why I believe this event occurred. 1) The implementation of the new arrivals from the Florida Metroplex and the similarities (and subtle differences) between the MAATY1 and the FOOXX5 arrivals. 2) Even though the altitudes in the FMS were briefed, the crew failed to notice the altitude constraint difference between the pre-loaded altitudes in the FMS and the clearance received from

ATC. 3) ATC used an altitude restriction from the FOOXX5 as an altitude restriction on the MAATY1. 4) ATC did not emphasize the difference between the clearance and the published arrival. 1) The pilots have been flying the FOOXX5 arrival regularly for many years. The FOOXX5 says to EXPECT LEGGT at FL270, and it was very common for the controllers to issue this restriction. We would always enter FL270 AT LEGGT manually into the FMS. By entering the altitude manually, we always create an "AT" altitude. Since the new procedure shows the same altitude at the same point I think that it is easy for the crew to assume that the FMS will cross LEGGT at FL270, just as it always has. However, "AT OR ABOVE" FL270 is now pre-programmed in the FMS and the auto-pilot will not cross LEGGT at FL270 like it did previously. It now requires re-entering the altitude into the FMS as an "AT" altitude if the controller issues the "cross LEGGT "AT" FL270" like they have done for many years. 2) To prevent this from happening in the future, the crew must be sure to cross-check the constraints ("AT OR ABOVE" vs "AT" altitudes) for the arrival. The crew must also be aware that ATC altitude restrictions MAY NOT coincide with the published arrival procedures and must be sure to cross-check each clearance. 3) There are similarities between the FOOXX5 and the MAATY1 in that they use some of the same fixes (HEVVN and LEGGT). The published altitudes at LEGGT are subtly different. FOOXX5 publishes expect LEGGT "AT" FL270 and MAATY1 publishes cross LEGGT "AT OR ABOVE" FL270. The controller used the altitude constraint from the FOOXX5 as opposed to the altitude constraint on the MAATY1. The controller that issued "cross LEGGT at FL270" may have issued that clearance hundreds of times in his career from the FOOXX5 and may not think anything of it, even though this clearance differs from the published altitude in the MAATY1. With MAATY1 programmed, the FMS in our aircraft schedules the crossing of LEGGT somewhere between FL280 and FL290 since it is projecting a 3 degree glidepath to GOJOE between FL260 and FL210 and MAATY AT 13,000. To make our FMS cross LEGGT "AT" FL270, it requires reprogramming the altitude restriction in the FMS. This is easily missed since the altitude displayed next to LEGGT is FL270 within the FMS. 4) If a clearance differs from the published arrival procedure, it would be helpful if ATC would emphasize that difference. For example "Descend via the MAATY1 EXCEPT cross LEGGT at FL270." Going forward the crew will also be sure to question ATC when a clearance does not match a published procedure.

Synopsis

Flight crew reported they failed to meet a crossing restriction while descending on a new arrival into TPA after misinterpreting the crossing restrictions and ATC clearance. Issue was further complicated by the use of the same fixes across multiple arrivals.

ACN: 1826118 *(7 of 50)*

Time / Day

Date : 202107
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : MQY.Airport
State Reference : TN
Relative Position.Angle.Radial : 130
Relative Position.Distance.Nautical Miles : 35
Altitude.MSL.Single Value : 17000

Environment

Flight Conditions : Marginal
Weather Elements / Visibility.Visibility : 10
Weather Elements / Visibility.Other
Light : Daylight
Ceiling.Single Value : 5000

Aircraft

Reference : X
ATC / Advisory.Center : ZME
Aircraft Operator : Corporate
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.STAR : SWFFT ONE
Airspace.Class A : ZME

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 6800
Experience.Flight Crew.Last 90 Days : 57
Experience.Flight Crew.Type : 2700
ASRS Report Number.Accession Number : 1826118
Human Factors : Workload
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Time Pressure

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
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.Total : 5900
Experience.Flight Crew.Last 90 Days : 60
Experience.Flight Crew.Type : 700
ASRS Report Number.Accession Number : 1826147
Human Factors : Time Pressure
Human Factors : Situational Awareness
Human Factors : Confusion
Human Factors : Workload

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

When arriving MQY from the South East sector, our routing has us over waypoints associated with the SWFFT RNAV Arrival but without "flying" the published arrival as it only serves BNA. Traffic landing MQY is kept at a higher altitude consistently resulting in late descents requiring a high rate of descent such as the 17,000 feet 35 miles from the airport we experienced today. This is opposite of the efforts being made for constant rate descents. This late descent is compounded by the requirement to land on Runway 32 at MQY which is a straight in approach from this arrival path. This creates an extremely rushed approach environment for not only the loss of altitude but also a reduction in speed in preparation for an approach. Additionally, this arrival path puts aircraft directly overhead MBT which is a heavy training airfield. The combination of training aircraft combined with a high performance jet aircraft with a high descent rate creates a high possibility of an inflight collision or separation issue with aircraft that are not likely talking with ATC. The other potential with being kept high is the inability to become properly stabilized for the approach into MQY which could lead an aircraft to have a runway excursion. There is no reason that a modification to the RNAV arrival to incorporate MQY and surrounding airports to better facilitate the flow of traffic vertically and provide for better stabilized arrivals and approaches couldn't be created.

Narrative: 2

Today our aircraft was given a descent clearance from 17,000 feet MSL to 5,000 feet MSL approximately 35 miles from our destination. Rough math calculates this to be a "2 to 1" descent profile that requires excessive descent rates into the terminal area. To compound this issue, the route of flight today went overhead of MBT which has/had high volumes of flight training aircraft in the vicinity of the airport. The possibility for traffic conflicts, TA/RA's and unstablized approach conditions are high in this scenario.

Synopsis

Corporate Captain reported a hazardous arrival procedure and accompanying charts that require modification to conform more closely with safe air traffic control for arrival to MQY airport.

ACN: 1825720 *(8 of 50)*

Time / Day

Date : 202107
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : SKBO.Airport
State Reference : FO
Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC
Light : Night

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1825720
Human Factors : Time Pressure
Human Factors : Human-Machine Interface
Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

My First Officer (Pilot Monitoring) and I (Pilot flying) flew to Bogota, Columbia (BOG). This was the first time for either of us to fly into Bogota. During our 3+ hour transit to BOG, the FO (First Officer) and I had a very long discussion about the specifics of the airport. About an hour from landing, ATC said that BOG was using Runways 13L/13R ILS approaches, which we were happy to hear, because we had a few questions explained below about the non-ILS approaches for Runways 31L/31R. No ILS approaches were available for Runway 31. Once we checked in with Bogota, we were told to fly the ISVAT 3W Arrival for Runway 31L, which surprised us because we had been told to expect Runway 13. The Jeppesen approach charts have 5 approaches for Runway 31L, although 3 of those approaches (RNP Z/Y/X Rwy 31L (AR)) are specifically not allowed to be flown by [our aircraft type]. Of the two remaining approaches listed in the Jeppesen, pages, only one,"RNP Visual Flight Proc RNP C Rwy 31L", was available to us in the FMS (Flight Management System). So our primary question was is the "RNP Visual Flight Proc RNP C Rwy 31L" an instrument approach, or is it a visual approach? Based on a simulator training event several years ago, I distinctly remember a Check Airman telling me that [company] pilots are not allowed to fly visual approaches at night. I searched the Flight Operations Manual (FOM) for "night visual approaches" and found nothing. While on the arrival, a search for just "visual approaches" yielded 28 results, a daunting number, given we were two pilots who had never been to BOG, it was late at night and we were descending on the arrival into mountainous terrain to a field at 8,400 foot elevation. In an effort to decide whether IMC or Visual Approach rules applied, I decided that this had to be classified as a visual approach, not an instrument approach, since page 10-7B-1 lists our only available approach to 31L under the category of Visual Approach Procedures. Finally, in the FOM, I found a one-sentence reference to visual approaches at night which states: "At night, since obstacles may not be visible, do not accept or request visual approaches unless the airport is clearly in sight and the flight crew is certain of remaining clear of obstacles and terrain while maneuvering for landing." During the time we were flying the arrival, we were above an overcast and the field was not in sight, so we quickly discussed the possibility of having to divert. At some point well after we transitioned from the arrival to the approach at AMVES, the runway environment came into sight. At that point I thought we could continue the approach, as we were down in the valley and could maintain sight of the field. As we approached the 31L Final Approach Fix (BO480), we were fully configured for landing and Tower asked us if we would prefer to land on Runway 31R. We said no, since we were already set up for Runway 31L. Then Tower told us that Runway 31L was "now closed" (and the runway edge lights and centerline lights were turned off) and that we had to land on Runway 31R. My concern now was that we would no longer be on the coded purple FMS path to landing because we couldn't reprogram the FMS in such a short time, and I was unfamiliar with the terrain in the area. The FO and I quickly referenced the terrain on our cockpit displays and decided that we would be clear of any terrain while I transitioned to 31R. So I disconnected the autopilot and flew over to the 31R center line. Another challenge was that we were initially on the PAPI glide path for 31L, and once we transitioned to 31R PAPI, were instantly high because 31R is offset about 4,000 feet closer to us than 31L. But I was able to get the airplane stabilized on PAPI glide path before we

reached 1,000 feet AGL, and we landed successfully on 31R. Of the many lessons learned from this flight, two things stand out to me. First, the 10-7 pages need a better discussion of visual approaches at night. The fact that the title of the approach is "RNP Visual Flight Proc RNP C Rwy 31L" (which sounds like an RNAV approach since RNP is listed twice in the title). Second, the actions of Bogota Tower to close 31L Runway at such a late stage in our approach was totally unnecessary and inexcusable. Insufficient discussion in 10-7 pages regarding Runway 31 visual approaches at night. Also, why Bogota Tower closed Runway 31L and shut off runway lights when we were in vicinity of Final Approach Fix and required us to transition to Runway 31R. Improve discussion regarding night visual approaches in 10-7 pages and query Bogota Tower why they closed the runway on us passing Final Approach Fix, requiring us to deviate from coded FMS path in mountainous terrain.

Synopsis

An air carrier pilot conducting an approach at night to SKBO reported they were cleared for a "RNP Visual Flight Proc." approach but charts and the Flight Manual were not clear if they were authorized to fly this procedure.

ACN: 1823384 *(9 of 50)*

Time / Day

Date : 202107
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : S46.TRACON
State Reference : WA
Relative Position.Angle.Radial : 104
Relative Position.Distance.Nautical Miles : 17
Altitude.MSL.Single Value : 14500

Environment

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

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : S46
Aircraft Operator : Corporate
Make Model Name : Falcon 2000
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.STAR : CHINS4
Airspace.Class B : SEA

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : S46
Aircraft Operator : Air Carrier
Make Model Name : B737-900
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Descent
Route In Use.STAR : CHINS4
Airspace.Class B : SEA

Person

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

Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 6650
Experience.Flight Crew.Last 90 Days : 65
Experience.Flight Crew.Type : 355
ASRS Report Number.Accession Number : 1823384
Analyst Callback : Attempted

Events

Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Anomaly.Inflight Event / Encounter : Wake Vortex Encounter
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Regained Aircraft Control
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

While descending via the CHINS4 arrival into BFI (Seattle/King County Boeing Field), on the segment between 'HUMPP' and 'AUBRN', passing approximately 14,500 ft. MSL at 250 kts. IAS, I encountered wake turbulence. Temporary loss of control was experienced as the aircraft rolled right, back left, and strongly back right again - with the final bank angle in the roll estimated to be beyond 30 but not more than 50 degrees wing down to the right before I could fully react. During the course of the roll and recovery, automation (including autopilot and auto throttle) was disengaged, and at no time did the EGPWS "BANK ANGLE" warning sound. I stopped the roll and regained controlled flight with full and smooth application of left aileron, while adding power and climbing out of the perceived vortex. Once clear, automation was restored, the event briefed amongst the crew, and I instructed the PNF (Pilot not Flying) to radio Seattle Approach indicating we had 'encountered wake turbulence' and that 'we were attempting to re-establish on the arrival'. The Approach Controller acknowledged the transmission and advised we were following a Boeing 737-900 series sequenced for SEA (Seattle). From there, a normal descent and approach was conducted to the destination airport. No aircraft faults/failures/malfunctions/warnings, nor exceedances were experienced at any time before, during, or after the event. I was aware of the altitude and spacing regarding the traffic ahead on the arrival, with use of TCAS indications and relative altitude, as well situational awareness provided by our aircraft's INAV display. Spacing and distance appeared more than adequate considering the flight conditions, as the preceding aircraft was consistently indicating around 2,500 ft. below our level and well ahead on the arrival. At no time were we given advisories from ATC in regards to traffic ahead, nor caution on wake turbulence. This event was truly unexpected, however, I must credit flight training providers with modeling extremely accurate wake turbulence simulation scenarios that helped me to quickly identify, and recover properly from this real life upset. Experiencing this is a reminder that wake turbulence can be encountered during a descent profile - especially on an RNAV arrival with 'at-or-above/below' vertical crossing restrictions that could result in brief level offs at slower airspeeds which could lead to preceding aircraft generating stronger than expected vortices.

Synopsis

Falcon 2000 Captain reported momentary loss of control after encountering wake turbulence on approach to BFI airport.

ACN: 1821848 *(10 of 50)*

Time / Day

Date : 202107

Place

Locale Reference.Airport : PTKK.Airport
State Reference : FO

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : GUM
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Crew Size.Number Of Crew : 2
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 20000
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 12000
ASRS Report Number.Accession Number : 1821848
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Confusion

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1821849
Human Factors : Physiological - Other
Human Factors : Human-Machine Interface
Human Factors : Distraction
Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

[Personnel were brought to] PTKK to finally fix the PAPI lights that have been inoperative for months. The Runway 4 PAPI was no longer NOTAM'd out. However, upon arrival [to] PTKK, we tried multiple times to turn them on to no avail. We asked TKK Radio to try and he was unable to turn them on either. Then arriving PTSA, the PAPI was inop for Runway 5 with no NOTAM. Then arriving [to] PKWA the Runway 6 PAPI is also NOTAM inop with shortened runway construction. So now we have the three shortest runways PTKK 6,000 ft., PTSA 5,700 ft., and PKWA (now down to 6,000 ft. with construction) having inoperative PAPI lights for the prevailing wind runway. Add this to PGSN not having PAPI/VASI installed even though the Jeppesen Approach chart indicates there are VASI, and we have 4 airports in the Guam region with no visual guidance. Poor trend, especially for night time operations and new crews coming on board. Unsatisfactory trend. [Weâ€™re] lucky we have light and empty airplanes with very few passengers allowing for short landing rolls.

Narrative: 2

I write this not relating to a specific flight but relating to a safety issue at PTKK airport. For the past 2 years, the PAPI at PTKK Runway 4 has been out of service. Sometimes this is noted on the NOTAMs and sometimes it is not. The safety issue is that PTKK is the proverbial "black hole" airport which gives very limited visual reference. This makes flying a visual approach very challenging. In fact, an article "Black Hole Approach" concludes with the statement "The best way to combat these often subtle and insidious factors (relating to the Black hole effect) is to avoid straight-in, visual approaches at night without glide slope guidance, especially when overflying the infamous black hole." Engineers conducted an extensive study of the problem. The results were published in a report entitled, "Flight Deck Work Load and Night Visual Approach Performance" They concluded that the problem is exacerbated by many factors but the factors that stood out to me are those that are present on nearly all PTKK approaches. They are: 1. A runway length/width combination that is unfamiliar to a pilot. PTKK is 6,000 ft. long with absolutely no overrun on either end. It is shorter than most runways and that effect is amplified by the fact that there is no paved safety area on either end. SNA is famed for being short but it is 5,700 ft. long PLUS over 1,000 ft. of paved safety area on the approach end to Runway 2L. It actually has almost 7,000 ft. of pavement. PTKK only has 6,000. 2. Substandard runway and airport lighting. PTKK has had broken PAPI for at least 2 years. The only other airport lighting is the runway edge lights and some taxi lights. There are no MALSR lights. There is no big city lights to help with visual reference. 3. Peering through a rain-soaked windshield can convince a pilot (because of refraction) that the aircraft is too high and can result in an error of as much as 200 ft. of altitude per nautical mile from the runway. It is very common to have an island induced rain shower right off the approach end of Runway

04 at PTKK. Now we are flying this approach late at night, windshield covered in rain, poor lighting, and absolutely no backup source of glide path information as I will explain later due to the way the RNAV approach is built. 4. An airport that is situated at a slightly lower elevation and on a different slope than the surrounding terrain. This is PTKK. The runway is on the northwest side of the island at sea level. The island rises quickly to the southeast to an elevation of 2,700 ft. in less than 1 mile. 5. An approach over water or unlit terrain means that the visual reference points are at a distance where altitude and sink rate are more difficult to judge. This is PTKK. Absolutely no ground reference from the IF of FIGBY until the runway nearly 10 miles away. The problem is further exacerbated by the fact that the only approach we have to Runway 4 (most commonly used because of the prevailing trade winds from the NE) is the RNAV (GPS) Runway 4 approach. Everything works fine with VNAV and LNAV until we reach the missed approach point of HAMAX. Notice that HAMAX is 2.2 miles from the end of the runway. So here you are, flying the approach as usual in VNAV and LNAV and you have the usual rain shower between FASPO and the runway. You are tired because it is now after midnight and you are over the dark ocean with no ground lights in sight and the PAPI's are not working as usual. You approach the waypoint HAMAX and the flight director bars (your only vertical guidance at this point) suddenly command a pitch up and a turn to the left. Why?? Because you have hit the missed approach point and the guidance tells you to go around. This isn't common for most approaches. It throws off even seasoned pilots. You can see the runway lights through the rain soaked windshield but again with no PAPI, you have now lost all vertical guidance. You are now at 660 ft. above the ocean and continue based on a fuzzy view out of the windshield. Are you stable for that 500 foot callout? I guess so, hard to tell if we're on the vertical path... Is this safe? I would submit that in my opinion that this is the most dangerous flight we operate. Why do we do it in the middle of the night? I am not talking about the hopper. That is daytime and is doable. We don't currently have an aircraft availability problem like we did when we were busy. Why not do this flight in the daylight? Why not get those PAPI's fixed? They've been broken for 2 years! Why not get the RNP approach finished. That would solve the whole problem if we actually had vertical guidance to the runway instead of losing it right at 660 ft. where we really need it.

Synopsis

Reports of PAPI lights to PTKK inoperative but not NOTAM'd out of service. Reporter states PAPI and VASI do not operate at PGSN but Jeppesen charts state VASI is available.

ACN: 1821532 *(11 of 50)*

Time / Day

Date : 202107
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : EWR.Tower
State Reference : NJ
Altitude.AGL.Single Value : 10

Environment

Flight Conditions : VMC

Aircraft : 1

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

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : EWR
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 : Landing
Airspace.Class B : EWR

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 9879.23
Experience.Flight Crew.Last 90 Days : 91.17
Experience.Flight Crew.Type : 9879.23

ASRS Report Number.Accession Number : 1821532
Analyst Callback : Completed

Events

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

Narrative: 1

On the RNAV Stadium Visual to runway 29 we were vectored behind an Airbus 321 on the ILS to 22R. We joined the visual at GIMEE with the airport and the [A321] in sight. We had been cleared to land prior to crossing GIMEE. Tower reported winds calm, ATIS had winds 200/6. Prior to SLIMR we were configured and slowing to approach speed. At approximately 1,500 ft AGL I called for the landing check and called to the FO that [the A321] appeared to be crossing the numbers and spacing looked good. Continued in LVAV/VNAV till the autopilot rolled us out on final at about 1,000 ft AGL. At this point PAPI showed slightly high and corrected to visual glide path. A rapid right roll was encountered just prior to touchdown causing contact of the right main. This slowed the roll but aircraft was still rolling right. Immediate left aileron was applied along with deployment of the auto speed brakes quickly caused the left main to touch down. Roll out was normal from this point. Wing drop was so rapid that I thought the right gear leg had collapsed. The event occurred so quickly that there was not even time to consider a go-around. The application of power and lifting off again would likely only have exacerbated this situation placing us at a bank angle at low speed with an at the time unknown problem. During debrief we determined that the event occurred just prior to the intersection with Runway 22R and was likely a wake turbulence event. An ACARS generated report showed a max bank angle of 6.9 degrees with a predicted wing tip strike at a bank angle of 7.5 degrees. The FO inspected the aircraft for possible damage, none was found. The event was reported to Tower, but they did not seem concerned. I contacted Clearance Delivery to get more information on the preceding aircraft. CD took more interest and sounded like it would be reported.

Callback: 1

Reporter stated intersecting runway wake encounter events were more unusual in his experience, but this one was quite severe.

Synopsis

B737NG Captain reported encountering wake turbulence shortly before touchdown on Runway 29 at EWR from an A321 on short final to Runway 22R.

ACN: 1819532 *(12 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Relative Position.Distance.Nautical Miles : 0
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : VMC
Light : Daylight
Ceiling.Single Value : 4000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : Skyhawk 172/Cutlass 172
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Initial Approach
Route In Use : Direct
Airspace.Class E : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : SR22
Operating Under FAR Part : Part 91
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 615
Experience.Flight Crew.Last 90 Days : 90
Experience.Flight Crew.Type : 400
ASRS Report Number.Accession Number : 1819532
Human Factors : Time Pressure
Human Factors : Confusion

Events

Anomaly.Conflict : NMAC
Detector.Automation : Aircraft TA
Detector.Person : Flight Crew
Miss Distance.Horizontal : 100
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

While on an IFR flight from ZZZ to ZZZ1, we were sent "direct ZZZZZ" to begin the RNAV Approach into ZZZ1. About a mile from ZZZZZ1, we were advised by ATC of VFR traffic that seemed to be on the other feeder route for the approach. After making visual contact with the pointed out traffic, we announced "traffic in sight" and proceeded with the approach. The traffic in question was a Cirrus SR22 doing 152 knots, so we slowed down to our approach speed of 90 knots and expected them to continue the approach, at which point we would either continue behind or request delay vectors. The Cirrus unexpectedly turned outbound towards us and we had to take evasive maneuvers. The situation resolved with both parties taking evasive action in the form of a right turn, as stated by the FAA's right-of-way rules

Synopsis

Flight Instructor reported an NMAC when an aircraft they were following on an approach unexpectedly reversed course towards them.

ACN: 1819510 *(13 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : FWB.Airport
State Reference : MO
Relative Position.Angle.Radial : 034
Relative Position.Distance.Nautical Miles : 2
Altitude.MSL.Single Value : 2000

Environment

Weather Elements / Visibility.Visibility : 10
Weather Elements / Visibility.Other
Light : Daylight
Ceiling.Single Value : 12000

Aircraft

Reference : X
ATC / Advisory.TRACON : SGF
Aircraft Operator : Corporate
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Route In Use : Visual Approach
Airspace.Class E : ZKC

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 28000
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 60
ASRS Report Number.Accession Number : 1819510
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew

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

Assessments

Contributing Factors / Situations : Airport
Primary Problem : Airport

Narrative: 1

We were cleared for visual approach Runway 21 at FWB. Our FMS was programmed and engaged on the RNAV(GPS) RWY 21. On the LPV VNAV glide slope, at 2,000 feet MSL, our GPWS [alerted] "too low terrain, pull up". We were still VMC with no terrain concerns, and we continued for a normal landing. I am concerned that the top of the trees may be interfering with the approach clearance area. Also, taking off from Runway 21, resulted in a momentary GPWS warning when below 500 feet during climb.

Synopsis

Pilot expressed concern that the top of the trees may be interfering with the approach clearance area while flying a visual approach to Runway 21 into FWB, triggering a GPWS terrain warning.

ACN: 1818334 *(14 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : VMC

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 2920.67
Experience.Flight Crew.Last 90 Days : 87.08
Experience.Flight Crew.Type : 2920.67
ASRS Report Number.Accession Number : 1818334

Events

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

Assessments

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

Narrative: 1

I flew a night operation into PTKK. While I was aware of the NOTAM'd PAPI being out of service, and the flight was flown in accordance with SOP, I would like to make the [company] aware of the potential risk associated when conducting a night RNAV(GPS) 4 PTKK approach under these conditions. I believe this reduction in safety at night is due to several factors: 1) Lack of visual reference on short final (black hole effect). 2) RNAV(GPS) 4 approach lacks vertical guidance to the runway, resulting in the FD's initiating a missed approach at HAMAX. 3) Reaching the MAP 300 ft. higher than published DDA. If not briefed and aware, the FD will command a left turn and level flight prior to the "expected" minimums. 4) Lack of outside and inside references to determine if you meet the stabilized approach criteria once you are in visual conditions. 5) PTKK is one of shortest runways in our system. 6) Numerous threats associated with preloading an electronic glide path while still on the published approach, especially in IMC conditions (a technique many use to increase the level of safety) 7) Junior and less experienced pilots typically fly this trip.

Synopsis

Pilot reported issues related to flying into PTKK Chuuk International Airport, Weno Island, Micronesia, at night.

ACN: 1818115 *(15 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : BHM.Airport
State Reference : AL

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

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

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 : 1818115
Human Factors : Time Pressure
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

BHM ATIS advised runways 6 and 36 were active, with visual and RNAV approaches in use to both. Conditions were VMC with good visibility. Upon initial contact with BHM Approach, we were advised to expect Runway 6. The First Officer briefed a visual approach to be backed up with the RNAV Runway 6. As we approached the terminal area, we observed a single heavy rain shower cell located directly on the final approach course for Runway 6, very near the final approach fix. This cell was approximately 5 NM wide and ATC had advised two other aircraft that this weather contained "light to heavy" precipitation. It seemed to us that if we were to continue to pursue the approach for Runway 6, we would most likely fly through this weather. After brief discussion, the First Officer and I determined that an approach and landing to Runway 36 would keep us clear of that weather. BHM Approach agreed and vectored us for an RNAV approach to Runway 36. The First Officer briefed the RNAV 36 approach and I entered the landing data for Runway 36, including current ATIS reported winds â€" 110 at 6 kt. The approach proceeded normally with the aircraft configured normally for landing and in a stable condition. The First Officer had switched off the autopilot at just below 1,000 ft. and maintained the proper glide path with the "snowflake" showing on glide path. At some point just below DDA, 1,530 ft., and MDA, 1,480 ft., very near the ridge just south of the airport, we received a terrain caution with [a] "too low terrain" audible message. The First Officer adjusted pitch and we went very slightly above glide path momentarily. We received no additional warnings or cautions and the First Officer readjusted pitch to resume normal glide path. Touchdown on Runway 36 was normal and within the touchdown zone. At no time did we receive any "pull up" or "obstacle pull up" alerts, only the one "too low terrain" alert. At the time of alert, the FO (First Officer) responded in accordance with the note in [the] POH Bulletin XX-XX, X.X.X. Conditions during the event were day VMC with good visibility, 10 SM. I believe this terrain caution could have been avoided by not performing an approach to Runway 36 in the first place and by maintaining a profile slightly above glide path. I did not observe us ever being below glide path. In thinking about the event afterwards, I realize that while the charted procedure guarantees obstacle clearance down to the MDA, it is the pilot's responsibility to maintain visual clearance from terrain and obstacles once below MDA. In the case of this particular approach, doing that requires one to fly a profile above a normal glide path. I had always known about the ridge and antennas south of the airport, but had never flown an approach to Runway 36 in BHM. Despite it being a charted procedure which is permissible in day VFR conditions, I'm not convinced that it is an approach that I would use in the future â€" due to the need to maintain a higher than normal glide path in order to avoid the terrain alert. In my opinion, flying a steeper approach could potentially lead to other issues such as landing long or past the touchdown zone if not managed very carefully. In the future, I would likely only use Runway 36 if in an emergency if Runway 6/24 was not available.

Synopsis

Captain reported triggering a low terrain alert while flying below the normal glide path profile during an approach to the runway.

ACN: 1817367 *(16 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 220
Relative Position.Distance.Nautical Miles : .5
Altitude.AGL.Single Value : 500

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 30
Light : Daylight
Ceiling.Single Value : 4000

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : Personal
Make Model Name : PA-34-200T Turbo Seneca II
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Final Approach
Route In Use.Other
Airspace.Class G : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Flight Phase : Landing
Airspace.Class G : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Instructor
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 2100
Experience.Flight Crew.Last 90 Days : 120
Experience.Flight Crew.Type : 300
ASRS Report Number.Accession Number : 1817367
Human Factors : Communication Breakdown

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

Events

Anomaly.Conflict : NMAC
Miss Distance.Horizontal : 100
Miss Distance.Vertical : 100
Result.Flight Crew : Took Evasive Action

Narrative: 1

This was a practice approach to ZZZ RNAV XX. I was the Instructor in the right seat. We had requested the practice approach from ZZZ Departure and was cleared for the approach and had changed to the ZZZ CTAF frequency. We had made several radio calls of our location. Our airplane has a Garmin 530W with ADSB and Traffic. Also onboard was an iPad with Foreflight and a Status 3. At no time did we get any traffic warning or observe Aircraft Y in the pattern at ZZZ. We were on short final at about 1/2 SM and 500 MSL. When my Pilot (Student) spoke out of the near aircraft, as I looked out the right window I observed Aircraft Y within 100 feet. I immediately took the flight controls and made a descending right turn towards the south away from the aircraft. I then transmitted that we were turning to avoid the aircraft that had just flown over us. There was a long pause when a female voice transmitted that they didn't see us. We circled around and re-entered the pattern to land. The other aircraft had continued their approach and landed. After we landed and taxied around for another takeoff, I observed the plane parked at the fuel with two individuals standing near the aircraft doors. When the aircraft departed, our equipment showed the aircraft but no display of a tail number. Prior to this incident, our equipment had been reporting other traffic.

Synopsis

PA-34 flight instructor reported an NMAC while on approach to a non-towered airport.

ACN: 1817229 *(17 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0601-1200

Place

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

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 : FMS Or FMC
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 : 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 : 1817229
Human Factors : Other / Unknown

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 : 1817244
Human Factors : Human-Machine Interface
Human Factors : Other / Unknown

Events

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

Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Overcame Equipment Problem
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

We were flying ZZZ1 to ZZZ, a XA00 report in ZZZ1. It was the First Officer's (FO) initial trip back from a 10-month furlough. We were on the ZZZZZ RNAV arrival from the northeast. I was the PF. ZZZ was landing north. ZZZ airport had an overcast layer obscuring the airport. At the appropriate time, I briefed the ILS XXR approach. We set up the FMS and tuned/identified the NAV radios for XXR, the normal approach for this arrival. When we checked in with ZZZ Approach, we were advised to expect the ILS XXL. I briefed the approach and we tuned/identified the NAV radios. We were being vectored to intercept the localizer. It looked like we overshot the localizer on the NAV display, so I turned to intercept. ATC advised us, "It looks like you are lining up for the wrong runway," and turned us off of the approach. There were no conflicts with any other aircraft. They then told us to expect the ILS XXR. We flew that approach successfully to a landing. While we were setting up for the XXR approach, we discovered we never set up the FMS for the ILS to XXL. [I believe the cause was] early sign-in. Overcast skies obscuring airport. [It was also the] FO's first trip after furlough. [I suggest] verification that both the NAV radios are tuned and identified and the FMS is set for the proper runway/approach.

Narrative: 2

Planned and briefed approach for ILS Runway XXR and was given ILS Runway XXL. The CA (Captain) set up and briefed new approach. I verified the frequencies and inbound course but neither of us set the new approach into the FMS. Was getting vectors to the ILS XXL [and] we had the correct ID for the ILS. When the CA looked at the ND and saw himself flying through the course for what was ILS XXR, the wrong approach, he corrected the heading to go back to intercept the course on the ND. The Controller said you are turning to line up for wrong approach and told us to go around. I have not flown since [last year]. I also do not have much experience in the aircraft. Was first flight since furlough. [I plan on] getting more flying in and becoming more comfortable in the aircraft, getting back into the rhythm of the flights.

Synopsis

B737-800 flight crew reported a clearance deviation due to automation mismanagement and CRM issues.

ACN: 1816689 *(18 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : LKR.Airport
State Reference : SC
Relative Position.Distance.Nautical Miles : 1
Altitude.AGL.Single Value : 1000

Environment

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

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : LRK
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 : Final Approach
Airspace.Class G : LKR

Aircraft : 2

Reference : Y
ATC / Advisory.CTAF : LRK
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Flight Phase : Initial Climb
Airspace.Class G : LRK

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 590
ASRS Report Number.Accession Number : 1816689
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

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

Assessments

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

Narrative: 1

I was flying RNAV 24 into LKR with a student. We both each made 2-3 radio calls on CTAF once we were 10 miles out to make sure our locations were clear on approach, and we checked to make sure we were on the correct frequency multiple times. Winds were calm, so we planned to land on runway 24, and suddenly I saw a plane taking off of 6 while we were 3 miles out on the approach. The plane never made any calls, and only slightly broke off to our left on departure. I took controls and broke off the approach to the right some while he was passing by. It seemed he knew where we were, but still decided to take off the opposite runway and squeeze past us.

Synopsis

Light aircraft instructor pilot reported an NMAC with opposite direction traffic at LKR non-towered airport.

ACN: 1815770 *(19 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 500

Environment

Flight Conditions : VMC

Aircraft

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

Component

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 134
ASRS Report Number.Accession Number : 1815770
Human Factors : Time Pressure
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 57
ASRS Report Number.Accession Number : 1815787
Human Factors : Situational Awareness
Human Factors : Time Pressure

Events

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

Assessments

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

Narrative: 1

Assigned the Visual XXR backed up by the RNAV XXR Approach (which was advertised on the ATIS). ATC assigned 170 or 180 knots to ZZZZZ. I used LNAV/ VNAV with the autopilot engaged, speed intervention to maintain assigned speed. VNAV reverted to VNAV SPEED and began to get high on the approach. At 400 feet high, I disconnected the autopilot began correcting. Approaching the glide path we were still four white bars on the PAPI and visually looked much higher than we should have been. I began to fly the approach visually but became low in reference to the RNAV. The resulting approach produced descent rate warning approximately crossing the threshold.

Narrative: 2

Upon coming into ZZZ we were set up and expecting the RNAV XXR. We had that loaded into the box. Somewhere outside ZZZZZ1 if I recall right we got cleared for the visual and backed it up with the RNAV XXR. Captain started calling for flaps and the aircraft began to slow to the selected flap speed. ATC gave us a speed of 180 knots so we had to open the speed window and reverted us into VNAV SPEED. We ultimately ended up being high on the approach. I told the Captain the path is not matching with the PAPI and he started to correct. Ultimately we ended up getting the "don't sink warning" on the aircraft and the Captain corrected.

Synopsis

Air Carrier Pilots reported an un-stabilized approach that set off the EICAS warning "Don't Sink" near the runway threshold. An uneventful landing was accomplished.

ACN: 1815598 *(20 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : TUS.TRACON
State Reference : AZ
Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Other

Aircraft

Reference : X
ATC / Advisory.TRACON : ABQ
Aircraft Operator : Air Carrier
Make Model Name : Widebody, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Flight Phase : Initial Approach
Airspace.Class C : TUS

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1815598
Human Factors : Time Pressure
Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

Arriving in TUS we had briefed the RNAV RNP Y Rwy 11 approach. Our clearance was for the ZONNA 1 arrival which took us from SSAND to OTUKE. Just outside SSAND we were cleared to fly the lateral course for the RNAV Y. We cleaned up the box and turned on to the course. The next fix was LUYEG, our clearance was to cross at 11,000 feet cleared for the RNAV Y approach. We slowed to 240, went flaps 1, did the LAVS procedure. The FMA went to PATH and looked normal. We read the Approach checklist. I checked the FMAs again, it indicated SPD not PATH. There was no VNAV scale to indicate high or low on the path. I selected V/S and slowed the rate of descent. Before I could enter the next stepdown altitude in the MCP, ATC called with a low altitude alert. There was no EGPWS warning. I disconnected the A/P and initiated a climb. We were in VFR conditions. We reengaged the A/P and selected 9,500 feet for a crossing altitude at HODPU. We did the LAVS procedure outside of HODPU. The FMA went to PATH and looked normal until it crossed the fix and then it went to speed. After that we used the A/P to fly the lateral course put each crossing altitude in the MCP. On final I disconnected the automation [and] flew a visual approach. First Officer did an excellent job monitoring, calling out deviations, and analyzing the problem. We delayed reading the approach checklist until the FMS was correct for the approach that we intended to fly. I was distracted by the checklist reading and that caused a delay for me to recognize that the FMA for the vertical mode was no longer in PATH. We had asked the ABQ Center Controller to clear us onto the approach [but] he told us to make our request to Approach Control. It meant that we were making changes to the FMS just before turning on to the approach. First Officer and I discussed the FMS setup, the approach, our procedures in the debrief. We were unable to determine what error caused the airplane to not fly the RNAV approach correctly. It would have been helpful to do everything earlier; complete the changes to the FMS and read the Approach checklist well before we were cleared onto the approach path. That would free both pilots to monitor the automation and catch deviations sooner.

Synopsis

Wide body transport Captain reported receiving a low altitude alert from ATC on approach to ABQ when the flight crew missed a change in the FMS vertical navigation mode.

ACN: 1815151 *(21 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Angle.Radial : 333
Relative Position.Distance.Nautical Miles : 7
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Military
Make Model Name : Military
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Initial Approach
Route In Use : Visual Approach
Airspace.Class D : ZZZ

Aircraft : 2

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Military
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 : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 2800
Experience.Flight Crew.Last 90 Days : 40
Experience.Flight Crew.Type : 40
ASRS Report Number.Accession Number : 1815151
Human Factors : Training / Qualification
Human Factors : Confusion
Human Factors : Distraction
Human Factors : Situational Awareness

Events

Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Miss Distance.Horizontal : 6000
Miss Distance.Vertical : 100
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

While approaching 7NM initial at ZZZ AFB under Runway Supervisory Unit ops control, my 3 ship of military aircraft were told that tower was going to have control of the runway for commercial traffic at 20 mile final. My 3 ship were instructed to carry through the overhead and go around the pattern. We executed that and once we were 90 to initial at 2,800 feet we picked up the visual to a commercial aircraft (Aircraft Y) approximately 200 feet above and descending to the runway.. I initiated the turn to initial early and offset the runway to the west to avoid the commercial aircraft. During the turn my wing men got perhaps 3,000 feet from me and they were not squawking in accordance with with our procedures. I was told that Aircraft Y had previously gone around and this was their second attempt to land. I was also told they received a TCAS advisory. I do not recall hearing a TCAS advisory, however my system was on 'TA' and it is very common to receive multiple traffic advisories in the pattern. I believe they were flying the RNAV Approach that does not have a hard altitude of 2300 feet at the final approach fix, like the ILS and TACAN approach does. We do that to avoid the VFR pattern traffic at 2800. I would suggest a review of all approaches at ZZZ AFB to avoid this situation again, or for the commercial traffic to have been assigned a hard altitude of 2300 feet until Final Approach Fix.

Synopsis

Military Pilot reported an airborne conflict in the traffic pattern.

ACN: 1814638 *(22 of 50)*

Time / Day

Date : 202103
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.UNICOM : ZZZ
Aircraft Operator : Personal
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Final Approach
Route In Use : Direct
Airspace.Class E : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Instructor
Function.Other.Other
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 17500
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 3100
ASRS Report Number.Accession Number : 1814638
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : FAR
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

Notified on XX June by ZZZ FSDO that the Aircraft X aircraft I was embarked, had a near miss at ZZZ on March XX...ALMOST three months after the supposed incident. Totally unknown, unreported to me or the other pilot who was undergoing his annual 61.58 proficiency check ride in the Eclipse. I was the PPE (Professional Pilot Examiner) conducting his final maneuver...WHICH was an RNAV to Runway XX circle to land on Runway XY. All proper reports were made on UNICOM, I especially watch the traffic on laptop and on the instruments for other traffic. To my knowledge there was no other traffic in the airport traffic pattern. We circled at 700 feet to the south of the field, turned base leg, and landed. The pilot told me that the FSDO said a Cessna 172 under ATC control now reports a near miss. I am waiting to hear what the ZZZ FSDO has to say on this matter. I suspect it is an ADS-B computer snitch or the ATC controller/other pilot have taken a long time to report the incident...OR Because the FAA folks all work from home this one got put in the "hold" basket. This could be a dangerous time in space where an aircraft under IFR rules gets turned over to the local frequency (UNICOM) by ATC when he is established on final and does not check in or report his existence to the other traffic ahead in the pattern. It would be most useful if the other pilot writes up his report on this possible incident.

Synopsis

GA pilot examiner reported that FSDO reported a near miss to the them three months after the incident and could not recall any details of it.

ACN: 1814633 *(23 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : MRN.Airport
State Reference : NC
Altitude.MSL.Single Value : 5000

Environment

Flight Conditions : IMC
Weather Elements / Visibility.Visibility : 6
Light : Daylight
Ceiling.Single Value : 500

Aircraft

Reference : X
ATC / Advisory.Center : ZTL
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Retractable Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Ferry / Re-Positioning
Nav In Use : GPS
Flight Phase : Initial Approach
Flight Phase : Descent
Route In Use : Direct
Airspace.Class E : ZTL

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 15276
Experience.Flight Crew.Last 90 Days : 21
Experience.Flight Crew.Type : 175
ASRS Report Number.Accession Number : 1814633
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

During the terminal phase of a single pilot IMC maintenance ferry flight to MRN (Foothills Regional) I requested the RNAV (GPS) Runway 21 Approach into MRN. ATC approved the request and cleared me to the CIKIS IAF. Scanning the preloaded route of flight in my G1000 PFD, I inadvertently selected the CICAC FAF as the desired steer point and turned in that direction. ATC observed the aircraft tracking to the wrong fix and directed a heading change in the direction of the IAF. At that instant, I detected the switch error and made the appropriate correct selection. The approach continued and the flight terminated without further incident. There can be no excuse for my having failed to confirm the exact GPS steer point selected; but in the interest of preventing a future incident such as this, I might question why two of the fixes on this approach would be labeled with identifiers so similar in spelling and pronunciation that this error could almost have been predicted, especially in the high workload environment of single pilot IMC during the terminal phase of the flight. I suspect that I'm not the first pilot to bite on this one, and the controller was probably spring-loaded to detect and correct my error. Can't TERPS label these fixes with less ambiguous identifiers?

Synopsis

A pilot flying an RNAV Approach into a non towered airport flew direct to the Final Approach Fix instead of the Initial Approach Fix as cleared. The fixes have similar sounding names which contributed to the navigation error.

ACN: 1813915 *(24 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1801-2400

Place

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

Environment

Flight Conditions : VMC

Aircraft

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1813915
Human Factors : Training / Qualification
Human Factors : Time Pressure
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : 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 : 1813912
Human Factors : Training / Qualification
Human Factors : Confusion
Human Factors : Communication Breakdown
Human Factors : Time Pressure
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

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

Narrative: 1

Flight was cleared for approach into Runway XX at ZZZ. After noticing the approach was too high, the flight crew executed a go-around and missed approach. The flight crew then tried to re-establish contact with ATC but was not successful. After reaching missed approach altitude the flight crew decided to turn and make left hand traffic for Runway XX, where we made a visual approach and landing while making position reports on the local CTAF frequency. After landing, it was realized that the flight crew could have potentially violated the proper missed approach procedure or additional approach clearances into ZZZ after not being able to contact ATC. After parking at gate, Captain called ATC via phone to cancel IFR. One possible cause could be the relatively rare experience of flying into an uncontrolled field at night and the procedures that are associated with that. There was also some confusion about the type of approach the flight was cleared to execute, in this case, RNAV or visual approach into Runway XX. We believed we were cleared for the visual approach. However, being unable to contact ATC added confusion and doubt to the situation after landing. Flight delays most likely added stress as well. The first suggestion for future experiences would be to be more mindful and diligent about confirming the type of approach we are cleared to execute. This would have clarified the proper procedure when executing a go-around. A second potential solution would have been to gain altitude in order to try and contact ATC. As for the approach, the flight crew could have requested vectors to leave and then rejoin the approach when the aircraft was at a more appropriate altitude before needing to execute the go-around.

Narrative: 2

After executing the go around, [we] climbed to pattern altitude to make a left traffic pattern instead of executing the published missed approach. [We were] unable to re establish contact with ATC after the go around. [We] did a visual approach to a landing.

Crew believed ATC cleared for visual approach, therefore not requiring the published missed approach. [We should] clarify approach clearance with ATC [next time].

Synopsis

Air Carrier Pilots reported, after an unstable approach at night to an uncontrolled airport, not executing the published missed approach.

ACN: 1813366 *(25 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : RNO.Tower
State Reference : NV

Aircraft

Reference : X
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
Nav In Use : FMS Or FMC
Flight Phase : Initial Approach
Route In Use : Visual Approach
Airspace.Class C : RNO

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1813366
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1813375
Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

The crew flew the RNAV X RWY to 34R at RNO in day clear weather with winds reported at 260/26G31. During the flare, the crew executed a go around due to a strong gust destabilizing the approach. During climb out, the Tower Controller called the winds stronger out of the West and suggested a visual approach to Runway 25. Although having reviewed the 10-7 Special Considerations page earlier in the flight, the crew did not recall the takeoff and landing restriction on Runway 25. The crew configured for a 5 mile visual approach to Runway 25, then briefed and commenced the approached. Descending on the approach with the terrain visible and safely below the aircraft, it became apparent that the terrain east of the airport would not allow a safe approach. At approximately the same time, our descent rate in combination with the terrain resulted in a brief 'Terrain' warning; the pilot flying adjusted the aircraft flight path and then executed a go-around. The crew then flew and landed from the RNAV X to RWY 34R. I believe rushing and a false sense of familiarity with the airport led to an incomplete recognition of all the information in the 10-7 pages. I have operated into RNO regularly but not often and always to light winds down the primary runway. Arrivals and approaches are briefed extensively and flown according to standards. The day of the event, we conducted a thorough briefing for the approach, to include reviewing the operating manual about the exact procedures for executing the EO (Engine out) SIDs at RNO and which RNAV approaches we were authorized to fly. Despite my review, to include Special Considerations/Restrictions, I did not refresh the [Runway] 7/25 restriction in my mind and in the moment I did not recall the critical restriction. Additionally at the time, I did not feel like we rushed the visual approach. However, I now realize that I was focused too much on flying a stable visual approach and landing into the wind and not taking the time to truly review the approach and missed approach. Take the time to thoroughly familiarize yourself with all the applicable notes during your airport review and briefings.

Narrative: 2

RNAV X 34R to RNO in day VMC, reported winds were very close to limits (260/26 G31). Due to an extremely strong gust which destabilized our approach we executed a go around. After max effort go around and stabilized climbing clean, Tower suggested we use Runway 25. Even though we had both reviewed the 10-7 pages earlier in the flight, at that particular moment we did not recall the prohibition to landing on that Runway. After agreeing that we would look at it, I as Pilot Monitoring set up the box for a visual by extending a 3 degree GS to an extended 5 mile Center Line to give us VTI. The Pilot Flying double checked the 10-9A page and the landing app. While still considering this option, we maneuvered towards the extended Center Line and set and then descended to an altitude above the depicted altitude in that area. Our rate of descent combined with rising terrain triggered the EPGWS (Ground Proximity Warning System) to a "TERRAIN" call. The Pilot

Flying immediately altered his flight path and the terrain remained visible and well below us. It became abundantly clear that a stable approach would not be possible and we abandoned this option. We opted for another attempt at the RNAV 34R, and despite strong gusty crosswinds were able to maintain a stable condition to touchdown and landing. Things I have taken away from this event: The winds Tower reports may not be the winds you experience at the Runway. By sticking to a ridged stable approach and associated Standard Operating Procedureâ€™s mantra we kept from bending metal, violating a FAR, exceeding a limit or attempting something really stupid. And although RNO is a complex city and we review the notes every time we go there, the [Runway] 25 note was momentarily forgotten. We reviewed the 10-9a pages but somehow forgot to review the 10-7 pages in that situation. A mistake I (or my First Officer) will never make again. I firmly believe that this is a onetime incident. A few moments either way and we would have missed the gust and landed uneventfully. And I have a hard time imagining that another crew, or me again, would ever forget the 10-7 notes in a complex city. But again thanks to our training department's dogma regarding stable approaches, we are self-reporting not something far worse.

Synopsis

Air carrier flight crew reported receiving an EGPWS terrain warning during descent on visual approach into RNO and subsequently performed a go-around. The crew stated they had not adequately reviewed the notes and restrictions for the runway and this may have contributed to the unstable approach.

ACN: 1812004 *(26 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : RNO.Airport
State Reference : NV
Relative Position.Angle.Radial : 360
Relative Position.Distance.Nautical Miles : 4

Environment

Light : Daylight

Aircraft

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

Component

Aircraft Component : Navigational Equipment and Processing
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 140
Experience.Flight Crew.Type : 10000
ASRS Report Number.Accession Number : 1812004
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Detector.Automation : Aircraft Other Automation
When Detected : In-flight

Result.Flight Crew : Overrode Automation
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

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

Narrative: 1

We were cleared the RNAV (RNP) Y 16 L inside of HLDMM (I believe) on the KENNO 2 RNAV. 0.3 was entered into the LEGS Page and 4,500 feet was placed in the MCP (Mode Control Panel) window. Inside of KLOCK, zeros were entered into the MCP. At approximately 1,500 feet AGL, with the aircraft fully configured and a zero vertical NAV deviation, the Vertical NAV suddenly indicated approach 488 feet below the vertical path. The aircraft made a minor attempt with pitch and power to correct the deviation. I then disengaged the autopilot and autothrottles. By the time we sorted this out, we were too high above the glidepath for a normal approach, so I directed / executed a go-around. We subsequently flew a visual approach backed up by (a different RNAV) the RNAV GPS X Runway 16L. We did not engaged the VNAV / LNAV. An ILS is not available to 16L. The weather packet cover page did note GPS interference testing in the PMSR (Pt. Mugu Sea Range) centered on the SXC248/058 and possible impact areas, but RNO was not in the listed area. RAF coverage was 0.3 or better. There was an FDC NOTAM for this approach (to disregard a note for night operations), but was N/A. Company was contacted.

Synopsis

Air carrier Captain reported that VNAV suddenly indicated below glide path during approach to RNO airport. The approach became unstable, and the flight crew executed a go-around. Reporter stated that there was GPS testing in nearby area but the approach airport was not listed on the coverage area document.

ACN: 1811826 *(27 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1801-2400

Place

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

Environment

Flight Conditions : VMC
Light : Dusk

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 : Initial Approach

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1811826
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1811830
Human Factors : Communication Breakdown

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

Events

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

The incident happened during our descent on the ZZZZZ arrival into ZZZ. As far as I remember, we had been cleared by the previous Controller and told to do the XXL transition. I had already programmed the FMS for that specific arrival and pre-loaded the ILS XXL. The weather was not an issue with a clear sky and great visibility. I briefed a visual approach for XXL, backed up with the routing of the ILS for that same runway, and made sure we had the discontinuity between the last point on the arrival - ZZZZZ1 and the first point on the approach - ZZZZZ1. We were then told to contact the next Controller and assigned different altitudes on the arrival while maintaining the routing. For some reason, at one point, I thought/assumed we were cleared for the visual and got rid of the discontinuity by linking the first point on the approach with the last point on the arrival - ZZZZZ1. I turned to the Captain to ask him to "confirm" and proceeded by removing the discontinuity. Because we were not cleared for the approach yet, the aircraft proceeded past ZZZZZ1 on a XXX as expected, but because it was now programmed to fly the approach it started turning at ZZZZZ2. The Controller asked us if we were flying the RNAV, we responded that we were doing the XXL transition and as the Captain said these words we realized we had made a mistake by leaving the XXX. The Controller kindly reminded us what we were expected to do and gave us a heading to intercept the localizer for the visual XXL. What led to this mistake is mostly my fault. I was fixated on flying the visual, and I forgot to actually make sure we had been given the clearance before getting off the arrival. My mind was too focused on the preconceived idea of what was expected rather than what we had actually been cleared for that I failed to properly communicate with my Captain. I was complacent, and this led to confusion in the cockpit and with the Controller.

Narrative: 2

During our descent on ZZZZZ arrival into ZZZ, we were cleared to descend via ZZZZZ , XXL transition. We programmed the FMS for that particular arrival and transition and preloaded the ILS XXL. The weather was good with clear sky and great visibility. Pilot Flying, briefed the visual approach XXL back it up by ILS. We made sure the discontinuity between the last point on the arrival ZZZZZ1 and the first point on the approach ZZZZZ1. We were told to contact the next Controller and assigned us different altitude on the arrival while maintaining the routing. I contacted the next Controller and for some reason we thought, we were cleared for visual via ZZZZZ1 transition. As we past ZZZZZ1, we continue to fly heading XXX as we approached ZZZZZ2 the plane was about to transition

to the new fix. At this point ATC assigned us a heading 350 and asked us if we are flying the RNV transition? Which responded yes and I realized the error. At this point he assigned us 310 heading to intercept the localizer and cleared us for visual to XXL. We were both fixated and our mind was set on the preconceived idea of what was expected rather than what we had actually been cleared for, especially when the proceeding traffic receives that clearance. I (we) failed to confirm and communicate with each other and ATC. I got complacent and side tracked, the combination of these two led to the confusion in the cockpit and with the Controller. As a (Captain/Pilot Monitoring) I should have communicated and confirmed that we are both on the same page and understood the clearance and when in doubt ask the ATC for clarification. I want to make sure and get the confirmation before removing the discontinuity and not to rush. Do not assume if previous aircraft receives particular clearance we will get the same and avoid complacency. I will emphasize this on my future arrival briefings to ensure this doesn't happen again, FOOLISH ASSUMPTION/MISTAKE.

Synopsis

ERJ175 flight crew reported a clearance deviation due to flight crew communication breakdown during approach.

ACN: 1811820 *(28 of 50)*

Time / Day

Date : 202106
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : VMC
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 : Final Approach
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 : 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 : 1811820
Human Factors : Workload
Human Factors : Troubleshooting

Person : 2

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1811825
Human Factors : Workload
Human Factors : Time Pressure

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Fuel Issue
Detector.Automation : Aircraft Other Automation
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 : Human Factors

Narrative: 1

During arrival into ZZZ we received 4 runway changes in about 5 minutes time. We were then broken off the arrival and vectored around for a visual approach to XXL. Reaching the ZZZZZ fix we received a fuel imbalance caution message. We then switched the fuel selector to the correct side to balance fuel and landed within limitations for a fuel imbalance. We felt rushed and focused on flying the visual correctly. Upon receiving the caution, we felt like going around was a more unsafe decision than continuing on the approach, due to the distraction and complexity that were that we were experiencing. Always go around whenever a caution message appears. Run the QRH as directed.

Narrative: 2

After a rushed departure due to company operations. The aircraft was initially over fueled (may have played a role). Descending on the ZZZZZ arrival we were assigned multiple runway changes and arrival transition changes in sterile. This caused task saturation. Finally we were assigned RNAV visual for [Runway] XXR. On the approach we received a fuel imbalance message turning onto final at ZZZZZ1. We were able to promptly balanced and corrected the issue. We landed with the selector off and a imbalance within limitations. Cause was gusty wind condition, multiple runway/transition changes, rushing because we were "leading the pack", and no clear reason why the fuel imbalance was caused (pilot error, mechanical, etc.) I feel we should have considered a go-around. I was behind the airplane and task saturated. I should have verbalized this to the captain. We could have requested delay vectors and potentially broke of the approach to fix and trouble shoot the issue.

Synopsis

ERJ-175 flight crew reported electing to land with a fuel imbalance rather than complete the QRH procedure.

ACN: 1811735 *(29 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZZ.TRACON
State Reference : FO
Relative Position.Angle.Radial : 238
Relative Position.Distance.Nautical Miles : 1
Altitude.AGL.Single Value : 800

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 5
Light : Daylight
Ceiling.Single Value : 5000

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B767-300 and 300 ER
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Nav In Use : FMS Or FMC
Flight Phase : Final Approach

Component

Aircraft Component : Indicating and Warning - Flight & Navigation Systems
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 8478
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 2749
ASRS Report Number.Accession Number : 1811735
Human Factors : Troubleshooting

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 15800
Experience.Flight Crew.Last 90 Days : 93
Experience.Flight Crew.Type : 1935
ASRS Report Number.Accession Number : 1811718
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overrode Automation
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

I was the PF (Pilot Flying) on this flight from ZZZZ1 to ZZZZ. On arrival into the ZZZZ terminal area, we were cleared direct to ZZZZZ and cleared for the ILS XXL approach. Weather at ZZZZ was reporting winds 280 at 12, few clouds at 3,000 ft., altimeter 29.62, and no other significant weather. The initial approach was uneventful and we were fully configured and stable by about 1200 ft. AGL. At approximately 800 ft., I turned off the autopilot and began hand flying. Then at approximately 700 ft. we received an audible wind shear warning that lasted for 3-4 seconds. This caught us both by surprise as there were no other conditions that would be associated with wind shear. There was no convective activity in the area, the weather was good, and the wind readout showed stable at 12 kts. The aircraft showed no airspeed fluctuation nor an increasing or decreasing trend vector, the thrust setting was normal, pitch attitude and vertical path were stable. During the alert, the weather radar showed a lot of red radar return that wasn't previously there, and did not correlate with what we were seeing visually out the windscreen. We both assessed the situation, and agreed that the alert was erroneous. At this point we were at about 300 ft. AGL, and the Captain told me to continue. I agreed with this assessment and decision, and continued to land normally. Not once did we receive any other indication that wind shear was present, it wasn't even "choppy". It was smooth all the way through landing. After reflecting on the event, I still believe that the alert we received was false. With that being said, as a crew, we probably should have discussed making a logbook entry and discussing the alert with the mechanic once we were parked at the gate in ZZZZ. Going forward if I encounter something like this again, I will handle it differently for a couple of reasons. First, the FOM does state that if a wind shear warning is received, to follow wind shear escape maneuver or to execute a normal go around.

Secondly, I do not want to get into a habit of second guessing the warning systems on board the aircraft. Regardless of a suspected error, and as long as safety is not compromised, follow procedure then once at the gate, make a logbook entry for a suspected error.

Narrative: 2

We were operating this flight from ZZZZ1 to ZZZZ arriving approximately XA:30 UTC. Captain was PM (Pilot Monitoring) and FO (First Officer) was PF (Pilot Flying). We were set up for the ZZZZZ1 RNAV arrival for the ILS XXL. The aircraft (a B767) was empty and our landing weight was 198,100 lbs. VApp was calculated at 122 and VRef at 117. The weather was VFR. There was no convective activity, a few clouds at 3000 ft., winds 280 at 12 reported on the field, and altimeter at 29.62. We were cleared to the fix ZZZZZ to begin the ILSZ XXL at 4000 ft. We intercepted the localizer and armed the APPCH. We continued to configure the aircraft for landing maintaining VFR conditions. With the aircraft fully configured for landing (Stabilized Approach criteria met) at approximately 700 ft. AGL we received a wind shear alert. The weather was VFR, and the winds at our altitude were showing stable at 12 knots. There was no airspeed fluctuation (including the airspeed trend line), the throttle position did not change, the thrust setting did not change, and the aircraft pitch attitude did not change. As PM, I did not elect to call "Go Around" as the aircraft was fully stabilized, fully configured for landing and we were passing through approximately 300 ft. AGL with the PF hand-flying the aircraft. Given the situation with all of the present conditions and the state of the aircraft, I believed the alert was erroneous. I should have made a logbook write up on the EPGWS (Enhanced Ground Proximity Warning System) to check for errors. There were no reports of any wind shear activity in the area and the weather conditions were VFR. Also given the location and state the aircraft was in, I thought it would create an unnecessary "non-normal" situation that could have potentially caused more problems than just continuing the approach and landing the aircraft. As I stated above, the aircraft exhibited no indications for us to believe that there were any type of wind shear occurrences at the present time or in the immediate time prior to landing.

Synopsis

B767 flight crew reported a false windshear warning during fully configured and stable final approach to landing.

ACN: 1811552 *(30 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

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

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 135 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Initial Approach
Airspace.Class B : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Flight Phase : Cruise
Airspace.Class B : ZZZ

Component

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1811552

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 : 1811553

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Automation : Aircraft RA
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

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

Narrative: 1

We were flying the ZZZZZ RNAV arrival into ZZZ inside of the ZZZZZ1 waypoint when ATC instructed us to descend via except cross ZZZZZ2 at 10,000 ft., 2000 ft. higher than published. We informed ATC that if we comply with the assigned crossing restriction that we will have trouble making ZZZZZ at 6,000, [which was] only 8.2 miles from ZZZZZ2. ATC then replied, "If you will be high on the arrival let me know." We then decided to slow down the aircraft to prepare for making the crossing restrictions and recalculate our descent inside of ZZZZZ2 to advise ATC if we will be high or if we can comply with the ZZZZZ restriction. Once the Honeywell FMS reached waypoint passage over ZZZZZ2 and cycled to the next fix, we started down to make the next crossing restriction. Within a few seconds of starting our descent, we received a TCAS "TRAFFIC" alert followed by a TCAS RA. I immediately disconnected the autopilot to comply with the RA and resolve the conflict. After the resolution advisory was resolved, [the Pilot Monitoring] noticed that the FMS had cycled to the next waypoint early and found that we were still a few tenths of a mile from ZZZZZ2 during the event. The assigned altitude at ZZZZZ2 was 10,000 ft.; we leveled off during the RA around 9,750 â€‟ 9,800 ft. There was no communication from ATC to us regarding the event. The rest of the arrival and approach was flown successfully and we landed safely. The Honeywell FMS cycled waypoints early, leading us to believe that we had reached waypoint passage. [I suggest] finding a solution to prevent the Honeywell FMS from making premature smart turns/waypoint passage cycles.

Narrative: 2

Operating [the] flight as SIC (Second in Command) and PM, we were assigned to descend via the ZZZZZ [arrival] but cross ZZZZZ2 at 10,000. We leveled off at 10,000 prior to the fix and set the next appropriate altitude. At about 2.5 miles prior to the fix, the Honeywell FMS prematurely sequenced to the next waypoint. We began an initial descent and quickly noticed the discrepancy in distance between current position and waypoint. [There was] an

RA to "monitor descent" annunciation. The Pilot Flying immediately climbed back to 10,000 and we waited until the correct DME was displayed. [The cause of the crossing altitude deviation was the] Honeywell FMS [working improperly]. I have noticed this problem in almost all company aircraft containing Honeywell FMS. The airplane will sequence to the next waypoint prior to the actual position. This can, and does lead to, altitude deviations and potential RAs and possibly worse. I would like to either see the problem itself fixed or the company to implement an SOP or training that covers this issue.

Synopsis

EMB135 flight crew reported a deviation from assigned altitude caused by the FMS during autopilot mode led to a TCAS RA during approach.

ACN: 1811512 *(31 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : NCT.TRACON
State Reference : CA
Altitude.MSL.Single Value : 7100

Aircraft

Reference : X
ATC / Advisory.Tower : RNO
ATC / Advisory.TRACON : NCT
Aircraft Operator : Air Carrier
Make Model Name : A319
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class C : RNO

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 : 1811512

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

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

Narrative: 1

On a visual approach to Runway 16L while descending to 7000 ft. we received a GPWS warning. I leveled off around 7,100 ft. and had the terrain in sight the entire time. After passing the hill I started a descent and was unstable so we went around. We were expecting the RNAV Y 16L but were taken off because of departing traffic on Runway 34R. This lead to an extended downwind and base to final. We were much farther out than we briefed or expected. When we finally turn final I used the RNAV 16 X approach plate for distance and altitudes. Over "BADPE" fix the altitude is 6900 ft. I set 7,000 and started to descend my rate was too much and we received the GPWS warning. [Pilot flying suggests] when operating in mountainous terrain on an RNAV approach and you are taken off that approach see if there is another approach that is better suited for your new location and situation, and familiarize yourself with it before even starting a visual approach.

Synopsis

A-319 Captain reported a CFIT event during approach that was extended due to departure traffic.

ACN: 1810398 *(32 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : RIC.Airport
State Reference : VA
Relative Position.Angle.Radial : 330
Relative Position.Distance.Nautical Miles : 5
Altitude.MSL.Single Value : 15000

Environment

Flight Conditions : Mixed
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : PCT
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Descent
Airspace.Class C : RIC
Airspace.Class E : ZDC

Person

Location Of Person.Aircraft : X
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 : 215
Experience.Flight Crew.Type : 13007
ASRS Report Number.Accession Number : 1810398
Human Factors : Workload
Human Factors : Distraction

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Returned To Clearance

Assessments

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

Narrative: 1

This was the first time flying into RIC for both crew members. Captain was PF and FO was PM. Crew planned to fly the SPIDR 4 RNAV Arrival and to connect to the RNAV (RNP) Y Runway 16 (RIC was landing Runways 16 and 20). Crew requested and was approved by Potomac Approach to fly the RNAV (RNP) Y to Runway 16 from DEEER (Potomac directed crossing DEEER at 4,000 feet MSL). We received the approach clearance around REDNG. FMC had given ALERT MESSAGES all flight long there was a steep descent after HEMME waypoint (280 KIAS/11,000 feet - 12,000 feet crossing restriction). FMC was correctly programmed. After passing HEMME, the aircraft began to deviate from the RNAV path by getting high. It became very clear, pilots had to intervene substantially in order to correct the aircraft back onto the VNAV PATH to successfully fly the RNAV (RNP) Y Runway 16 Approach. PF used maximum inflight speedbrake, elected not to use extending flaps. Aircraft airspeed was restricted to 250 KIAS or less as aircraft was transitioning to below 10,000 feet MSL. The only technique to slow the aircraft and attempt to re-establish the RNAV vertical path was to extend the landing gear about 30 miles from the field. Crew was able to correct aircraft back to RNAV path and complete the approach + landing. If this was another crew with little or no experience flying this RNAV Arrival to RNAV (RNP) Approach into RIC with actual weather, there is a high probability they would not successfully complete the approach and landing (would have to go missed approach, other altitude/speed deviations and/or compromise safety).

Synopsis

Air carrier Captain reported crossing restrictions and speed issues while flying into RIC airport on the RNAV (RNP) Y Runway 16 Approach.

ACN: 1809567 *(33 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZDV.ARTCC
State Reference : CO
Altitude.MSL.Single Value : 30000

Environment

Flight Conditions : IMC

Aircraft

Reference : X
ATC / Advisory.Center : ZDV
ATC / Advisory.TRACON : D01
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Airspace.Class A : ZDV
Airspace.Class B : DEN

Person

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 6500
Experience.Flight Crew.Last 90 Days : 155
Experience.Flight Crew.Type : 4000
ASRS Report Number.Accession Number : 1809567
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

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

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.No Specific Anomaly Occurred : Unwanted Situation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Denver airport is becoming hazardous to fly into due to non-specific ATIS, poor communication between DEN Center and DEN Approach, and the normalization of multiple arrivals and approaches being programmed during a normal arrival into Denver. This has increased substantially in the last few months and is resulting in aircrews being nearly continuously heads down reprogramming and briefing arrivals/transitions, approaches, taxi plan, getting appropriate landing data, briefing such changes, reviewing NOTAMs associated with these changes...etc. This is usually done while dodging weather, and mitigating turbulence, while descending into high terrain and congested traffic into an airport with multiple, parallel, similarly named runways. I feel there are three root causes. 1) ATIS is not very useful. Basically, a direction of traffic flow and a listing of all available approaches DEN has. 2) There seems to be a system now where approach tells Center what runway transition to assign aircraft. This transition frequently doesn't make sense and was not anticipated, programmed and briefed. Then, upon handoff to approach, the transition to another runway is often assigned. Then when the actual runway and approach is assigned, it frequently results in another reprogramming. This is acceptable during rapidly changing weather...it is commonplace all the time, however. On Aircraft X we programmed and briefed the FLATI 2 RNAV, RWY26 transition, RNAV Z Runway 26 approach. (Winds were 25024G34.) After starting the descent, we were given direct BYYKE, for the LONGS RNAV arrival. We programmed the LONGS arrival, Runway 26 transition, Runway 26 RNAV Z approach. We told Center that we were requesting Runway 26. Center directed us to fly the Runway 16R transition. (even though we were planning not to accept this approach). They said they are directed by DEN approach what transition to assign). We reprogrammed the ILS R16 transition and approach (we are now well along in the descent...moderate turbulence, and a VNAV discontinuity resulting from the reprogramming not being executable because of an approach transition altitude in-congruence) This was resolved quickly and safely and flown uneventfully with a 25 knot crosswind landing. The forecast approach winds were spot on, the ATIS hadn't changed substantially in an hour (Though there were about 5 or 6 of them). The point is, there was no significant change in weather driving this. I could have written the same report the last time I arrived to DEN on my last [arrival] from the east. On the flight today, we planned and briefed two different arrivals, one of the arrivals changing the transitions twice, two different RNAV Z approaches, an ILS approach and two different runways/performance numbers, NOTAMs, engine failure procedures taxi plans etc. I wouldn't spend time filing this report if it was a "one off" It is becoming the norm and accepted scenario into Denver. It is also a contributing factor with DEN historically having issues with RNAVs. Each of

these arrivals is complicated with at least 5-10 different altitude or speed constraints associated with them.

Synopsis

Air carrier Captain reported confusion and distractions when flying into Denver.

ACN: 1809079 *(34 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : LAS.Airport
State Reference : NV
Altitude.MSL.Single Value : 5500

Aircraft

Reference : X
ATC / Advisory.Tower : LAS
Aircraft Operator : Air Carrier
Make Model Name : Airbus Industrie Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Initial Approach
Route In Use.STAR : RNDRZ 1
Airspace.Class B : LAS

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 : 1809079
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Software and Automation

Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

While level at 5,500 ft. and at 170 kts. and on the RNDRZ 1 RNAV, ATC asked us to fly heading 090. ATC gave us a left turn toward Runway 25L. ATC asked us if we had Runway 25L in sight. We responded that we had Runway 25L in sight. We were cleared a visual approach for Runway 25L and made a normal landing. As ATC noted on my phone call to them regarded a possible navigational deviation error, ATC admitted that they are having trouble with their new arrival charts. The ATC person told me that there have been many errors by pilots and agreed the chart is confusing to pilots and this problem needs to be re-examined. After reviewing the arrival chart at the gate, my First Officer and I noted that what is depicted on the arrival chart is not what is depicted on our PFD. On the chart, a small box is depicted at intersection "BERBN" to look for another box for the runway transitions and its very confusing and can be easily missed This RNDRZ 1 RNAV arrival needs to be examined and rectified so as to not confuse pilots as was noted by our ATC Specialist during our phone conversation.

Synopsis

Airbus Captain reported the STAR chart for the LAS RNDRZ 1 RNAV arrival is confusing and does not match the aircraft PFD.

ACN: 1808608 *(35 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : SAN.Airport
State Reference : CA

Environment

Flight Conditions : IMC
Light : Night

Aircraft : 1

Reference : X
ATC / Advisory.Tower : SAN
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 : GPS
Nav In Use : FMS Or FMC
Flight Phase : Final Approach
Airspace.Class B : SAN

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : SAN
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Takeoff / Launch

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 : 1808608
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 : 1808609
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Ground Conflict, Critical
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

Arriving in San Diego, we had been cleared for the RNAV Z Runway 27 approach. We checked in with the Tower and were cleared to land. I heard Tower instruct a [heavy jet] to, "Line up and wait, traffic on an 8 mile final". Checklists and callouts may have masked additional communications on the frequency because I can't recall whether the [heavy jet] flight was cleared for takeoff, or not. We broke out of IMC at approximately 1400 feet. The Pilot Monitoring called "Runway in Sight - Landing". Shortly thereafter, the First Officer said, "Is that an airplane on the runway?" I looked closer and honestly could not tell. The navigation and beacon lights were blending into the approach lights and it was difficult to distinguish the aircraft. We had to get closer before the actual structure of the airplane was apparent. We had already determined that a go-around/missed approach was necessary, but before we could communicate that to the Tower Controller, she issued the go-around instruction, "Fly the published Missed Approach, and contact Departure". I had observed that the offending aircraft was stationary on the runway, and not in the midst of a takeoff roll, so I knew that the published missed approach or runway heading was appropriate, and that a sidestep departure for spacing was not necessary. So we complied as instructed. We had already determined our BINGO fuel enroute and knew that we could accept one more approach before diverting to our alternate, so we accepted vectors back for another approach. The subsequent approach and landing was uneventful. The [heavy jet] had been removed from the runway and was still holding short when we landed. No mention of the reason for the go-around was given by the Tower, nor did we ask. Because we knew. There was an airplane on the runway. Cause: [The] decision to work a Maintenance Irregularity while on an active runway. The Tower's decision to put the [heavy jet] on the runway when they were not ready to depart, and then forgetting about them. And our loss of situational awareness based on the radio communications that were, or were not, taking place on the Tower Frequency. In the future, if the First Officer questions the security of the runway, or the landing clearance, I will instruct them to

simply, and without delay, to ask the Tower. This would NOT have prevented the necessity to go-around, but perhaps would have initiated the maneuver a little sooner.

Narrative: 2

While on the RNAV Z 27, we were handed off to Tower and were cleared to land. This occurred at approximately SAYAE intersection. The approach continued normally and we broke out about 1,400 feet and then called "runway in sight", "runway in sight landing". Sometime after the 1,000 feet stabilized cleared to land call, I noticed what appeared to be an airplane on the displaced threshold of Runway 27 and said, "Is that an airplane on the runway?â€• The darkness of the displaced threshold area against the runway lights and the fact that the aircraft was in position pointed away from us made it difficult to tell. However, by the times the words were spoken, we were close enough to see. At the very same moment we began our go-around, the Tower issued instructions to go around and fly the published missed approach, which we did since the aircraft on the runway did not appear to be moving. We proceeded with a normal go-around and returned for a normal landing since we had sufficient fuel. In the simplest terms, we executed a normal go around due to an aircraft on the runway. Why was there an aircraft on the runway? I am not sure. Shortly after we were cleared to land, we heard the tower instruct [another aircraft] to line up and wait, traffic 8 mile final. I honestly don't recall hearing a take-off clearance, perhaps due our being engaged with our tasks and callouts during the approach. We did see the aircraft short of the runway when we returned. It wasn't until later that we read that they had a mechanical issue. Maintaining better awareness of traffic utilizing the runway particularly when we can't see it yet. Better awareness would have allowed us to question if the runway was indeed clear. That may not have prevented the go around this time, it would've depended on how soon we became aware.

Synopsis

Air carrier flight crew reported executing a go-around at SAN when it became clear another air carrier aircraft was in position for takeoff on their landing runway.

ACN: 1808202 *(36 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

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

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Personal
Make Model Name : PA-31P Navajo P
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Nav In Use : GPS
Flight Phase : Final Approach
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 5640
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 3000
ASRS Report Number.Accession Number : 1808202
Human Factors : Situational Awareness
Human Factors : Distraction

Events

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 : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

On a coupled RNAV XX LPV approach to ZZZ the aircraft overshoot the turn to final. It started the turn but not fast enough to intercept. After correcting and intercepting final the aircraft began a descent as if following the glideslope. There was heavy rain between me and the airport and my attention was diverted to that and I lost situational awareness. It is obvious now that the descent was not following the glideslope when the terrain alert activated I climbed to a higher altitude and shortly broke out of the rain and landed in visual conditions. We were in contact with approach control until just before the turn to final, then switched to UNICOM. My mistakes were ones of complacency. When I had an abnormal turn to final I should have executed a missed approach. Something was not right. I allowed my attention to be diverted at a critical time from the task of monitoring the approach. I misinterpreted the weather situation. I used ASOS reports that may have been 5 - 10 minutes old in a rapidly changing weather situation. I should have requested the RNAV XY and accepted the tailwind even though the minimums were higher. The weather was moving west to east and conditions in the quadrant turned out to be much better.

Synopsis

Pilot reported getting a terrain alert after not noticing the aircraft was not on glideslope. Reporter stated they were focused on the poor weather conditions and did not monitor the approach progress.

ACN: 1807543 *(37 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : PSP.TRACON
State Reference : CA

Aircraft : 1

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

Aircraft : 2

Reference : Y
Make Model Name : Small Transport
Crew Size.Number Of Crew : 1
Airspace.Class E : PSP

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1807543
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : NMAC
Detector.Automation : Aircraft RA
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

On the RNAV Visual 31 L between fixes WEMIR and CEKMA, SOCAL Approach witnessed a target (aircraft he was not talking to) pop up that was a threat to us. He instructed us to stop descent immediately, the First Officer did a great job of arresting the descent, then Approach told us to immediately climb as TCAS instructed us to descend. We followed TCAS and saw the single-engine turboprop pass over us by about 400 feet and in front of us by about one-half mile. The FO re-established us on the approach and we landed without incident. The beautiful weather in Palm Springs and general aviation aircraft not talking to ATC was THE factor in this TCAS RA. ALWAYS follow TCAS.

Synopsis

Air carrier Captain reported TCAS RA Alert on approach to PSP airport.

ACN: 1807324 *(38 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1801-2400

Place

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

Environment

Flight Conditions : VMC
Light : Night

Aircraft : 1

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

Aircraft : 2

Reference : Y
Make Model Name : Cessna Aircraft Undifferentiated or Other Model
Crew Size.Number Of Crew : 1
Flight Phase : Final Approach
Airspace.Class C : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1807324
Human Factors : Situational Awareness

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Unstabilized Approach

Detector.Person : Flight Crew
Miss Distance.Vertical : 200
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

Night VFR RNAV Y XXR approach. Approaching FAF ZZZ tower advised us of Cessna traffic on downwind turning base for short parallel runway XXL. Traffic in sight. As we passed our FAF, fully configured and stable we saw the Cessna pointing right at us on base and both remarked "I hope they don't overshoot". At approximately 800 feet AGL the Cessna was still pointing at us and I could see they were clearly going to overshoot slightly above us as they turned to final. I felt it was way too close and pushed over slightly as I estimated them to be no more than 100-200 feet above us as they crossed right over us and slightly behind. As our approach was now unstable in my estimation I executed an uneventful go-around. We advised tower of the close pass. We returned for a second, uneventful approach and landing to XXR. I called tower controller after landing and he said he would contact the Cessna pilot and talk to him about the incident. Cessna not keeping us in sight and possibly lining up on incorrect runway. Light VFR traffic maintaining better situational awareness with a large air carrier with approximately XXX people on board and all landing lights, fully configured on final approach.

Synopsis

Air carrier Captain reported an NMAC during approach with an aircraft on approach on the parallel runway.

ACN: 1807082 *(39 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : RNO.Airport
State Reference : NV
Altitude.MSL.Single Value : 6500

Environment

Flight Conditions : VMC
Light : Night

Aircraft

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Check Pilot
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1807082
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

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

When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

IOE FO (First Officer) was performing a visual approach into RNO Runway 16L, backed up with RNAV X 16L. We were outside BADPE and were visual with the runway, check airman was monitoring FO and said "You are too low, shallow out your descent rate." FO proceeded to do so but not aggressively enough of a correction, Check airman was about to correct him again and we got a single EGPWS aural of "OBSTACLE." Under guidance of check airman, FO disconnected autopilot, added power, and climbed a few hundred feet. We were then back on profile and still outside final approach fix of BADPE so continued on approach with FO hand flying. The EGPWS Aural occurred at about 6,500 feet altitude about 4 miles outside of the BADPE fix. Check airman believes terrain clearance was safe, we were observing one white light and three red lights on PAPI, but the EGPWS disagreed with me. We were too low on a visual approach. Check airman had asked for a correction but was not insistent or urgent enough to get through to the FO. Busy arrival with many configuration changes, radio calls, etc. And it was a first day of flight with this particular FO, check airman did not realize that this FO was perhaps a bit overloaded and behind the aircraft, may have overestimated his skill level at this time. Check airman (Me) should have been more insistent about tolerances, as in not accepting one little bit low per arrival altitude guidance on RNAV plate.

Synopsis

Check Airman reported receiving a EGPWS Alert on approach.

ACN: 1806605 *(40 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ROA.TRACON
State Reference : VA

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Other

Aircraft

Reference : X
ATC / Advisory.Tower : ROA
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 : Cargo / Freight / Delivery
Flight Phase : Initial Approach
Airspace.Class C : ROA

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 : 1806605
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors

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

Narrative: 1

Winds were calm at ROA. ATIS called Runway 24 as landing and departing using RNAV (RNP) Z RWY 24. ATC asked us if we wanted the visual. Given terrain and having never been to ROA I elected to stay with the RNAV approach. ATC had us cross STEFN at 5,400 feet which had us 400 ft high. We attained VNAV PATH and 150 KIAS approximately 3 miles after STEFN. Since we could see the terrain and visibility was greater than 5 miles we planned to maintain 150 KIAS until 5 miles prior to the airfield. Between DBERD and WILHE there is depicted terrain with a spot elevation 2,058 feet. Just pass that terrain, still on LNAV and VNAV PATH at 150 KIAS Roanoke Tower gave us a low altitude warning. We verified both our altimeter settings and altitude. We advised Tower that we could see both terrain and the airfield. Tower acknowledged and advised us that they could see us clearly; and that they were required to announce the low altitude alert anytime it is activated. Otherwise, the approach and landing were normal. Of note there was no GPWS alert with flaps 20 and gear up. After block-in, I requested a phone number to discuss the event. I spoke with [ATC] and inquired about the altitude alert call. He indicated they sometimes get an altitude alert activation, but usually on vectors to visual Runway 24. He also indicated he was not as familiar with the Tower sector. I asked him to look into it a bit more given that the only difference between what I flew and what I would have flown in IMC is I would have been 25 KIAS slower which would have resulted in a descent rate difference of just 133 FPM given a constant wind. The wind in this case was a light headwind during the approach. Had I been in IMC and/or could not immediately determine by visual reference terrain clearance, the approach would have terminated with an immediate climb and terrain escape maneuver. Recommend the altitude alert system be de-conflicted to ensure aircraft on FMS glide path for the RNAV Z RWY 24 do not get erroneous alerts and/or note on company chart outlining requirements for speed on the approach or other requirements to successfully complete the approach in IMC. No deviations noted by Tower or aircrew. The low altitude alert system may need to be adjusted or approach procedures may need to be adjusted to avoid erroneous low attitude warnings. De-conflict low altitude warning with proper approach lateral and vertical guidance.

Synopsis

Air carrier Captain reported receiving a low altitude alert from ATC on approach into ROA even though it appeared there was no terrain conflict.

ACN: 1806222 *(41 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : TUS.Airport
State Reference : AZ
Altitude.AGL.Single Value : 1400

Aircraft

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

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 : 1806222
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Distraction

Events

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

Assessments

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

Narrative: 1

Unexpected last minute change of runway from RNAV Runway 29R to ILS runway 11L. Winds were calm forecast to pick up out of the west at our arrival time. No digital ATIS, didn't find active runway until listening to ATIS on radio well into the arrival. On downwind vectors advised of pair of military aircraft we would follow on approach. Turned base and cleared for visual approach to Runway 11L. As we turned in towards the airport, we crossed a knoll just north of the final approach course. We were descending and crossed over the top of the knoll at about 1,400 feet AGL. The GPWS activated and announced pull up terrain, the FO (First Officer) executed an escape maneuver as he had been trained. With autopilot off speed quickly accelerated and still in the flaps 2 configuration we exceeded the limit speed by about 5 knots for 5 to 10 seconds before speed reduced back into normal range. We advised TUS that we were missed approach and were vectored around to another visual approach and landing. Cause - Higher than normal workload, changing runways, keeping traffic in sight and terrain awareness. On calm wind days be prepared for approach from either direction on smaller airports with only one primary runway. Study terrain areas to plan for visual approach altitude you want to be at crossing them.

Synopsis

Air carrier flight crew reported GPWS Alert on approach to TUS airport.

ACN: 1805558 *(42 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

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

Aircraft

Reference : X
ATC / Advisory.TRACON : NCT
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Initial Approach
Route In Use.STAR : RNAV (RNP) Y RWY 16L
Airspace.Class E : NCT

Component

Aircraft Component : GPWS
Aircraft Reference : X
Problem : Design

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1805558
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 1806144
Human Factors : Situational Awareness

Events

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

Assessments

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

Narrative: 1

On a day, VFR approach to RNO just to the north of waypoint URATE as depicted on the RNAV (RNP) Y to 16L, EGPWS alerted "Caution, obstacle." The FO as pilot flying altered his flight path, yet we then received "Obstacle, pull-up!" which the FO did. Both the hill and obstacle at 5,101 feet MSL were in sight the entire time. We then continued for a normal uneventful landing. Enroute, we had discussed extensively the challenges of RNO, including terrain, single runway, engine failure considerations, and higher than typical descent rates and true airspeeds, and were comfortable with our position and closure rate with the hill and tower. Cause - EGWPS will alert for terrain or obstacles for either proximity or closure rate sooner than I expected. By being carefully studied on the terrain and obstacles in the vicinity of RNO prior to arrival, we were well aware of the tower and hill located at the location of the EGPWS alert. Suggestions - Give a wider avoidance to high terrain or obstacles both horizontally, vertically, and with respect to closure rate.

Narrative: 2

Cleared visual approach 16L RNO. Turned to intercept extended final near FAP WORTH. Had briefed and set up for RNAV (RNP) Y 16L and using it as backup to visual. Dialed in 6,400 and began descent to FAP altitude turning base to final. EGPWS alerted "Caution, Obstacle". As PF I verified obstacle in site and continued turn to final away from it. Soon after alert "Obstacle, Pull up" occurred. I disconnected the AP and initiated a climbing turn away from obstacle that we had kept in site the entire time. Alert ceased very quickly and we continued an uneventful and stable approach and landing. Approach briefing had included a good discussion on RNO hazards including single runway operations, EO considerations, mountainous terrain, high descent rates and TAS. We knew where the obstacle/ hill was on the approach and felt comfortable with our position relative to it on the visual approach. Cause - The preceding aircraft was denied the instrument approach. Visuals in mountainous terrain create unique challenges. Being cleared to follow proceeding aircraft and maintain spacing may have also caused a more square pattern than desired which brought us closer to the obstacle. Suggestions - Maintain the practice of following IAP ground track even on a visual approach if not intimately familiar with the terrain. Also, be cognizant of how EGPWS tracks descent and closure rate. The warnings certainly came quicker than we expected. I would give high terrain an even wider berth.

Synopsis

Air carrier flight crew reported a CFTT event while on the RNAV (RNP) Y RWY 16L approach to RNO airport.

ACN: 1805443 *(43 of 50)*

Time / Day

Date : 202104
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 4
Light : Daylight
Ceiling.Single Value : 900

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
ATC / Advisory.UNICOM : ZZZ
Aircraft Operator : Personal
Make Model Name : PA-46 Malibu/Malibu Mirage/Malibu Matrix
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Route In Use : Direct
Airspace.Class E : ZZZ
Airspace.Class G : ZZZ

Component

Aircraft Component : Flight Director
Aircraft Reference : X
Problem : Malfunctioning

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
Experience.Flight Crew.Total : 1660
Experience.Flight Crew.Last 90 Days : 44
Experience.Flight Crew.Type : 527
ASRS Report Number.Accession Number : 1805443
Human Factors : Troubleshooting
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : 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 : Overrode Automation
Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

After an uneventful instrument cross-country flight, I listened to the destination airport ASOS, Wind 29 knot, Gusting 38, clouds OC 900 feet and Visibility 4 sm. I set up the FD (Flight Director) for the RNAV approach into the un-towered airport. I had done this approach before in marginal VFR conditions. Approach cleared me for the approach. With the autopilot coupled to the FD I passed the IAF in heavy IMC and turned inbound at the IF. Approach cleared me to switch to the UNICOM frequency, which I did. I noticed that the autopilot was not maneuvering the airplane as I had intended, it was making a climbing left turn off course. I decoupled the autopilot and hand flew the airplane while attempting to reset the FD. While being distracted trying to reset the FD I inadvertently got off altitude and heading and found myself in an unusual attitude. I recovered from the unusual attitude and got the airplane stabilized and hand flew the airplane and landed without further incident. I performed well during my recent IPC, but single pilot instrument flying in heavy IMC is not the same as being placed under-the-hood with flight instructor in the right seat. Also, emphasis should be made on (UPRT) Upset Prevention and Recovery Training. I will seek training before doing single pilot low IMC approaches in the future.

Synopsis

PA-46 pilot reported difficulties with the Flight Director resulted in a momentary unusual attitude event in IMC conditions.

ACN: 1805426 *(44 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : CVO.Airport
State Reference : OR
Relative Position.Distance.Nautical Miles : 2
Altitude.MSL.Single Value : 400

Environment

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

Aircraft : 1

Reference : X
ATC / Advisory.UNICOM : CVO
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Mission : Training
Flight Phase : Final Approach
Route In Use : Visual Approach
Airspace.Class G : CVO

Aircraft : 2

Reference : Y
Make Model Name : Small Aircraft
Flight Phase : Final Approach
Airspace.Class G : CVO

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 : Instrument
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 805
Experience.Flight Crew.Last 90 Days : 150
Experience.Flight Crew.Type : 775
ASRS Report Number.Accession Number : 1805426
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Observer
Detector.Person : Flight Crew
Miss Distance.Horizontal : 2
Miss Distance.Vertical : 2
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

I was doing an instrument approach in to CVO with a student. RNAV 35. We had made normal radio calls, 10, 7, 5, 2 and 2 miles out. There was one plane in the downwind who had called #2, landing behind my student and I on Runway 35. When we were below the LPV minimums and the student had removed the foggles, somebody on the ground holding short of Runway 35 called out "there is about to be a mid air collision for the 2 planes on final." My student and I both were looking out straight ahead and to the sides and saw nothing. Out of nowhere a plane [Aircraft Y] came over the top of us, from behind and to our right and almost clipped our left wingtip. To our knowledge, there was only one plane in the downwind aside from us on short final and 2 planes holding short of 35 ready to depart. My student confirms that they saw Aircraft Y land on Runway 35 and taxi off with no radio calls. We did everything right, making all the appropriate radio calls. Aircraft Y made no calls and we never saw them on ADS-B or out the window. The pilots from on the ground from two different planes both confirmed that Aircraft Y made no radio calls and that I and my student were doing everything correctly. I never saw Aircraft Y visually or over ADS-B. The student was under the foggles for the approach but when he went visual, we still never saw a plane near us. I can confirm nobody was departing Runway 17 at the time because there was already 1 plane doing pattern work for 35, and the plane who called out the near midair collision from the ground, had just completed a taxi from 17 to 35 on the ground because it was the runway in use. This was within feet of hitting our wing from above. Not only was this incredibly unsafe, but the fact that no radio call was made ever is even more concerning.

Synopsis

GA flight instructor reported an NMAC during final approach to CVO non-towered airport. Reporter stated the other aircraft never made any radio calls during the approach which contributed to the event.

ACN: 1805216 *(45 of 50)*

Time / Day

Date : 202105
Local Time Of Day : 1201-1800

Place

Locale Reference.Navaid : YRK.VORTAC
State Reference : KY
Altitude.MSL.Single Value : 2450

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility.Visibility : 6
Light : Daylight
Ceiling.Single Value : 2700
RVR.Single Value : 7000

Aircraft

Reference : X
ATC / Advisory.TRACON : HTS
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
Airspace.Class E : ZID

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 : 4157
Experience.Flight Crew.Last 90 Days : 86
Experience.Flight Crew.Type : 3855
ASRS Report Number.Accession Number : 1805216
Human Factors : Situational Awareness
Human Factors : Fatigue

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance

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

Assessments

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

Narrative: 1

I had just crossed the YRK VORTAC and began a descent from 2,600 feet MSL towards 2,300. I realized that I had descended too quickly and should have held level at 2,600 until reaching the initial fix of MYKEE for the RNAV 12 approach into HTS. Huntington Approach queried me as to my low altitude (I had descended to 2,450 feet MSL). I corrected my altitude and was then asked by Huntington Approach if I could maintain my own obstruction clearance on the approach. I answered in the affirmative and continued on the approach to a landing without any further issue. This was my initial error. I realized I was fatigued on a long flight with a strong headwind and long period of time in IMC. I should have maintained 2,600 feet MSL until crossing MYKEE.

Synopsis

GA pilot reported an altitude deviation during approach to HTS airport resulting in a low altitude alert from ATC.

ACN: 1804022 *(46 of 50)*

Time / Day

Date : 202104
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 0
Relative Position.Distance.Nautical Miles : 0
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : VMC
Light : Daylight
Ceiling.Single Value : 25000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Corporate
Make Model Name : Gulfstream G650
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Final Approach
Route In Use.Other
Airspace.Class B : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : PA-44 Seminole/Turbo Seminole
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Flight Phase : Cruise
Airspace.Class E : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 6000
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 1000
ASRS Report Number.Accession Number : 1804022
Human Factors : Distraction
Human Factors : Workload
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 30000
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 1200
ASRS Report Number.Accession Number : 1803832
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Communication Breakdown
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Conflict : NMAC
Detector.Automation : Aircraft RA
Miss Distance.Vertical : 300
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

On the Approach ATC advised us of uncontrolled VFR traffic at 2,500 feet who was ducking under the Class Bravo. We called visual and saw the aircraft on TCAS, which showed the aircraft 400 feet above us. We were at 2,000 feet on the approach. When the VFR aircraft

was about a mile and a half, TCAS showed a descent of the offending traffic, and an RA to monitor vertical speed. I believed the descent mode of the TCAS to be inhibited, and since the aircraft was now showing 300 feet above us, I initiated a descent, bottoming out at 1,850 feet. Upon landing, we called the TRACON on the telephone, and were told by the person who answered that he believed the target had gone to a satellite airport. I spoke to the supervisor at that tower, and the Supervisor was able to tell me that the aircraft had actually gone to a different satellite airport, but the radar playback showed the targets merging with us at 1,900 feet, and the offending aircraft 300 feet above us. He allegedly then threaded the needle between the top of Class D, and the Class B, and went to its destination. It's been very problematic in the last few years of VFR aircraft flying under the Class Bravo, and us having to take evasive action beyond the TCAS RA to avoid collisions, especially on the approaches. This airspace really needs to extend the 30 mile ring to the surface, in order to protect all of the approaches into the very busy satellite airports in the area.

Narrative: 2

While on the RNAV Approach ATC pointed out traffic at our 11:00 oâ€™clock position 500 feet above us, heading our way. We acquired the traffic visually, but shortly thereafter we got an RA to descend as the other aircraft, a light twin, started a descent. He passed right over head us. After landing, I called the TRACON to find out about that aircraft, but the Supervisor had no information as the shift had just changed. So we called a Tower. The controller there opened an investigation, and got back to us later. The controller indicated that the radar showed the two aircraft merged, and the vertical separation was only 300 feet. The controller also indicated that the light twin did not violate anybodyâ€™s airspace. It threaded the needle between the top of Class D, and the bottom of the overlying Class B, on its way to its destination, and at the intersection on the approach it was in class E. Therefore this guy was completely legal the whole time. I believe the time has come to lower the floor of the Class B in this airspace to protect the approaches into some of the busiest General Aviation airports in America. I do not believe that the other pilot ever saw us, and it is time the FAA put a stop to guys threading the needle in these busy airspace locations.

Synopsis

Flight crew reported receiving an RA caused by a VFR light twin, while they were on final approach .

ACN: 1804019 *(47 of 50)*

Time / Day

Date : 202104
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 289
Relative Position.Distance.Nautical Miles : 5
Altitude.MSL.Single Value : 1800

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 2
Light : Daylight
Ceiling.Single Value : 1500

Aircraft

Reference : X
ATC / Advisory.TRACON : 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 : IFR
Mission : Training
Nav In Use : GPS
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class E : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 1380
Experience.Flight Crew.Last 90 Days : 124
Experience.Flight Crew.Type : 435
ASRS Report Number.Accession Number : 1804019
Human Factors : Distraction
Human Factors : Fatigue

Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Confusion

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Student
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 277.1
Experience.Flight Crew.Last 90 Days : 17.3
Experience.Flight Crew.Type : 100
ASRS Report Number.Accession Number : 1804065
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Confusion
Human Factors : Training / Qualification

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

I was acting as a flight instructor on board Aircraft X, a Cessna 172S on a local IFR flight practicing approaches. My student is a Certified Flight Instructor (CFI) candidate who was

gaining instrument currency and proficiency. We began with an ILS approach at ZZZ1 with my student flying the aircraft and me handling ATC communications to reduce his workload in the hard IMC conditions. We crossed a cold front while receiving vectors for the ILS approach where we encountered light to moderate turbulence and precipitation. We completed the ILS approach without incident and proceeded to the VOR for the VOR-A approach into ZZZ, planning to complete a Low Approach Only. We experienced severe turbulence which forced the autopilot (GFC700) to disconnect and I took the controls of the aircraft and requested deviations to the north as necessary to track clear of the progressing cold front. Once we got into smoother air, I gave my student the flight controls and we proceeded direct ZZZ2 [VOR] for a procedure turn. Our plan was to complete the VOR-A approach and then receive radar vectors for the RNAV 01 at ZZZ. My student had proclaimed that he wanted to avoid going back through the cold front while getting vectored for the RNAV 01 approach and suggested we circle to land at ZZZ and cancel the IFR flight plan. When my student suggested this, we had passed the Final Approach Fix inbound and began a descent to the Minimum Descent Altitude and were switched over to advisory frequency. I switched frequencies back to Approach to tell them our intentions to try and circle to land since they were expecting us to go missed on the practice approach. When I told ATC of our intentions, they replied in the affirmative and added "Aircraft X, low altitude alert, check altitude immediately, altitude indicates 1,800." I replied the altitude checks and requested an altimeter setting. ATC replied with an altimeter setting of 29.58 and we had a setting of 29.67 set in. I figured this was why they gave us the low altitude alert but then quickly realized that the Minimum Descent Altitude for the segment of the approach we were on was 2,020 feet and we were at 1,720 feet with the new altimeter setting. I informed my student to return to 2,020 feet and we continued on the approach without issue and proceeded with the missed approach with vectors to the RNAV01 at ZZZ. During the missed approach, I was surprised at myself that I did not catch that the student had descended below the Minimum Descent Altitude and I assessed why that had happened during a period of smooth flight and during the post flight discussion with my student. During the lead up to the approach, the encounter with the severe turbulence had shaken both me and my student. We also had a back seat passenger who was an instrument student who had never been in IMC before. I was concerned with the safety of my student and the back seat student and began thinking about the circle to land approach and how we would request vectors for the RNAV Approach if we were unable to circle to land in order to stay away from the front line. I had determined from the weather when we departed ZZZ that circling for the runway at ZZZ would have been nearly impossible with the current ceilings. I told my student this and informed him we would need to execute the RNAV Approach in order to make it back into the airport. The workload at the moment was very high and the effects of the turbulence certainly could have impaired multitasking skills for both my student and I. When we began the descent on the approach, we left 3,000 feet for 2,020 feet which is the Minimum Descent Altitude until a fix which then the Minimum Descent Altitude decreases to 1,760 feet. My student did not reset the altitude select when we ran our Final Approach Fix check and the altitude select remained at 3,000 feet. Additionally, when I recognized we were below the published Minimum Descent Altitude, I should have instructed my student to execute the missed approach as 91.175(E)(1)(i) states, rather than just climbing back up to the Minimum Descent Altitude. This flight was also my third flight in hard IMC this day, and this VOR approach was my 8th approach in IMC in a span of 6 hours. I am an experienced Flight Instructor with over 45 hours in actual instrument conditions and over 150 approach logged, but never before had I completed so many IMC flights in such a time span with the challenging conditions of the frontal passage. My self-assessment prior to this flight determined I was able to complete the flight successfully with good quality of instruction to the student, but the extraordinary conditions we experienced during the flight quickly eroded that ability for me, in addition to the highly

divided workload situation we found ourselves in while inbound on the VOR Approach which led to the descent below Minimum Descent Altitude and failure to execute the missed approach immediately after. I think also a more comprehensive briefing of the approach would have aided in my student's short term memory of the initial difference of Minimum Descent Altitude. Even though I briefed the Minimum Descent Altitudes, I do not think they were retained due to the stress and workload of the situation. If this event were to occur again, I would better instruct my student to execute the missed approach rather than working to reclaim the missed Minimum Descent Altitude.

Narrative: 2

The aircraft had 3 people on board for a local approaches flight in IMC conditions in Aircraft. This flight took place while a stationary front was passing through the area. This caused for almost constant moderate turbulence at times during the flight close to the frontal passage. The flight started with an ILS approach into ZZZ1. After the ILS approach we were vectored to go to the ZZZ2 VOR . Along the way, we had to deviate twice for turbulence. This, as well as IMC conditions, was causing a good amount of sensory overload for myself and the flight instructor with me. At times during the flight the autopilot was being used, but at one point, the amount of turbulence actually caused the autopilot to disengage. Because of this, at the time of the deviation, I was hand flying the aircraft while the other pilot was loading the VOR Approach. When we proceeded inbound on the approach, there is a step down to a minimum of 2,020 feet until an 8 DME fix. Then the minimum goes lower to 1,760 feet. With the sensory overload that both I and the other pilot were experiencing during the IMC flight, we ended up descending below the altitude minimum below the fix. ATC had not updated our altimeter setting in a decent amount of time. We were called by ATC letting us know for a low altitude and to immediately recover. They gave us an updated altimeter and our altitude after the correction showed it being right at the approach total minimum. Instead of executing an immediate missed approach we climbed back up to 2020 feet then re-descended to the 1,760 minimums. By doing this we unfortunately broke 14 CFR 91.175 (c) 1, 3 and (e) 1. The proper action would have been to either, not conduct the flight in the first place or, to immediately execute the missed approach once realizing the descent below the step down. We also could have stopped the flight after the ILS approach into ZZZ1. The rest of the flight utilized great CRM, but during this approach, a better action to even ask as the approach started would have been to double check the approach and its minimums including each step down.

Synopsis

Instructor and student reported descending below Minimum Descent Altitude, which they attributed to an incorrect altimeter setting, and turbulence.

ACN: 1802822 *(48 of 50)*

Time / Day

Date : 202104
Local Time Of Day : 0601-1200

Place

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

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B767-300 and 300 ER
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class D : ZZZ

Component

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1802822
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1802912
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.General : Maintenance Action
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

I was the PM (Pilot Monitoring) for the flight and first approach. It started with a C HYD QTY (Center Hydraulic Quantity) EICAS in the terminal area of ZZZ. The QRH was completed. A RNAV GPS approach was conducted with the autopilot and autothrottles off. Weather was day/VMC. Immediately after gear and flaps were extended there was a complete failure of the C hydraulic system with the associated EICAS messages. I announced to the PF (Pilot Flying) that we would have to abandon the approach and complete the QRH. I coordinated a go around with Tower. I explained our problem and our need to perform the QRH before another attempt to land. While talking to Tower, I failed to monitor our airspeed after the First Officer (FO) arrested the rate of descent. I had not given him any guidance as to maintaining a particular speed or altitude. The stick shaker got my attention. I called "Speed" just as the PF added power and recovered quickly. Tower handed us over to Approach. I explained the need to perform the QRH, the time needed to complete the QRH, and that we would only have 2 of three hydraulic systems. A few minutes into working on the QRH procedure ATC advised us that they were [giving priority to] us. ATC asked for souls on board and fuel state. The QRH was completed. I elected to become the PF for the landing. The landing and rollout were successful. Emergency vehicles escorted us to parking. Of course I wish I could do it over. I'm not

happy with my initial performance with the problem. The system failure happened at the most inconvenient time. Nonetheless the decision to not land and fix the problem was easy enough. However, my initial execution was poor. After announcing the problem to the PF, I should have simply called Go Around. That would've put us back into the "Aviate" phase and eliminated the stick shaker activation. Then I would've told Tower of the Go Around. Everything else would have sequenced properly for the remainder of the flight.

Narrative: 2

The Captain was PM and I, the First Officer was PF for our flight. Takeoff, climb and cruise were uneventful and no issues or indications were observed until descent into ZZZ. After obtaining the latest weather at ZZZ we decided Runway XX would be the most suitable based on the winds (270/3) and we would plan on and request the RNAV XX into ZZZ. We loaded the approach, requested landing performance via ACARS and briefed it as a normal flight. Descending into the area required the use of the speed brakes in order to keep the aircraft on the established VNAV path as well as slow down to 240 kts when passing 10,000 ft. Once reaching 9000 ft on a downwind position we first saw the C HYD QTY EICAS message appear. The PM checked the status page and noticed a magenta "RF" and an indication of 0.45 for the center hydraulic quantity. The PM ran the C HYD QTY QRH and the only information listed was "the hydraulic quantity is low". We completed the checklist, called for recall review, cancelled it and discussed that we would write it up once on the ground in ZZZ and advise maintenance of the issue. We continued our descent for the RNAV XX approach, reducing speed and configuring for the landing. We were issued a heading and to maintain 3000 till established and we were cleared for the approach. I had setup for an approach as briefed, set 1200 in the altitude window and the aircraft began a shallow descent in VNAV PATH down to the minimums. After calling for "gear down, flaps 20", I set 160 kts in the speed window and the C HYD SYS PRESS EICAS message appeared. I called for "flaps 25, landing checklist" when the PM alerted me of the EICAS message. After this a series of additional EICAS messages appeared and discrete lights illuminated. I noticed LEADING EDGE, TRAILING EDGE, and TE FLAP ASYM as the associated discrete lights had illuminated as well and got my attention. As the list of messages and indications appeared, the PM stated "We can't land like this, we're going to need to find a place to go figure out what's happened". As the PF, I had set 146 as the target speed for the approach and had just disengaged the autopilot and authrottle as briefed on the arrival briefing for automation intent. After the PM made that statement I hesitated to continue descending as I knew we could not land in this condition. The PM advised tower that we had an issue and would need to stay in the traffic pattern in order to troubleshoot the problem and would not be able to land at this time. At this moment I noticed the low speed awareness tape had not continued trending downward and minimum operating speed (red and black tape) was now very close to our current speed. Shortly after the stick shaker came on for roughly one second as the airspeed trended into the minimum operating airspeed range. I immediately added thrust and added forward pressure on the control column to increase airspeed and stop the stick shaker. The PM called out "Airspeed" as I was taking corrective action. ZZZ tower informed us we could climb to 3000 ft. to abandon our approach and to run the necessary QRH. The PM set 3000 in the altitude window, we both verified it and I pressed the GA (Go Around) switch on the thrust levers. We conducted the GA profile, when bringing the flaps to 20 I could feel the asymmetric condition as the aircraft pitched up and the thrust increased. Continuing with the GA the PM raised the landing gear up, we maintained runway heading and set a speed of roughly 185 kts in the climb out. During the climb out the master caution light was intermittent as the gear doors and landing gear indications were intermittent as well. I remained PF with the autopilot disengaged and the auto throttle engaged. The PM attempted to engage Right Autopilot Command but we noticed this did not initially work so I continued flying manually with no autopilot. ZZZ approach advised us to proceed direct

to the ZZZ1 VOR and stay within 10 DME while we ran the QRH and advised them of our intentions. At this time ATC asked for souls on board and fuel remaining and we advised them we had 2 souls on board and roughly 2 hours of fuel. The PM ran through the C HYD SYS PRESS QRH, noticing the center hydraulic quantity was down to 0.15 at one point. With no success completing the QRH, we completed the descent and approach checklist from the deferred items followed by the alternate flap extension and alternate gear extension checklists. The leading and trailing edge flaps successfully extended to 20 and the landing gear was down and 3 green lights were illuminated. At this time the PF and PM switched roles as the captain stated he felt more comfortable conducting the approach to landing. The captain stated the briefing remained the same and talked about the different Vref as a result of the new flap setting. After a positive transfer of controls, I advised ZZZ approach we would like to return to ZZZ and conduct the RNAV XX approach. We were vectored on a left downwind for the approach at which time the PF reduced speed to the target speed of 156 based on a flaps 20 Vref of 151, while I completed the landing checklist from the deferred items. We advised ATC we would be able to land the aircraft normally, they informed us that ARFF (Aircraft Rescue & Fire Fighting) would be standing by the runway just in case. We landed Runway XX and exited at taxiway 1 and told tower we could taxi to the international cargo ramp without any additional assistance. We left the flaps down at 20 after landing in order to prevent any further issued with the flight control movement. After blocking in on the ramp, maintenance came up and informed us that a substantial amount of hydraulic fluid had leaked onto the right main gear. We completed the necessary post flight paperwork, placed it in the trip envelope and then conducted a post flight inspection speaking to ARFF and maintenance about the exterior of the aircraft. At this time the captain and I grabbed our flight bags and headed to the Company transport to leave the airport. Looking back on the event I think there were a few things that could've been done differently. The initial indication of the C HYD QTY should have been a sign that something may have gone wrong, and after running the associated QRH we could've perhaps asked to slow and configure early to identify if there was an issue while at a higher altitude rather than on final approach. My role of PF on final approach. Despite the indications, discrete lights and overall confusion that was occurring at the time I should've had focused solely on flying the airplane and not getting distracted by the other things going on. This may have prevented the stick shaker event from occurring. There was no clear command to go around once we encountered the C HYD SYS PRESS EICAS message. Rather than wait for instructions or what the Captain was trying to diagnose, I should've called go around instead of remaining at 2500 ft with the airspeed trending downward in that configuration. As the other crew member I could have voiced my opinions in a more assertive way, stating what I believe may have happened as well as consulting the Captain if he felt we should identify as an emergency at the time.

Synopsis

Flight crew reported having a stick shaker activation during a go around, which was attributed to a hydraulic system failure.

ACN: 1802638 *(49 of 50)*

Time / Day

Date : 202104
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : EUG.Airport
State Reference : OR
Altitude.MSL.Single Value : 2000

Aircraft : 1

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

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : EUG
Aircraft Operator.Other
Make Model Name : Helicopter
Crew Size.Number Of Crew : 2
Flight Plan : VFR
Mission : Ambulance
Flight Phase : Cruise
Route In Use : None
Airspace.Class D : EUG

Person

Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 5
ASRS Report Number.Accession Number : 1802638
Human Factors : Situational Awareness

Events

Anomaly.Airspace Violation : All Types
Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Air Traffic Control
Miss Distance.Vertical : 500

Were Passengers Involved In Event : N
When Detected : In-flight
Result.Air Traffic Control : Separated Traffic
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

Aircraft X was inbound on the RNAV Runway 34L approach. After they switched to my frequency, I issued traffic at their 10 o'clock and 10 NM eastbound. I was not talking to the VFR traffic that was crossing the approach path for Runways 34L and 34R. The traffic (Aircraft Y) called me up when they were about 2 NM from Aircraft X on a converging path and lower altitude. Aircraft Y was about 1 NM south of the EUG Class D. While they were about 500 feet below Aircraft X, and said they had Aircraft X in sight, it seemed to have the potential to cause an RA for the descent of Aircraft X. Aircraft X later called Aircraft Y in sight and passed 500 feet above them. Had the timing or weather been slightly worse, the situation could be much more dangerous. EUG should have a Class C airspace for the purpose of requiring VFR aircraft to be in contact with ATC while crossing the approach and departure paths at conflicting altitudes.

Synopsis

EUG TRACON Controller reported an airborne conflict between an air carrier aircraft and a VFR helicopter. Controller suggested EUG should be a Class C airport requiring VFR aircraft to be in contact with ATC while crossing air carrier approach/departure paths.

ACN: 1802626 *(50 of 50)*

Time / Day

Date : 202104
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : EUG.Airport
State Reference : OR
Altitude.MSL.Single Value : 2000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : EUG
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Flight Phase : Landing
Airspace.Class E : EUG

Aircraft : 2

Reference : Y
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Flight Plan : VFR
Airspace.Class E : EUG

Person

Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 5
ASRS Report Number.Accession Number : 1802626
Human Factors : Situational Awareness

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Environment - Non Weather Related

Narrative: 1

Aircraft X was IFR and requested the RNAV [Runway] 35 approach into CVO airport. I cleared them for the approach and advised them of traffic - multiple targets in the vicinity of CVO indicating 040 and below. There were probably about 10 VFR targets in the vicinity of CVO, all squawking 1200 not receiving ATC services. Several of the VFR targets were maneuvering near the IAFs for approaches into EUG Runways 16R and 16L, which could have easily caused more problems for arrivals into EUG if they had come then. I switched Aircraft X to advisory frequency at least 10 NM south of the airport. My focus then switched to other traffic I was working. After a few minutes, Aircraft X returned to my frequency to report that they were flying west to avoid traffic. They were not flying the published missed approach due to multiple other aircraft in that path. I also had to immediately issue a traffic alert to other traffic near them. They were flying on an IFR plan and maneuvering on their own below the MVA to avoid multiple other aircraft. Once they were above the MVA I vectored them further away from traffic. From what I could tell, there was not any orderly flow of the VFR traffic at CVO. CVO airport needs to have an air traffic control tower. There is too much VFR aircraft flying disorderly on their own in that vicinity, many of them student pilots and foreign, but also mixed with air taxis and jets, as well as regular aerobatic activity. This is just one example of pilots not being able to sequence themselves and pilots needing to take evasive action. Also, EUG should be upgraded to a Class C in order to require VFR aircraft flying at dangerous altitudes in the approach path of EUG to talk to ATC.

Synopsis

Eugene TRACON Controller reported an unsafe operation with numerous VFR aircraft at the CVO uncontrolled airport.