

ASRS Database Report Set

Global Positioning System (GPS) Reports

Report Set Description.....A variety of reports referencing use of Global Positioning System (GPS) devices.

Update Number.....34

Date of UpdateApril 8, 2024

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

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

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000



TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

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

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

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

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

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

A handwritten signature in cursive script that reads "B. Hooey".

Becky L. Hooey, Director
NASA Aviation Safety Reporting System

CAVEAT REGARDING USE OF ASRS DATA

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

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

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

Report Synopses

ACN: 2062181 *(1 of 50)*

Synopsis

Air carrier flight crew reported they experienced GPS jamming flying through the Cairo FIR and missed a frequency change to the adjacent control facility.

ACN: 2062063 *(2 of 50)*

Synopsis

Air carrier Captain reported GPS malfunction flying through Eastern European airspace.

ACN: 2058307 *(3 of 50)*

Synopsis

Part 107 UAS pilot reported flying in TFR without authorization.

ACN: 2054512 *(4 of 50)*

Synopsis

Air carrier pilot reported GPS jamming in Jeddah FIR airspace. The location was in the vicinity of Red Sea/Sinai Peninsula.

ACN: 2051526 *(5 of 50)*

Synopsis

Light aircraft pilot reported receiving a low altitude alert from ATC on approach to OLM airport when they descended below charted altitude in instrument conditions.

ACN: 2051513 *(6 of 50)*

Synopsis

Skydiving plane pilot reported after reaching what appeared to be the correct location for the skydivers to disembark, the aircraft experienced a GPS map shift. The pilot stated he visually found the correct location. The pilot reported there was military maneuvers in the area.

ACN: 2049716 *(7 of 50)*

Synopsis

Air carrier Captain reported the repainted Taxiway Y1 at BNA visually reduced the wingtip clearance with outbound traffic on Taxiway Y2. Reporter also stated the charts incorrectly depict Taxiway Y1's change of position after the repainting.

ACN: 2048762 *(8 of 50)*

Synopsis

Captain reported GPS signal loss in ORBB foreign airspace caused distractions which resulted in them failing to send a mandatory position report.

ACN: 2048490 *(9 of 50)*

Synopsis

Air carrier flight crew received obstacle warning on approach. Adjusted approach path and landed uneventfully.

ACN: 2047819 *(10 of 50)*

Synopsis

Air carrier Captain reported GPS jamming on the descent into ELP. Captain stated there was a late approach change, by ATC, contributing to an unstable approach.

ACN: 2047145 *(11 of 50)*

Synopsis

Air carrier Captain reported during arrival on PHX BRUSR 1 STAR they were given a confusing clearance for a visual approach for Runway 8. Flight crew was using RNAV Runway 8 approach which reportedly does not share a common fix with BRUSR 1 STAR to provide continuity, but the ILS Runway approach 8 does. The Captain stated the approaches are so similar, the inbound fixes should be the same.

ACN: 2045714 *(12 of 50)*

Synopsis

Air carrier flight crew reported GPS jamming resulted in intermittent GPS failures while on RNP approach.

ACN: 2045396 *(13 of 50)*

Synopsis

Captain reported GPS jamming in OPLR airspace at FL320 resulting in false GPWS indications and warnings.

ACN: 2044772 *(14 of 50)*

Synopsis

B737 Captain reported temporary malfunction indications of GPS, FMC, and transponder due to unreported and unknown circumstances. Captain also reported similar situation reported by several other aircraft.

ACN: 2044462 *(15 of 50)*

Synopsis

Air carrier flight crew reported GPS jamming in Egyptian airspace.

ACN: 2043541 *(16 of 50)*

Synopsis

Air carrier Captain reported GPS jamming during cruise flight near Ukrainian airspace.

ACN: 2043379 *(17 of 50)*

Synopsis

Air carrier pilot crew reported GPS jamming over Pakistan.

ACN: 2042566 *(18 of 50)*

Synopsis

Air carrier Captain reported an ADS-B Out EICAS advisory message while in cruise flight over the Middle East. The crew performed the checklist procedure and suspected electronic GPS jamming, the system restored later in the flight.

ACN: 2041999 *(19 of 50)*

Synopsis

C172 pilot reported an alternator failure during a night time personal flight which resulted in a total electrical failure. The pilot was able to relay a special handling request via cell phone and complete a safe landing.

ACN: 2041905 *(20 of 50)*

Synopsis

Captain reported an airspeed malfunction and other associated malfunctions related to the aircraft air data system after takeoff in IMC. The Captain diverted and landed safely.

ACN: 2040998 *(21 of 50)*

Synopsis

Pilot reported GPS signal interference while taxiing at BHB due to construction at the airport.

ACN: 2040807 *(22 of 50)*

Synopsis

Cessna 421 pilot reported a failure of aircraft communication systems after takeoff resulted in entering class D airspace without clearance.

ACN: 2039976 *(23 of 50)*

Synopsis

Air carrier Captain reported GPS jamming in international airspace at cruise altitude. The Captain indicated the GPS jamming lasted for approximately 20 minutes.

ACN: 2038880 *(24 of 50)*

Synopsis

Embraer Phenom 300 pilot reported a loss of the Attitude and Heading Reference System resulting in uncontrolled dutch roll at cruise altitude related to a possible military GPS jamming exercise. The pilots did not slow down or reduce altitude, but regained control after a period of time.

ACN: 2037634 *(25 of 50)*

Synopsis

Air carrier Captain reported while flying near the Azerbaijan border the aircraft experienced GPS jamming. The Captain was concerned if the system would return to normal. The crew contacted maintenance for assistance.

ACN: 2037033 *(26 of 50)*

Synopsis

C-172 Flight Instructor reported a NMAC while on final approach with a low wing high performance aircraft that had entered the pattern on an overhead. Flight Instructor turned and descended to avoid contact with the other aircraft who performed a touch and go landing and departed the area.

ACN: 2036017 *(27 of 50)*

Synopsis

C172 flight instructor with a student reported engine power loss during cruise resulting in a diversion to nearest suitable airport.

ACN: 2035864 *(28 of 50)*

Synopsis

Air carrier Captain reported a false Terrain EICAS warning at 30,000 ft. during cruise. The Captain maintained level flight and the alert stopped. The Captain indicated that the aircraft was operating in airspace of known GPS jamming.

ACN: 2035443 *(29 of 50)*

Synopsis

Air carrier Captain reported GPS jamming while close to Israeli border. The Captain suggests that this not be a maintenance write-up because it is such a common occurrence on this route.

ACN: 2034531 *(30 of 50)*

Synopsis

Flight crew reported conflicting glidepath information while on a RNAV GPS approach to Runway 20 at CMD in visual conditions. The flight crew received a RAAS "too high" callout, while the aircraft was on the RNAV GPS glidepath, and the ground PAPI guidance was showing the aircraft high. The aircraft landed in the touchdown zone.

ACN: 2031003 *(31 of 50)*

Synopsis

Air carrier pilot reported a false terrain alert and ADS-B failing EICAS message while flying at 30,000 feet near SULOM intersection. The reporter stated they were not sure if this was the result of GPS jamming since this area is reportedly not known for that.

ACN: 2029651 *(32 of 50)*

Synopsis

Pilot flying C-402 aircraft after recent maintenance work on the aileron control cable reported flight control anomaly during climb out. Pilot returned to departure airport and returned plane for maintenance.

ACN: 2029379 *(33 of 50)*

Synopsis

Air carrier pilot flying reported GPS jamming in the area around BOI. The pilot crew eventually performed an ILS and visual approach to the runway because of the unreliable GPS signal.

ACN: 2029348 *(34 of 50)*

Synopsis

Fractional aircraft pilots reported a problem holding an assigned heading and altitude. Reporters stated GPS testing in the area may have contributed to the deviations.

ACN: 2028563 *(35 of 50)*

Synopsis

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

ACN: 2027953 *(36 of 50)*

Synopsis

Air carrier relief pilot reported GPS jamming which caused an excursion from the assigned altitude.

ACN: 2027712 *(37 of 50)*

Synopsis

Air carrier pilot reported GPS jamming northwest of Solon intersection. The crew deviated from the assigned altitude and then returned after resetting the GPS system.

ACN: 2027708 *(38 of 50)*

Synopsis

Air carrier B777 Captain reported GPS jamming in-flight. Although well above any terrain, the pilot received a terrain warning and earlier, a GPS jamming message.

ACN: 2027217 *(39 of 50)*

Synopsis

C-185 floatplane Captain reported a NMAC event during initial climb with a non-reporting landing aircraft. The floatplane Captain took immediate evasive action to avoid a collision.

ACN: 2026312 *(40 of 50)*

Synopsis

A319 flight crew reported hearing a loud bang and the airframe vibrating during climb-out, followed by Engine #1 rolling back to idle which made the aircraft yaw and bank. The flight attendants informed the flight crew there was a large hole in Door 2R, and a loud noise was coming from the affected door. The flight crew diverted to an alternate airport.

ACN: 2024697 *(41 of 50)*

Synopsis

Air carrier pilot crew reported GPS jamming departing Tel Aviv and continuing for hours. The crew used an alternate method to regain GPS guidance and continued the flight.

ACN: 2023441 *(42 of 50)*

Synopsis

General aviation pilot reported a near miss on final approach at a non-tower airport while proficiency training. The pilot performed an evasive maneuver at low altitude to avoid the other aircraft, re-entered the pattern and landed safely.

ACN: 2022197 *(43 of 50)*

Synopsis

CE-560 Captain reported a runway excursion onto the adjacent grass after landing at night at a non-towered airport. The Captain was able to maneuver back onto the runway with rudder control and taxied off the runway without damage.

ACN: 2021847 *(44 of 50)*

Synopsis

Wide body air carrier Captain reported GPS jamming on the AMMOS 1E arrival into LLBG.

ACN: 2021354 *(45 of 50)*

Synopsis

Air carrier flight crew reported they encountered GPS jamming in cruise flight in the vicinity of ABQ.

ACN: 2020565 *(46 of 50)*

Synopsis

GA flight instructor with student reported a track heading deviation after turning to the wrong intersection resulting in a CFTT event. ATC advised the pilots of the terrain issue prompting the crew to take evasive action.

ACN: 2020242 *(47 of 50)*

Synopsis

PA-32 pilot reported the primary navigation and communication screen went black after takeoff resulting in possible altitude and airspeed deviations. The reporter continued to destination where the avionics shop determined water damage may have caused the malfunction.

ACN: 2000093 *(48 of 50)*

Synopsis

Air carrier Captain reported GPS jamming in the vicinity of Ukraine and Syria.

ACN: 1998026 *(49 of 50)*

Synopsis

Corporate jet Captain reported executing a go-around from approach to SMO after experiencing GPS anomalies. Reporter stated he was notified that other aircraft experienced similar anomalies in that area.

ACN: 1994554 *(50 of 50)*

Synopsis

Recreational/hobbyist UAS pilot reported controllability issues flying their UAS and believes the GPS module or remote controller are possible causes.

Report Narratives

Time / Day

Date : 202312

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : OJAC.ARTCC

State Reference : FO

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Center : OJAC

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 3

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Cargo / Freight / Delivery

Flight Phase : Cruise

Airspace.Class A : HECC

Component

Aircraft Component : GPS & Other Satellite Navigation

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

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2062181

Human Factors : Confusion

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Aircraft : X

Reporter Organization : Air Carrier

Function.Flight Crew : Captain
Function.Flight Crew : Check Pilot
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2062182
Human Factors : Workload
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
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 : Aircraft
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Human Factors
Primary Problem : Aircraft

Narrative: 1

At cruise, in radar contact with Cairo, we were contacted on guard prior DEESA and told to contact AMMAN on 128.5. We made the switch and were informed that we'd flown through Jordan and Amman without speaking to anyone. Amman asked us to squawk IDENT and confirm our aircraft registration. Upon completion of that were were given direction to switch frequencies to Jeddah control. At the time of contact on guard by Amman the radios were extremely busy and we never heard a call from Cairo to switch frequencies. We were also experiencing GPS jamming so our situational awareness (SA) in terms of location was not at it highest. Cause: Lack of situational awareness due to the amount of chatter on the ATC frequency. Lack of situation awareness due the loss of our GPS and moving map. Suggestion: Sharing the event with other aviators, letting them know how congested the radios will be in that region. Also, informing the pilot group that GPS jamming is common in that region. Be prepared for the jamming and don't let that keep you from maintaining your positional SA. There are three border crossings in the matter of about 15 min. Be prepared for frequency changes.

Narrative: 2

The following narrative was given to me by my Captain trainee and Relief Pilot after returning to the flight deck after a rest period. While transiting from Cairo airspace to Amman airspace, there was no frequency assigned by the Cairo controller to contact Amman. In the vicinity of waypoint PETRA, the AMMAN controller transmitted on 121.5 for

our flight to contact him with an assigned frequency. The Captain trainee, who is a previous first officer on this equipment, and my Relief Pilot, answered the AMMAN controller on the requested frequency. The AMMAN controller was apparently angry that our flight had entered his airspace without radio contact with him. He then asked for our aircraft registration which was given. The AMMAN controller then assigned a frequency to contact JEDDAH control. As the Captain Line Check Airman, I was in the crew bunk during this event. I was notified of the problem at the end of my rest period. The rest of the flight was uneventful. Cause: Failure of the Cairo controller to accomplish a timely hand off to the AMMAN controller. Also, failure of the flight crew to maintain awareness of the airspace they are in along with the necessity to be proactive about maintaining radio communications with the controlling agencies. Suggestion: The Cairo controller should have issued a frequency change for our flight to contact the AMMAN controller before our flight entered the Amman FIR. Also, the Captain trainee and Relief Pilot, should have maintained a higher degree of situational awareness regarding the need to be proactive in effecting the hand off from Cairo to Amman. Approaching the Amman FIR, the flight crew should have contacted Cairo and requested the Amman frequency.

Synopsis

Air carrier flight crew reported they experienced GPS jamming flying through the Cairo FIR and missed a frequency change to the adjacent control facility.

Time / Day

Date : 202312

Place

Locale Reference.ATC Facility : LRBB.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 36000

Aircraft

Reference : X
ATC / Advisory.Center : LRBB
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Airspace.Class A : LRBB

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 16297.50
Experience.Flight Crew.Last 90 Days : 122.47
Experience.Flight Crew.Type : 69.77
ASRS Report Number.Accession Number : 2062063
Human Factors : Human-Machine Interface
Human Factors : Confusion
Human Factors : Distraction

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Software and Automation

Contributing Factors / Situations : Environment - Non Weather Related

Primary Problem : Ambiguous

Narrative: 1

Aircraft approximately 120 miles east of position KARIL. Enhanced Ground Proximity Warning System activated at 36000 ft. warning, "PULL UP!, PULL UP!". This occurred for approximately fifteen second until silenced by GPWS TERR OVERRIDE button. Aircraft was experiencing GPS failure with "DME-DME" updating. RNP was 2.0, ANP .41.

Synopsis

Air carrier Captain reported GPS malfunction flying through Eastern European airspace.

Time / Day

Date : 202311

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Relative Position.Distance.Nautical Miles : 6.1

Altitude.AGL.Single Value : 350

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Ceiling : CLR

Aircraft

Reference : X

Aircraft Operator : Commercial Operator (UAS)

Make Model Name : DJI Phantom 4 RTK

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 107

Mission : Surveying / Mapping (UAS)

Flight Phase : Climb

Airspace.TFR : ZZZ

Operating Under Waivers / Exemptions / Authorizations (UAS) : N

Weight Category (UAS) : Small

Configuration (UAS) : Multi-Rotor

Flight Operated As (UAS) : VLOS

Flight Operated with Visual Observer (UAS) : Y

Control Mode (UAS) : Transitioning Between Modes

Type (UAS) : Purchased

Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)

Reporter Organization : Commercial Operator (UAS)

Function.Flight Crew : Remote PIC (UAS)

Function.Flight Crew : Person Manipulating Controls (UAS)

Qualification.Flight Crew : Remote Pilot (UAS)

Experience.Flight Crew.Total (UAS) : 100

Experience.Flight Crew.Last 90 Days (UAS) : 10

Experience.Flight Crew.Type (UAS) : 100

ASRS Report Number.Accession Number : 2058307

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected : In-flight
Result.Flight Crew : Exited Penetrated Airspace

Assessments

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

Narrative: 1

I, as the single pilot of the UAS failed to check for TFR prior to launching drone to fly a preprogrammed survey route over a construction site which I have flown a few times previously. I flew my UAS briefly into restricted airspace but landed the drone within a couple of minutes of learning the details of the TFR which I had violated I overrode the built-in automatic lockout feature on my Phantom 4 RTK drone as I have done many times previously to allow the drone to fly. Typically the GPS automatic lockout provided by DJI as part of the command and control software is not super precise and is more of a 2D feature, often automatically blocking flights that are near but not technically inside or below restricted airspace. I incorrectly assumed that this lockout was the same issue on this flight as all of the others I have ever had. However as the drone was climbing to the pattern height, I did check the TFR notice that was provided by the software and saw that it was something unusual and it was for a VIP in town and extended from the ground all the way to 18,000 feet. So I landed the drone immediately and did not complete the survey. I did not attempt to relaunch after that and terminated my planned flights for the rest of the day. I explained what happened to my bother, and he recommended that I file this incident report. As a result of this incident I have downloaded a new app to my phone - b4ufly application so that I can check TFRs and NOTAMs right before I fly and not rely solely on my initial airspace checks and previous flight experience at each site. I do not expect this to ever happen again and I apologize for my mistake.

Synopsis

Part 107 UAS pilot reported flying in TFR without authorization.

Time / Day

Date : 202311

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : OEJD.ARTCC

State Reference : FO

Aircraft

Reference : X

ATC / Advisory.Center : OEJD

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

Nav In Use : GPS

Nav In Use : FMS Or FMC

Flight Phase : Cruise

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : Navigational Equipment and Processing

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 2054512

Human Factors : Troubleshooting

Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe

Detector.Automation : Aircraft Other Automation

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

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

Narrative: 1

During cruise flight near departing the Jeddah FIR, vicinity of Red Sea/Sinai Peninsula we began to receive indications of GPS jamming. I have received several operation group emails indicating jamming and spoofing in the Cairo FIR that have been significant and was alert for that potential. I was not expecting to see in Jeddahs airspace. On L550 approximately 10nm east of OBNAK we received a TRANSPONDER R EICAS approximately 50nm east of KITOT we got a TRANSPONDER L EICAS followed shortly after by TERR POS EICAS. The ND (Navigation Display) indicated that the GPS was gone and the aircraft was navigating on IRS (Inertial Reference System) (3) and shortly after with IRS-DME/DME. The GPS data on the FMC POS pages was gone. I informed Jeddah Control that we were negative GPS. With DME updating and sufficient ground nav aids available for position cross checks I did not have a concern regarding position reliability. Some operators appear to have had much more significant navigation failure outcomes. The period of GPS loss was approximately 250nm and systems began to normalize in the vicinity of SISIK on N697. The rest of the flight through Cairo was uneventful.

Synopsis

Air carrier pilot reported GPS jamming in Jeddah FIR airspace. The location was in the vicinity of Red Sea/Sinai Peninsula.

Time / Day

Date : 202311

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : S46.TRACON

State Reference : WA

Altitude.MSL.Single Value : 1400

Environment

Flight Conditions : IMC

Weather Elements / Visibility : Rain

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility.Visibility : 1

Light : Dusk

Ceiling.Single Value : 800

RVR.Single Value : 5000

Aircraft

Reference : X

ATC / Advisory.TRACON : S46

Aircraft Operator : Personal

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

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Initial Approach

Route In Use : Direct

Route In Use : Vectors

Airspace.Class D : OLM

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 : Private

Experience.Flight Crew.Total : 300

Experience.Flight Crew.Last 90 Days : 87

Experience.Flight Crew.Type : 68

ASRS Report Number.Accession Number : 2051526

Human Factors : Situational Awareness

Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met

Anomaly.Deviation - Altitude : Overshoot

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

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Person : 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

Contributing Factors / Situations : Weather

Primary Problem : Human Factors

Narrative: 1

I was on a planned IFR practice flight in IMC. I was in communication with ATC and receiving vectors to the Final Approach Fix. The aircraft was in clouds, rain, and light-moderate turbulence for the entire approach. The autopilot had indicated a temporary autopilot failure condition (possibly due to delayed initialization) earlier in the flight, so I decided to fly the aircraft without autopilot. After being given vectors to final and cleared for the RNAV (GPS) approach, I was told to contact the Tower. I was close to the Final Approach Fix and approximately at the minimum required altitude (2400 MSL) to cross it. The short flight, turbulent IMC, and temporary autopilot failure had prevented me from completing my destination briefing earlier, so I began looking up the Tower frequency while hand-flying the plane and updating the GPS unit to sequence to the Final Approach Fix. A minute or so later, ATC called me with an altitude alert. I realized I had descended approximately 1000 feet below the minimum crossing altitude as I crossed the fix. I let ATC know that I was okay and immediately slowed the descent and carefully gained some altitude back to intercept the glide slope. I emerged from the clouds and was able to confirm the airport in sight and switch to Tower. The factors contributing to the altitude discrepancy included the workload, weather and lighting conditions, and possibly not choosing a more appropriate scale for the GPS navigation map near the Final Approach Fix. My relatively low time in actual IMC may have also contributed in terms of stress. I believe the altitude discrepancy could have been mitigated by making flying the plane the first priority, navigation the second, and ATC communications the third. Engaging the autopilot later in the flight could also have reduced workload, as well as updating the GPS map scale for different phases of the flight. Completing a full destination briefing before leaving the ground and noting important frequencies would also have helped with such a short flight.

Synopsis

Light aircraft pilot reported receiving a low altitude alert from ATC on approach to OLM airport when they descended below charted altitude in instrument conditions.

Time / Day

Date : 202311

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : HDH.Airport

State Reference : HI

Altitude.MSL.Single Value : 13900

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.TRACON : HCF

ATC / Advisory.UNICOM : HDH

Aircraft Operator : FBO

Make Model Name : Small Transport

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : VFR

Mission : Skydiving

Nav In Use : GPS

Airspace.Class E : HCF

Component

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : FBO

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Commercial

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 1184

Experience.Flight Crew.Last 90 Days : 245

Experience.Flight Crew.Type : 484

ASRS Report Number.Accession Number : 2051513

Human Factors : Situational Awareness

Human Factors : Troubleshooting

Human Factors : Workload

Human Factors : Distraction

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Exited Penetrated Airspace
Result.Flight Crew : Became Reoriented
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

While conducting skydive operations over Dillingham airfield (HDH) using GPS (OBS mode) to navigate to a user waypoint identifying the drop zone, I had a GPS malfunction where my moving map froze while climbing through 6000-8000 ft. MSL the issue corrected itself and GPS seemed to be working normally again. I notified HCF (Honolulu Control Facility) of the issue and that I was unsure if it was my equipment or if the military was affecting the GPS signal since they were in the middle of a military exercise in the area. At some point while turning to intercept the 080 course inbound to the drop zone my GPS was showing me on course and the GPS time, distance and course off set seemed to be indicating normally and outside sight picture looked good as well so I shifted most of my attention inside to ensure I configured the airplane at the right time. Right after I gave the skydivers the green light to jump and a couple jumped, out my moving map suddenly shifted to show me about 1.5 miles south of the drop zone in the restricted airspace R-3110B. I immediately stopped the rest of skydivers from jumping, made a left turn to exit the airspace, and notified HCF of the issue. I positioned the aircraft back over the drop zone using outside reference only, released the rest of the skydivers, descended and landed normally.

Synopsis

Skydiving plane pilot reported after reaching what appeared to be the correct location for the skydivers to disembark, the aircraft experienced a GPS map shift. The pilot stated he visually found the correct location. The pilot reported there was military maneuvers in the area.

Time / Day

Date : 202311

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : BNA.Airport

State Reference : TN

Altitude.AGL.Single Value : 0

Environment

Light : Dusk

Aircraft

Reference : X

ATC / Advisory.Ramp : 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 : Taxi

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 : 242

ASRS Report Number.Accession Number : 2049716

Human Factors : Situational Awareness

Human Factors : Confusion

Events

Anomaly.ATC Issue : All Types

Anomaly.Conflict : Ground Conflict, Critical

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

Anomaly.No Specific Anomaly Occurred : Unwanted Situation

Detector.Person : Flight Crew

When Detected : Taxi

Result.Flight Crew : Took Evasive Action

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

BNA Taxiway Y1 has been repainted and shifts to the left abeam Spot 25 resulting in perceived lack of wingtip clearance with outbound traffic on Taxiway Y2. BNA Ramp Control cleared us to Gate D1 via Y1 with no concern for outbound traffic on Y2. The BNA 10-9 page, both Chart and AMM (Airport Moving Map), and BNA company information page incorrectly depicted the change to Taxiway Y1. The GPS tracking on the 10-9 showed us well left of the original Y1 taxiway. We held right of the new line abeam Spot 25 to ensure a safe passage. After reaching the gate, I reached out to a BNA ground operations supervisor to voice my concern and also spoke with the chief pilot. I spoke with the BNA Ramp, they believed the current taxiway configuration ensures 20 ft. wingtip for which it appears to be otherwise. It warrants another look by BNA personnel to ensure the new taxiway configuration ensures proper wingtip clearance. Suggestions: Under the current taxiway configuration, air crew should be cautious for conflict near Spot 25. Additionally, the current taxiway configuration abeam the terminal near Spot 25 needs to be reevaluated to ensure proper wingtip clearance for all aircraft.

Synopsis

Air carrier Captain reported the repainted Taxiway Y1 at BNA visually reduced the wingtip clearance with outbound traffic on Taxiway Y2. Reporter also stated the charts incorrectly depict Taxiway Y1's change of position after the repainting.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ORBB.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 390

Aircraft

Reference : X
ATC / Advisory.Center : ORBB
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Flight Phase : Cruise

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : 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 : 2048762
Human Factors : Workload
Human Factors : Human-Machine Interface
Human Factors : Communication Breakdown
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Software and Automation

Contributing Factors / Situations : Human Factors

Primary Problem : Aircraft

Narrative: 1

While over southern Turkey approaching Iraq Airspace we first experienced intermittent Right Transponder messages. The Left was tried and it also produced messages. Then we experienced the loss of GPS Signal (iPads as well) and finally communication with Baghdad Control became very garbled. The flight plan did indicate the possibility of these events happening in this airspace because of the ongoing military activity. The interference lasted for approximately XX minutes and there were no incidents/problems because of it. However, I had prepped a company position report to send at RATVO intersection. Due to the distraction with communications, GPS and the Transponders, I failed to send the position report. I did not realize the error until we were on the ground. Cause: Distraction due to interference with navigation and communication. Suggestion: Double check company procedures especially when non normal conditions occur. We may or may not have received a dispatch request for a position report during the time of communication interference. When the X hr requirement was not met, Dispatch should have been following up for it.

Synopsis

Captain reported GPS signal loss in ORBB foreign airspace caused distractions which resulted in them failing to send a mandatory position report.

Time / Day

Date : 202310

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : MDT.TRACON

State Reference : PA

Relative Position.Distance.Nautical Miles : 4

Altitude.MSL.Single Value : 2100

Environment

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.TRACON : MDT

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Mission : Passenger

Flight Phase : Initial Approach

Airspace.Class D : MDT

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 : 100

Experience.Flight Crew.Type : 10000

ASRS Report Number.Accession Number : 2048490

Human Factors : Situational Awareness

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 : Took Evasive Action

Assessments

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

Narrative: 1

We had thoroughly briefed the GPS approach at RDG. Cleared for the visual for Runway 31 we backed it up with the LNAV and VNAV with autopilot disengaged. We were on profile and just before ADEKY we got an obstacle warning. We verified we were on the proper VNAV PATH. Made minor level off as we had the (Tower) obstacle in sight. We were warned of this from Operations. So, it's a known problem let's get the approach plate redesigned. Suggestion: Redesign the crossing altitudes on this approach.

Synopsis

Air carrier flight crew received obstacle warning on approach. Adjusted approach path and landed uneventfully.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ELP.TRACON
State Reference : TX
Altitude.MSL.Single Value : 6300

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Tower : ELP
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : RNAV 22
Flight Phase : Final Approach
Route In Use.STAR : SAMMR3
Airspace.Class C : ELP

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 227.22
Experience.Flight Crew.Type : 6541.92
ASRS Report Number.Accession Number : 2047819
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Overrode Automation

Assessments

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

Narrative: 1

As I recall, We were on the SAMMR3 Arrival and set up for and briefed the RNAV RNP Z 22. Cleared direct FISPI, RNAV GPS Y cleared visual approach Runway 22. I believe the FO (First Officer) changed approaches in the FMS from "Z" to "Y". It was a short approach vector, we accepted it obviously but now we were too high. Gear down, flaps 15, approx 5700 MSL. I called "unstable, going around", which we executed. Vectors off the missed approach to the same approach, climb to 6500 MSL per ATC. Base leg was at 6500 MSL I believe, cleared visual approach Runway 22. FAF min altitude was 5100 MSL, so we were high again. Gear down, flaps 15, then fully configured by 700-800 AGL. VNAV would not engage as we did not re cruise from 8000 MSL on the missed to 6500 MSL. We were stable by 600 AGL, Aircraft X RAAS (Runway Awareness and Advisory System) audible was "Too high, Too high" which I believe was based on a descent from 8000 MSL. I was comfortable landing from a stable approach, touch down and landing were in the touchdown area with an Auto Brakes 3 short roll out. I haven't been to ELP in quite a while, we were getting GPS jamming on the descent which was a distraction. I think the ATIS was advertising the "Z" approach, we were cleared the "Y" version.

Synopsis

Air carrier Captain reported GPS jamming on the descent into ELP. Captain stated there was a late approach change, by ATC, contributing to an unstable approach.

Time / Day

Date : 202310

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : PHX.Airport

State Reference : AZ

Aircraft

Reference : X

ATC / Advisory.TRACON : P50

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Nav In Use.Localizer/Glideslope/ILS : RNAV 8

Flight Phase : Initial Approach

Route In Use.STAR : BRUSR 1

Airspace.Class B : PHX

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 : 2047145

Human Factors : Confusion

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Troubleshooting

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types

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

Anomaly.No Specific Anomaly Occurred : Unwanted Situation

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Became Reoriented

Assessments

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

Narrative: 1

PHX WX (Weather) day VFR CAVU, on east flow. Aircraft on BRUSR 1 RNAV STAR for Runway 08. ILS [Runway] 8 NOTAMd OTS (Out of Service). Crew loaded, briefed, and planned RNAV GPS Y Runway 8 prior to TOD (Top of Descent), as backup for visual approach, expecting vectors to final as standard between TLMAN and JAMIL. Instead controller, gave an unfamiliar sounding clearance to (paraphrased) "remain on the BRUSR, cleared for the visual approach Runway 8." Both the First Officer as PF (Pilot Flying) and myself as Captain/PM (Pilot Flying) remarked to each other that that was an unusual sounding clearance in general, that there was no proximate traffic ahead to delay vectoring us towards the runway, and because this STAR and IAP share no common fix. The more commonly used ILS 8 does share JAMIL with the BRUSR however, yet even then vectors are always given in our experience. As we had already called the field in sight and were at the point where a standard rate turn from base to final was required, we just accepted the visual approach clearance, joined the FAC (Final Approach Course) normally without overshoot, and landed normally without any difficulty or ATC query. A less familiar crew, both of us being based at PHX, perhaps with night, WX, etc., might have fared differently. It is especially confusing because JAMIL sits right on the FAC as displayed on the Aircraft navigation display, but it is most assuredly NOT part of the RNAV 8 IAP. Had we done as a crew is trained to do, arm the approach mode and monitor for FAC interception, we would have blown right through the FAC, with a potential loss of separation for [Runway] 7R traffic, of which there was none for us, but commonly are there. Poor design of RNAV GPS Y Runway 8 IAP, in that it shares no common fix with the RNAV STAR, coupled with the controller's unusual clearance, rather than the typical vectors to final. Recommend the RNAV (GPS) 8 be redesigned to use the same fixes as the ILS 8, both for commonality/familiarity, and to link both to the STAR to prevent an overshoot. As it is structured now, now it is an accident waiting to happen. The RNAV GPS Y Runway 8 should be reconfigured to used the same waypoints of JAMIL and WAZUP as the ILS 8, both for commonality and so that the RNAV STAR can link to the RNAV IAP. Until then, controllers must issue vectors to final. Airports such as LAX are now issuing blanket approach clearances to given runways, because whether ILS, RNP, or RNAV, they all use the same fixes and FACs.

Synopsis

Air carrier Captain reported during arrival on PHX BRUSR 1 STAR they were given a confusing clearance for a visual approach for Runway 8. Flight crew was using RNAV Runway 8 approach which reportedly does not share a common fix with BRUSR 1 STAR to provide continuity, but the ILS Runway approach 8 does. The Captain stated the approaches are so similar, the inbound fixes should be the same.

Time / Day

Date : 202310

Place

Locale Reference.Airport : ELP.Airport

State Reference : TX

Altitude.MSL.Single Value : 1500

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : ELP

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

Flight Phase : Final Approach

Route In Use.Other

Airspace.Class C : ELP

Component

Aircraft Component : GPS & Other Satellite Navigation

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.Last 90 Days : 10.47

Experience.Flight Crew.Type : 931.13

ASRS Report Number.Accession Number : 2045714

Human Factors : Confusion

Human Factors : Distraction

Person : 2

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Experience.Flight Crew.Last 90 Days : 145.57
Experience.Flight Crew.Type : 415.50
ASRS Report Number.Accession Number : 2046333
Human Factors : Distraction
Human Factors : Confusion

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

Briefed and flew an arrival connected to the RNP Z approach. Descending into El Paso, the GPSs started to fail, both, in and out of service for a bit. Pointed this out to Approach Control and they informed us of White Sands Missile Range doing GPS jamming and might effect our GPSs. It did. Conditions very VMC and visibility was very clear. We were provided vectors to final and automation was eventually disconnected. The GPS failures contributed to my slow calls to get configured early enough. I was late to configure, faster than I should have been and above glide slope. Anticipated corrections for the aircraft parameters were made and communication with the Captain was clear and concise and calm. By the book, we should have gone around at 500 ft. We didn't. With 12000 ft. of runway available, I landed well inside the TD Zone, smoothly. The ACARS Approach Report Below 500 ft. belongs in the Hall of Shame. Good debrief post Shutdown.

Narrative: 2

During an approach in to ELP a late configuration caused a higher than normal rate of descent. With a 12000 foot runway and the touchdown zone made we continued the approach. We did land very smoothly in the touchdown zone. This all occurred in VMC conditions with good visibility. Crew coordination and communication between myself and the first officer were clear and concise throughout the arrival and approach. In hindsight we should have executed a go-around. Some contributing factors were GPS anomalies that we were experiencing. We reported these to ATC and were informed that the White Sands Missile Range was conducting a GPS jamming exercise. This did in fact cause some distractions and most likely contributed to a late/slow configuration. We conducted a thorough debrief regarding this situation after the flight.

Synopsis

Air carrier flight crew reported GPS jamming resulted in intermittent GPS failures while on RNP approach.

Time / Day

Date : 202310
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : OPLR.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 32000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Center : OPLR
Aircraft Operator : Air Carrier
Make Model Name : Boeing Company Undifferentiated or Other Model
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise

Component : 1

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

Component : 2

Aircraft Component : GPWS
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 1532
Experience.Flight Crew.Last 90 Days : 134
Experience.Flight Crew.Type : 715
ASRS Report Number.Accession Number : 2045396

Events

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

When Detected : In-flight

Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Software and Automation

Contributing Factors / Situations : Environment - Non Weather Related

Primary Problem : Environment - Non Weather Related

Narrative: 1

At FL320 at 40NM south of INDEK on airway L509 we experienced GPS jamming. As a result the GPWS first gave us a "terrain, terrain, terrain" warning followed by "pull up, pull up, pull up". We began noticing the GPS jamming once entering Lahore airspace so the GPWS warning was not a surprise as we knew our position along the route.

Synopsis

Captain reported GPS jamming in OPLR airspace at FL320 resulting in false GPWS indications and warnings.

Time / Day

Date : 202310
Local Time Of Day : 0001-0600

Environment

Flight Conditions : VMC

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise

Component : 1

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

Component : 2

Aircraft Component : Transponder
Aircraft Reference : X
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 Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 184
Experience.Flight Crew.Type : 315
ASRS Report Number.Accession Number : 2044772
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Other

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

Assessments

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

Narrative: 1

FO (First Officer) as PF (Pilot Flying). We were level at cruise prior to our check on with Albuquerque Center when we received GPS-L and GPS-R scratchpad messages. FMC POS (Position) REF (Reference) page did not have any data for either GPS. We referenced the GPS checklist, and the GPS light was not illuminated. Actual ANP remained less than required but began increasing. Other aircraft reported similar problems to ATC including Aircraft Y and Aircraft Z. XPNDR FAIL light also illuminated, and the light stayed on despite selecting the other transponder. We wrote up the failures and sent an Air Carrier COMM message to Maintenance Control. No response; planned outage per pilot bulletin. About 15-20 minutes later, the GPS-L data returned and the actual RNP returned to normal. The GPS-R data never returned. After completing the flight, I called Dispatch to discuss.

Synopsis

B737 Captain reported temporary malfunction indications of GPS, FMC, and transponder due to unreported and unknown circumstances. Captain also reported similar situation reported by several other aircraft.

Time / Day

Date : 202310

Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : HECC.ARTCC

State Reference : FO

Environment

Flight Conditions : VMC

Aircraft : 1

Reference : X

ATC / Advisory.Center : HECC

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 3

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Cruise

Route In Use : Direct

Aircraft : 2

Reference : Y

ATC / Advisory.Center : HECC

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 3

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Cruise

Route In Use : Direct

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : Navigational Equipment and Processing

Aircraft Reference : X

Problem : Malfunctioning

Person : 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 : 2044462
Human Factors : Workload
Human Factors : Troubleshooting
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2044466
Human Factors : Troubleshooting
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

GPS jamming/spoofing in Egyptian airspace. Maintained magenta line with no indication from Cairo of loss of separation. However, in addition to the normal indications observed in previous GPS jamming incidents was one of particular concern. Specifically, aircraft GPS as

well as EFB and company iPad FD PRO X showed our position as stationary overhead LLBG (Ben Gurion) airport for approximately 34 minutes. Cause: Unusual GPS jamming/spoofing of unknown origin.

Narrative: 2

Entering Egypt airspace at LAKTO at XA54Z received ADS-B L OUT EICAS. Had been expecting GPS jamming as last month flying ZZZZ - VIDP had intermittent jamming. Started the time to see how long it would last. Received several more alerts, intermittently including GPS L, NAV UNABLE RNP, TERRAIN POS, RUNWAY POS, etc". 3 minutes later FO noticed GPS on iPad showed us over TLV. Received intermittent/changing EICAS alerts. Checked POS REF page periodically and sometimes GPS signal was there, sometimes it matched TLV. FMS L was showing primary. INERTIAL was displayed on the ND (Navigation Display). Looked at RAD NAV Inhibit and it was still ON (inhibiting). GPS was still on as well (indicating the wrong position LLBG at times!) At some point (SERMA ish?) RNP showed 2 and ANP went to 20. Aircraft never changed course or heading so wasn't overly concerned about position, however continued actively monitoring the situation. Reviewed the GPS jamming bulletin and guide and Advised Cairo at freq change of GPS jamming. Controller wanted to know if we had an ADS-B out, which was NO at the time. After several minutes with ANP "exceeding" 20.0, selected RAD NAV INHIBIT OFF and INERTIAL was replaced with DME DME on ND and ANP was resolved to green and less than 2.0. Later we did lose ADS-B L again and reported it to ATC. Controller asked if we needed vectors and we said NO. Controller cleared us direct KARIK. Proceeded direct KARIK and that was the only time the airplane was off the magenta line. Rather than a straight line it kind of mimicked an S like the actual course, and airplane was .4L and corrected. Situation was resolved and direct KARIK. Both GPS receivers showed LAT LONG for TLV when they were not blank (missing data). As well as iPads and EFBs. Situation resolved and everything back to normal after ELETA. Continuous jamming for 34 minutes XA54Z until XB28Z. Reselected RAD NAV INHIBIT ON. Contacted Dispatch to report, ACARS messages attached. Filed a safety report and contacted union and Dispatch from hotel in case they needed more info. Dispatch also indicated a "XXXXX" call sign had similar spoofing. Definitely GPS spoofing, never experienced that before. Do not believe we had any gross NAV error. Dispatch also indicated they had not seen it before for one of our flights. Not sure if it was the good guys or the bad guys, but someone involved in the current Israeli Palestinian conflict. Flight plan route too close to conflict airspace. Suggestions: 1- Rerouting flights further from conflict airspace (Dispatch did indicate they were considering this, and after checking the flights behind us, they were indeed routed further west and south". not sure if they had any issues?) 2-NOTAM indicating KNOWN areas of GPS jamming (last month we also had GPS jamming on same route, further north flying ZZZZ-VIDP. It was intermittent, and did NOT involve spoofing. Reported it to Dispatch. Dispatch reported jamming had been happening in the area "frequently"). 3-TRAIN crews on WHAT SPOOFING looks like, and WHAT to EXPECT and MONITOR and ACCOMPLISH if necessary. The Aircraft X Bulletin does NOT do it justice. Internet search revealed two weeks ago more than XX aircraft went off course on/near IRAN airspace due to spoofing (including Aircraft X and a Biz Jet than nearly went into Iran airspace unintentionally!), so it's a BIG DEAL and crews need to be prepared and take this seriously.

Synopsis

Air carrier flight crew reported GPS jamming in Egyptian airspace.

Time / Day

Date : 202310
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : OPLR.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 32000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Nav In Use : FMS Or FMC
Flight Phase : Cruise
Route In Use : Direct

Component : 1

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

Component : 2

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : 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 : 11720
Experience.Flight Crew.Last 90 Days : 108
Experience.Flight Crew.Type : 570
ASRS Report Number.Accession Number : 2043541

Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

Got ASDB OUT EICAS message in the vicinity of SULOM waypoint. Got ADSB out and then TERR POS EICAS messages from ATVAN to KARIL waypoints (near Ukrainian airspace). All other systems normal and operations returned to normal when we flew out of the area. Pretty much normal for this flight, no action needed or taken.

Synopsis

Air carrier Captain reported GPS jamming during cruise flight near Ukrainian airspace.

Time / Day

Date : 202310
Local Time Of Day : 1801-2400

Place

Altitude.MSL.Single Value : 30000

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Nav In Use : FMS Or FMC
Flight Phase : Cruise
Route In Use : Direct

Component : 1

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

Component : 2

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2043379
Human Factors : Troubleshooting
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.No Specific Anomaly Occurred : Unwanted Situation
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew

When Detected : In-flight

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

Result.Flight Crew : Overcame Equipment Problem

Result.Aircraft : Equipment Problem Dissipated

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings

Contributing Factors / Situations : Software and Automation

Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Environment - Non Weather Related

Primary Problem : Environment - Non Weather Related

Narrative: 1

During cruise over Pakistan (about mid way through) we got a GPWS event that we both immediately realized was a false warning. We were at FL 300 and the terrain was well below us and a clear night with no cloud cover. We experience many GPS and ADS failures during this flight so it was fairly easy to determine false signals or anomalies. Jamming from Pakistan. Make this countries accountable through pressure from the government to stop this type of jamming or spoofing.

Synopsis

Air carrier pilot crew reported GPS jamming over Pakistan.

Time / Day

Date : 202310

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : LLLL.ARTCC

State Reference : FO

Altitude.MSL.Single Value : 8000

Environment

Light : Night

Aircraft

Reference : X

ATC / Advisory.Center : LLLL

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

Flight Phase : Climb

Component

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : 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 : 4366

Experience.Flight Crew.Last 90 Days : 95

Experience.Flight Crew.Type : 841

ASRS Report Number.Accession Number : 2042566

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Event / Encounter : Other / Unknown
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 : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Manuals
Primary Problem : ATC Equipment / Nav Facility / Buildings

Narrative: 1

On departure 30NM south of Amman we got a ADS-B Out EICAS Advisory Message. We selected R transponder IAW FM Non normal procedures and the system worked okay. Later in the flight the ADS-B operated normally in L transponder. We were abeam southern Israel so suspect electronic jamming or interference.

Synopsis

Air carrier Captain reported an ADS-B Out EICAS advisory message while in cruise flight over the Middle East. The crew performed the checklist procedure and suspected electronic GPS jamming, the system restored later in the flight.

Time / Day

Date : 202310
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Relative Position.Distance.Nautical Miles : 22.5
Altitude.MSL.Single Value : 2500

Environment

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

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : FBO
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Personal
Flight Phase : Descent
Route In Use : None
Airspace.Class D : ZZZ

Component

Aircraft Component : AC Generator/Alternator
Aircraft Reference : X
Problem : Failed

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 332.5
Experience.Flight Crew.Last 90 Days : 40.6
Experience.Flight Crew.Type : 158
ASRS Report Number.Accession Number : 2041999
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Workload
Human Factors : Time Pressure

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

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Landed in Emergency Condition

Assessments

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

Narrative: 1

While enroute from ZZZ1 to ZZZ, an alternator failure occurred, causing the lost of all lights, GPS, both radios, transponder, oil temperature gauge, and both fuel quantity gauges. The malfunction was first noticed at approximately 22.5 miles southwest of ZZZ. While performing the decent checklist, a red light next to the ammeter was on, and the ammeter was showing a discharge. I proceeded to troubleshoot the problem by cycling the alternator twice. The alternator failed to restart with both attempts. At this point, the was approximately 4 miles southwest of Location X. I proceeded to shut down all non-required lights (strobes, taxi light) and attempted to contact ZZZ tower twice to inform them of the situation and [request priority handling], unfortunately, both attempts to make contact were unsuccessful. Once over Location X, I continued to fly northbound, where I began loosing power to all my electrical equipment. Follow this, I retrieved my Sentry Mini portable ADS-B and GPS receiver to assist with my situational awareness and navigate to the midfield left downwind of Runway X. There I proceeded to [make] 360 left turns while contacting FBO using my cell phone. Contact with the FBO was successful and I was able to give them my call sign, position, and situation. They were then able to contact ZZZ Tower and relay the information. I was then given priority over other approaching aircraft, and proceeded to receive landing clearance with a steady green gun light signal from tower. I [landed] safely on Runway X and proceeded to taxi back to parking using Taxiway 1, 2, 3. Once there I met with ZZZ Fire Department and an airport employee that requested all my information including name, phone number, address, fuel on board, number of passengers, and type of aircraft. The airport employee also requested and received a photo of my pilot's license. Afterwards, I spoke with an air traffic controller from ZZZ Tower, who also requested my full name, phone number, and a brief description of the situation. No reports were requested of me by air traffic control. I was also informed that I was exempt from any and all pilot deviations due to the [nature] of the event.

Synopsis

C172 pilot reported an alternator failure during a night time personal flight which resulted in a total electrical failure. The pilot was able to relay a special handling request via cell phone and complete a safe landing.

Time / Day

Date : 202310

Place

Locale Reference.ATC Facility : TPA.TRACON
State Reference : FL

Environment

Flight Conditions : IMC
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : TPA
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
Nav In Use.Localizer/Glideslope/ILS : ILS 1L
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class B : TPA

Component

Aircraft Component : Air Data Computer
Aircraft Reference : X
Problem : Malfunctioning

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 : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 12773.1
Experience.Flight Crew.Last 90 Days : 26.1
Experience.Flight Crew.Type : 1272
ASRS Report Number.Accession Number : 2041905
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Workload
Human Factors : Distraction

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

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Maintenance Action
Result.Flight Crew : Diverted
Result.Air Traffic Control : Issued New Clearance

Assessments

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

Narrative: 1

On an IFR flight from ZZZ to ZZZ1, while on departure roll the copilot called no airspeed on his side. We aborted the takeoff, and as we were rolling out to taxi way advised tower we had an airspeed issue. While taxiing off the runway we noticed that the airspeed came back alive. The pitot tube cover had been damaged on a previous flight and was not installed while it had been sitting on the ground for a few days with rain in the area, so assumed maybe some water had been in the line and was not free, as the airspeed seemed to be responding normal on the taxi. We taxied back to attempt another takeoff and briefed on the callouts and the plane to go to ramp if any issues. ZZZ is not our home base and we had no maintenance at this facility. We were cleared for takeoff and proceeded with departure roll. Everything was normal and normal speeds, we completed takeoff and during after takeoff checks the right IAS stopped at 167 knots. At this time called for checklist and proceeded to go to Air Data Computer-X which was working fine. I then decided that it would not be wise to continue as we had multiple legs that day and weather at the initial destination ZZZ1 and would divert to TPA. Was a short flight and started to setup for an approach into Tampa. The weather was broken 800 with 10 miles visibility and could tell it was clearing as I could see the airport through the clouds some way out. We were cleared for the ILS 1L. During this time and slowing, a loud gear horn came on while I was at 200 knots. I advanced the throttles and I looked again to make sure ground speed was fine via GPS and it was. The Horn came on again and since we were below gear speed decided to extend the gear. During all this was responding to ATC, who noticing they gave us a tight turn to close to arriving at the Final Approach fix and they gave me a left turn to have a better intercept. I was focusing on the airspeed and the turning back to final as the ATC correction and wind from the NE...I had overshoot final. Seeing the ground below, I assumed I would transition to visual soon and could continue

trouble shooting as I would have to advise maintenance on the ground of what I saw. the copilot was running the checks, but he was also starting APU and busy as well..and never gave me any altitude callouts. I noticed now and ATC advised we were below the minimum altitude for that area. As I looked down I noticed we were 500 below the published altitude. I started to correct lateral and vertical and got back on the approach and had intercepted. I started coming down and was trying not to overcorrect, so I remained a little left of course until 3 mile final, but had visual by this time. Contributing factors were that I wanted to get the mission completed and the facility we were at had no maintenance, so I decided to attempt the flight as having XX years I have seen this airspeed problem before. The copilot did not have a lot of time in the last 90 days in the airplane and like me after we had the problem and decided to divert, we were focusing to much attention to the problem, which we had secured via the checklist and not enough on the approach to the divert. Seeing almost marginal weather and flown to the divert airport for years, I had it in my head this would be a visual approach. Realizing the altitude deviation I immediately kicked back into IFR and flying the plane rather than trouble shooting the horn/airspeed issue. The flight was also very short at 20 minutes, so things were going pretty fast, task saturation. I should have stopped the trouble shooting before we contacted the ATC Final, and only focused on the checklist and approach. We debriefed as a crew and discussed with manager

Synopsis

Captain reported an airspeed malfunction and other associated malfunctions related to the aircraft air data system after takeoff in IMC. The Captain diverted and landed safely.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : BHB.Airport
State Reference : ME
Altitude.AGL.Single Value : 0

Environment

Weather Elements / Visibility : Cloudy
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 400

Aircraft

Reference : X
ATC / Advisory.UNICOM : BHB
Aircraft Operator : Air Taxi
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Taxi

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2040998
Human Factors : Workload
Human Factors : Human-Machine Interface
Human Factors : Confusion

Events

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

Detector.Person : Flight Crew
When Detected : Taxi
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

During taxi-in to parking after landing, Garmin 430W displayed INTEG message, ADS-B traffic failed, and loss of GPS Position. Transponder displayed MSG No 1090ES TX. After off-loading passengers at the gate, we power-cycled the Master Avionics, GPS could not obtain GPS position. There is pavement work on the apron at Bar Harbor, in discussion with the construction workers they stated they are conducting a radiation based testing. There are NOTAMs for the construction work but none regarding GPS interruption. GPS interference from construction equipment in close proximity to parked and taxiing aircraft. Recommend PIREP for BHB and possible NOTAM for the airfield.

Synopsis

Pilot reported GPS signal interference while taxiing at BHB due to construction at the airport.

Time / Day

Date : 202309
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ2.Airport
State Reference : US
Altitude.AGL.Single Value : 3000

Environment

Flight Conditions : Marginal
Weather Elements / Visibility : Rain
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 4000

Aircraft

Reference : X
Aircraft Operator : Personal
Make Model Name : Golden Eagle 421
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Personal
Flight Phase : Cruise
Route In Use : Direct

Component : 1

Aircraft Component : Communication Systems
Aircraft Reference : X
Problem : Malfunctioning

Component : 2

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Private
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 1200
Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 25
ASRS Report Number.Accession Number : 2040807
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

Company, had just acquired and purchased Aircraft X, a Cessna 421B on Day 0 of which it immediately went into Annual inspection with FBO X at ZZZ. Annual inspection was completed on Day 1 and the aircraft was flown from ZZZ - ZZZ1 - ZZZ2 on Day 24 where it was to have major avionics replacements as several flight systems were problematic and work was to be performed by FBO Y. During this time, the Primary Flight instruments were replaced with an Aspen EFD1000, COM 1 was replaced with a Garmin 430W GPS, the transponder was replaced with a Lynx L3 NGT-9000, the engine monitoring system with a JPI EDM 760, 2 Comm Lemo jacks installed, an instrument inverter replacement, troubleshooting of the auto-pilot system, and 4 USB connections. Six weeks later, the aircraft was completed and a short flight from ZZZ2 to ZZZ5 was planned to place the aircraft at it's permanent location. Shortly after takeoff approximately 10 minutes into flight while establishing cruise, the aircraft started to receive major static and indecipherable communications through COMM 1 and COMM 2. Pilot attempted to troubleshoot and clean up squelch to no avail. Pilot then attempted to reboot avionics and radios. During this time the Garmin 430W would not reboot, loss of auto-pilot and yaw-dampener would not return, and only COMM 2 was available and full of static. L3 Transponder was still working and the PFD 1000. Without other means of navigational aid on board at the time, dead reckoning was used while continuing troubleshooting, and navigating in marginal conditions. The aircraft crossed over 2 sections of Class D airspace (ZZZ3) and (ZZZ4) which wasn't realized until days later after reviewing the flight. Upon further review the pilot should have SQUAWKED 7600 during communication loss however, the pilot reacted to operational risk management and wanted to ensure he could aviate and navigate to the destination of 56 nautical miles. The aircraft was successful in landing at ZZZ5. As a result of the incident Failure to Establish 2-way communication while crossing into a Class D airspace resulted.

Synopsis

Cessna 421 pilot reported a failure of aircraft communication systems after takeoff resulted in entering class D airspace without clearance.

Time / Day

Date : 202310
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZSPD.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 34000

Aircraft

Reference : X
ATC / Advisory.Center : ZSPD
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight / Delivery
Nav In Use : GPS
Flight Phase : Cruise

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2039976
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings

Contributing Factors / Situations : Software and Automation

Contributing Factors / Situations : Human Factors

Primary Problem : ATC Equipment / Nav Facility / Buildings

Narrative: 1

GPS Jamming received over Ankara airspace between point IPSAT and EKMEK, at FL340.

Cause: GPS Jamming.

Synopsis

Air carrier Captain reported GPS jamming in international airspace at cruise altitude. The Captain indicated the GPS jamming lasted for approximately 20 minutes.

Time / Day

Date : 202209

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZLA.ARTCC

State Reference : CA

Relative Position.Distance.Nautical Miles : 100

Altitude.MSL.Single Value : 45000

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

ATC / Advisory.Center : ZLA

Aircraft Operator : Personal

Make Model Name : EMB-505 / Phenom 300

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Cruise

Airspace.Class A : ZLA

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : AHRS/ND

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Pilot Flying

ASRS Report Number.Accession Number : 2038880

Human Factors : Communication Breakdown

Human Factors : Confusion

Human Factors : Human-Machine Interface

Human Factors : Training / Qualification

Human Factors : Troubleshooting

Human Factors : Workload

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

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

At FL450 approximately 100 miles north of LAS, a Phenom 300 lost control due to a military radar jamming exercise. Both AHRS units dropped off line, as well as the GPS receivers, and the airplane entered an uncontrolled dutch roll. The pilots did not slow down at first, nor did they go down in an attempt to regain control. The event lasted about 20 minutes. With both AHRS units off line, of course, the yaw damper and autopilot are unavailable tools, as well as many other related systems. The military either stopped the jamming exercise or the airplane flew out of range of the jamming exercise, and the aircraft systems slowly restored themselves.

Synopsis

Embraer Phenom 300 pilot reported a loss of the Attitude and Heading Reference System resulting in uncontrolled dutch roll at cruise altitude related to a possible military GPS jamming exercise. The pilots did not slow down or reduce altitude, but regained control after a period of time.

Time / Day

Date : 202309

Local Time Of Day : 0001-0600

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 4

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : GPS

Nav In Use : FMS Or FMC

Flight Phase : Cruise

Route In Use : Direct

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : Navigational Equipment and Processing

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : Relief Pilot

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 2037634

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Distraction

Human Factors : Workload

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

Were Passengers Involved In Event : N
When Detected : In-flight
Result.General : Maintenance Action
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

I was the RC (Relief Captain) and went on the first break shortly after takeoff from Delhi. After returning from my break we were near Azerbaijan and the FMS was using DME-DME to navigate. ANP (Actual NAV Performance) was good, less than .5. The GPS was not usable and did not display a position (early in the flight). Later, in Eastern Europe GPS began to show a Lat/Long but its differential displayed on POS REF Page 2 was 16.0, therefore unusable. The FMS was continuing to use DME-DME to navigate. We were all very concerned if the aircraft could continue to receive land based NAV aids once we flew toward Iceland, Greenland and northern Canada. I again went on my rest break. I returned from break approaching 50 degrees West on the North Atlantic track. The aircraft FMS was now using GPS as its navigation source. The Captain and FO (First Officer) had contacted maintenance and performed a maintenance procedure with them cycling circuit breakers to reset the GPS. Cause: GPS jamming or unreliability in the Middle and Far East. Suggestion. I am continually concerned whenever I have flights that fly near India, Pakistan, Israel, Syria, Turkey and Ukraine due to GPS jamming and general GPS position stability. Active management of RAD NAV Inhibits are required but sometimes the GPS never recovers for the FMC to use it for navigation. On this last flight when the Captain called maintenance they remotely checked our aircraft and found the hardware had hard GPS faults. Apparently this can not be fixed by pushing buttons on the CDU (Control Display Panel). Then what can the crew do? You are facing an Oceanic crossing without NAV Aids that provide accurate position information. That would force a divert to London or Iceland or descent below RVSM airspace (and therefore insufficient fuel to reach destination). I do not want to fly flights that put me in this position, I will avoid these flights in the future. Crews should be given the permission to call maintenance in this situation and if inflight analysis shows hard faults in GPS components then maintenance should authorize cycling specific circuit breakers to recover navigation capability.

Synopsis

Air carrier Captain reported while flying near the Azerbaijan border the aircraft experienced GPS jamming. The Captain was concerned if the system would return to normal. The crew contacted maintenance for assistance.

Time / Day

Date : 202309

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 1200

Environment

Flight Conditions : VMC

Weather Elements / Visibility : Haze / Smoke

Weather Elements / Visibility.Visibility : 7

Ceiling.Single Value : 12000

Aircraft : 1

Reference : X

ATC / Advisory.CTAF : 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 : VFR

Mission : Training

Flight Phase : Final Approach

Aircraft : 2

Reference : Y

ATC / Advisory.CTAF : ZZZ

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

Crew Size.Number Of Crew : 1

Flight Phase : Final Approach

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Instructor

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Commercial

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 530

Experience.Flight Crew.Last 90 Days : 92

Experience.Flight Crew.Type : 480

ASRS Report Number.Accession Number : 2037033

Human Factors : Situational Awareness

Human Factors : Training / Qualification

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
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Miss Distance.Vertical : 300
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

After a training flight I was returning to ZZZ, and after making a couple radio calls we called turning final for Runway XX at ZZZ. Another aircraft called after me saying they were on a 3 mile upwind for the overhead. I was already on short final thinking they were further away and higher (due to the radio call), however a couple seconds later the Garmin GPS called traffic alert for same altitude and behind me. I immediately descended and turned so they wouldn't contact me. They (low wing, high performance) passed overhead in a 45° bank into the overhead about 300 ft. above me going around 175 knots (I was about 200 ft. AGL and was slowed to around 60 knots). I was unable to talk to the pilot as they left the area after they performed the overhead and a touch and go, but I suspect the issue was in part due to a non standard pattern entry and high wing Cessna being overtaken by a low wing that was slightly higher making it difficult for us to see each other.

Synopsis

C-172 Flight Instructor reported a NMAC while on final approach with a low wing high performance aircraft that had entered the pattern on an overhead. Flight Instructor turned and descended to avoid contact with the other aircraft who performed a touch and go landing and departed the area.

Time / Day

Date : 202309
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 200
Relative Position.Distance.Nautical Miles : 10
Altitude.MSL.Single Value : 3500

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 8000

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Cruise
Route In Use : Direct
Airspace.Class E : ZZZ

Component

Aircraft Component : Engine
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 560
Experience.Flight Crew.Last 90 Days : 128.1
Experience.Flight Crew.Type : 488.1
ASRS Report Number.Accession Number : 2036017

Events

Anomaly.Aircraft Equipment Problem : Critical
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Diverted
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

My student and I experienced a partial power loss while in cruise on a cross country training flight. We diverted to the nearest suitable field, ZZZ1 [Airport], to make a precautionary landing. Upon initial power loss, I heard a "pop" sound followed by engine roughness and sputtering. We had an engine monitoring display onboard and it showed that cylinder #2 was not working. We could still maintain altitude but we weren't sure how long the engine would keep running. Using our GPS and a paper sectional, we found ZZZ1 and immediately turned towards it. Once we found the field, I asked my student to find an ATC frequency that we could talk on. I asked him to find a frequency for ZZZ Approach because that was the closest Center. He told me he couldn't find the frequency so I tuned into ZZZ Center. I called up ZZZ Center and let them know our situation, they gave us a couple options such as ZZZ2 [Airport] which was 10 miles north of us. By the time this happened we were already over the ZZZ1 [Airport] and told them we were going to land to "play it safe". They also [gave us priority handling] and asked for some contact info. They gave us a phone number to copy and said we didn't have to call it. We landed safely on the east facing grass field and shut down. I was able to contact ZZZ Center via radio on the ground and let them know we were safe. An owner's friend came to check in on us. We were safe with no injuries or damage to the plane. He left about 20 minutes later and another local came to meet us.

Synopsis

C172 flight instructor with a student reported engine power loss during cruise resulting in a diversion to nearest suitable airport.

Time / Day

Date : 202309

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : OPLR.ARTCC

State Reference : FO

Altitude.MSL.Single Value : 30000

Environment

Flight Conditions : IMC

Aircraft

Reference : X

ATC / Advisory.Center : OPLR

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 : Cruise

Component

Aircraft Component : EICAS/EAD/ECAM

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

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.Total : 11689

Experience.Flight Crew.Last 90 Days : 138

Experience.Flight Crew.Type : 539

ASRS Report Number.Accession Number : 2035864

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Confusion

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

We were just north west of SULOM, in contact with Lahore ATC at FL300. Unexpectedly, the aircraft commanded a terrain escape maneuver, with both aural and visual commands. I exercised emergency authority and we maintained level flight. After about 45 seconds the alert stopped and an TERR (Terrain) EICAS message appeared. The flight continued uneventfully. This flight operates in areas of known GPS interference. More commonly recognized is the area in Turkey over and near the Black Sea (as well as near Syria). Recently, we have seen an increase in this activity in the area of the Pakistan/India FIR (Flight Information Region) boundary also. Normally this is evident in the aircraft by loss of ADSB and TERR Shift messages followed by loss of terrain mapping capability. It is expected and resolves itself upon leaving the area. In rarer instances, the loss of accurate GPS position can cause loss of satellite link and even loss of GPS position updating. Again these normally resolve upon leaving the affected area. Last night was the first time I have had a Terrain warning of any kind. It is worth noting that we did hear another aircraft with Delhi Control, just prior to crossing the FIR boundary that got an alert and did respond, but they were well below us but in the same area. Another factor is that all of the areas where this GPS interference is present are fairly heavily traveled. Pakistan and India have a relatively small number of FIR crossing points for international flights, for instance, virtually all of the traffic transiting Pakistan to Europe and Eurasia have to file over SULOM. Similarly, with war in Ukraine and Russian airspace restricted, large amounts of traffic route along the southern coast of the Black Sea. My primary concern is the relative inexperience we are seeing in the cockpit. I have flown with crew members who were not fully aware of this problem, and had crew members do things like write up the GPS as inoperative when in fact it wasn't. In and of itself this is not dangerous, but certainly reacting inappropriately to a false terrain escape warning, especially near the maximum operating altitude of the aircraft and in close proximity to other aircraft could be extremely hazardous and lead to loss of aircraft control or midair collision.

Synopsis

Air carrier Captain reported a false Terrain EICAS warning at 30,000 ft. during cruise. The Captain maintained level flight and the alert stopped. The Captain indicated that the aircraft was operating in airspace of known GPS jamming.

Time / Day

Date : 202309

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Cruise
Route In Use : Direct

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 12076
Experience.Flight Crew.Last 90 Days : 158
Experience.Flight Crew.Type : 482
ASRS Report Number.Accession Number : 2035443
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Workload
Human Factors : Distraction

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.No Specific Anomaly Occurred : Unwanted Situation
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

This report is specifically relating to our Dubai flights over flying Israeli airspace. The cautions in the warner about having the seatbelt sign on, and all passengers seated and cockpit door closed, need to be re-emphasized in a pilot bulletin related to the flights to and from Dubai and any others that transit Israeli airspace. Also, as a maintenance issue, the Israelis jam GPS signals as part of their Iron Dome defense system and aircraft under airspace will lose GPS reception. The aircraft will make an automated maintenance right up regarding the loss of GPS. Again, another pilot bulletin should be issued encouraging pilots to make an info only write-up stating that the aircraft was in Israeli air space, and that the onboard systems were working fine. Attached are pictures of my write up doing so and saving ZZZ Maintenance a two hour check that they are performing on other flights transiting Israeli airspace when Operations and Maintenance are unaware that the signals were jammed from the ground, and that it was not an aircraft defect.

Synopsis

Air carrier Captain reported GPS jamming while close to Israeli border. The Captain suggests that this not be a maintenance write-up because it is such a common occurrence on this route.

Time / Day

Date : 202309

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : CMD.Airport

State Reference : AL

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft

Reference : X

Aircraft Operator : Air Taxi

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Final Approach

Route In Use : Visual Approach

Component

Aircraft Component : GPWS

Aircraft Reference : X

Problem : Improperly Operated

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2034531

Human Factors : Situational Awareness

Human Factors : Human-Machine Interface

Human Factors : Communication Breakdown

Human Factors : Confusion

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2034206
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Confusion
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

While conducting a visual approach to Runway 20 (backed up by the RNAV (GPS) 20 approach) we got a "too high, too high" RAAS (Runway Awareness and Advisory System) annunciation. We were more than 500 ft above TDZE, and we did not appear high visually. Descent rate was not excessive and airspeed was appropriate. (Discussing the event after the flight, we both agreed we were less than 1/2 dot high on the glide path.) We discussed whether a go around was necessary. Neither of us thought we were high, and we were within stabilized approach criteria. However, the PAPI indicated we were high. We decided to continue the approach to a landing. We never intercepted the PAPI glide path, and the flying pilot stopped trying to capture it. At 500 ft above TDZE the approach was stable""we were on the approach glide path""**though the PAPI still indicated we were high. Afterwards** we agreed the PAPI was not providing accurate information. Of note, on the recorded ASOS the PAPI for Runway 2 was mentioned as inoperative though there was no published NOTAM. If the PAPI for Runway 2 is inoperative a NOTAM should be published. I think the PAPI for Runway 20 should be checked. Otherwise, I am at a loss as to how two separate systems would indicate similar conditions (that we were high) while other aircraft systems and the crew did not indicate/perceive the same conditions.

Narrative: 2

While on a visual approach to Runway 20 at CMD we received an eGPWS (Enhanced Ground Proximity Warning System) "Too High" call; this was the only callout from the system. This was prior to the 500 foot stabilized call. I thought I was slowing appropriately and that I was on the RNAV glide path for the runway. At 500 feet, my FO called "500, stable", I responded "landing". We both thought our approach angle was appropriate. While on short final, still over the trees, prior to the clear zone, the PAPI showed that we were high, but that I felt certain that was wrong. I felt that descending to a shallower approach angle would have put us too unsafely close to the trees and I also felt very confident that we were on a 3.0° angle. In short, I did not believe the PAPI. We landed in the touchdown zone and stopped with moderate brake and reverse thrust with approximately 2,000 ft of runway remaining. We discussed the approach thoroughly after the passenger departed. Neither of us thought we were unstable or in a position that required a good-around. Both of us thought a safe landing was possible and that we did indeed make a safe and legal landing. We were both surprised and confused by the "too high" call and the especially the PAPI. At debrief, I think that both of us disbelieved the PAPI. I also think I was on the electronic glide path. The only other issue I think could have caused me to think we were on the correct glide path is the downslope runway illusion. This runway did slope down in the direction we were landing and this could very well have caused my thought that we were okay when we were in fact high. I think in the future I need to pay more attention to runway slope during my approach briefings. I also should have performed a missed approach when equipment that is not known to be malfunctioning is telling me I'm high. There may be a disconnect between the RNAV glide slope and the PAPI. A second attempt at the approach using the visual approach function of the FMS would have been helpful to verify a correct approach angle. I need to trust the equipment as I'm gaining experience in a new aircraft (I'm still low-time and high mins).

Synopsis

Flight crew reported conflicting glidepath information while on a RNAV GPS approach to Runway 20 at CMD in visual conditions. The flight crew received a RAAS "too high" callout, while the aircraft was on the RNAV GPS glidepath, and the ground PAPI guidance was showing the aircraft high. The aircraft landed in the touchdown zone.

Time / Day

Date : 202308
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : OPLR.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 30000

Aircraft

Reference : X
ATC / Advisory.Center : OPLR
Aircraft Operator : Air Carrier
Make Model Name : B777 Undifferentiated or Other Model
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2031003
Human Factors : Confusion
Human Factors : Distraction
Human Factors : Human-Machine Interface
Human Factors : Troubleshooting
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Requested ATC Assistance / Clarification

Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Returned To Clearance

Assessments

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

Narrative: 1

Departed heading north on our standard routing at 30,000 feet. As we approached waypoint SULOM we noticed the navigation indication on the lower portion of the PFD (Primary Flight Display) was switching from GPS to INERTIAL and back. Also received the EICAS (Engine Indicating and Crew Alerting System) message - ADS B OUT R. This was a new area for navigation disruptions. Normally these types of disruptions occur [in another area]. We made contact with OPLR FIR. Half way between waypoints SULOM AND INDEK with the indications mentioned above, experienced a TERRAIN WARNING. The First Officer was the flying pilot and he reacted to the warning. We climbed about 400 ft. and the warning started to subside. Contacted OPLR to check our position. He showed our altitude at just above 30000 ft. well above the terrain. At the time of the terrain warning, I am fairly certain that there was not a position/map shift. As mentioned above, the OPLR FIR in my experience is not an area of GPS spoofing and navigation disruptions. I flew the same route the next week and did not experience any problems, GPS, ABS B, or TERR. In the areas of extreme GPS spoofing, where we experience loss of both GPS and even look ahead TERR, I have never received and TERR WARNING. I believe my first officer was correct in reacting to the TERR WARNING given the position we were in, approaching some of the highest terrain in the world. We did contact dispatch with all of the details. Maintenance also pinged the aircraft and found no major faults. This event is just part of the challenges of the ZZZ to ZZZZ route. I see no internal or external causal factors.

Synopsis

Air carrier pilot reported a false terrain alert and ADS-B failing EICAS message while flying at 30,000 feet near SULOM intersection. The reporter stated they were not sure if this was the result of GPS jamming since this area is reportedly not known for that.

Time / Day

Date : 202308
Local Time Of Day : 1201-1800

Place

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

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Make Model Name : Cessna 402/402C/B379 Businessliner/Utiliner
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Mission : Passenger
Flight Phase : Climb
Airspace.Class D : ZZZ

Component

Aircraft Component : Aileron Control System
Aircraft Reference : X
Problem : Malfunctioning

Person

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 : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Type : 1700
ASRS Report Number.Accession Number : 2029651
Human Factors : Troubleshooting
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Maintenance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Flight Cancelled / Delayed

Result.General : Maintenance Action
Result.Flight Crew : Diverted
Result.Flight Crew : Landed As Precaution
Result.Flight Crew : Returned To Departure Airport
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

I was scheduled to fly Aircraft X to ZZZ1. The airplane had recently been cleared by maintenance after work on the aileron control cable. I paid attention to the aileron surface deflections on the preflight. They looked symmetrical. I completed the pre flight and all checklists and took off. While climbing out, the aircraft strongly wanted to roll to the left and rapidly rolled left several times. Due to the gusty turbulent conditions, the ball was jumping left to right, but I maintained positive aircraft control and attempted to retrim. The airplane appeared under control. I engaged the autopilot, and the autopilot failed to navigate in GPS steer mode, and commanded a rapid roll to the left. I attempted to use the GPS disconnect red button on the yoke but the GPS annunciations indicated that it was still engaged. I turned it off with the switch and requested a return to the field. The controller asked if I wanted a long downwind or to stay near the shore, and I indicated that I would like to stay near the shore for a vector to final for runway XX which was the active in ZZZ. I Intercepted the final approach course and landed runway XX in ZZZ. On final the controls seemed asymmetrical but the aircraft remained under positive control. I landed taxied in and wrote up the plane. I really believe that; following maintenance which involves the flight controls, a FCF (functional check flight) should be performed, prior to releasing the aircraft. In this case all laws and procedures were followed and the aircraft was at best extremely out of trim following the maintenance that had been performed. While there are indications on the trim devices, and those were checked in preflight, there can be alot of variability between individual aircraft. At worse, the flight control rigging was more of a correction that was called for based on any lack of cable tension that had been previously found. The GPS disconnect I am not sure; it may just be that it was raining quite a lot and water got on to the yoke. Require an FCF flight for any flight control re-riggings prior to releasing the aircraft.

Synopsis

Pilot flying C-402 aircraft after recent maintenance work on the aileron control cable reported flight control anomaly during climb out. Pilot returned to departure airport and returned plane for maintenance.

Time / Day

Date : 202308
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : BOI.TRACON
State Reference : ID
Altitude.MSL.Single Value : 5000

Aircraft

Reference : X
ATC / Advisory.TRACON : BOI
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : ILS 10R
Flight Phase : Initial Approach
Route In Use : Direct
Airspace.Class C : BOI

Component : 1

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

Component : 2

Aircraft Component : Navigation Database
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2029379
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Flight Deck / Cabin / Aircraft Event : Other / Unknown
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Automation : Aircraft Other Automation
Detector.Person : Air Traffic Control
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Overcame Equipment Problem
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Prior to arriving BOI on SPUUD 4 Arrival, PF (Pilot Flying) briefed and set up for visual backed up with GPS 10R based on ATIS. Approximately 120 NM away, multiple aircraft reported GPS jamming issues to Salt Lake Center. As we approached BOI, our aircraft also experienced GPS problems, with ECAM "FM/GPS Position Disagree." After reviewing FMS and GPS position data in FMGC and finding no errors, PF decided to set up for ILS10R as the backup instrument approach. Normal descent via SPUUD4 to EKEME. Then assigned descent to 5,000 ft. Identified airport off right wing visually. Aircraft was on a tight downwind, so PF slowed and started configuration process in attempt to reduce workload (Threat and Error Management process). ATC assigned heading 010 which put aircraft pointing almost directly at ELUBE for base leg. When cleared for visual approach, PF asked for ELUBE direct, verified FMA "NAV," then started descent in attempt to ensure aircraft was not above the GS. During this maneuver, PF mistakenly set 2000 ft. and OPEN descent, while intent was 4400 ft. Open Descent. Aircraft then joined final course, PF selected APPCH button, but Autopilot did not couple to ILS (GS did not show in capture range). At this point, aircraft had gotten below GS, and gave "GLIDESLOPE" call audio. At nearly same time, Tower called to say they tracked us LOW and to verify runway in sight. PF disengaged Autopilot, reset higher altitude, and leveled aircraft. Before Landing Checklist completed and aircraft stable by 1000 AGL, continued on VASI to landing BOI 10R. Cause: ATC vector to final at 5000 ft, while crossing for ELUBE is 4400 ft. ATC vector to final directly toward ELUBE rather than intercepting LOC well prior to ELUBE, not allowing sufficient room for descent, LOC capture, and normal Glideslope intercept in normal order and timing. Pilot error in setting 2000 ft. rather than 4400 ft. and then setting OPEN descent rather than a nominal 500 to 1000 fpm down. Suggestion: Ensure

ATC vectors to final course include descent to proper fix crossing altitude. Ensure ATC vectors to final course intercept at least 3 NM outside of a given fix. Ensure ATC does not rush to cut airline crews into a short final at a higher altitude. Emphasize the recommendation to NOT use open descent when close to the FAF.

Synopsis

Air carrier pilot flying reported GPS jamming in the area around BOI. The pilot crew eventually performed an ILS and visual approach to the runway because of the unreliable GPS signal.

Time / Day

Date : 202308
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZLA.ARTCC
State Reference : CA
Altitude.MSL.Single Value : 31270

Aircraft

Reference : X
ATC / Advisory.Center : ZLA
Aircraft Operator : Fractional
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Cruise
Route In Use : Direct
Airspace.Class A : ZZZ

Component : 1

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

Component : 2

Aircraft Component : Navigation Database
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
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 : 2029348
Human Factors : Workload
Human Factors : Troubleshooting
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2029646
Human Factors : Workload
Human Factors : Human-Machine Interface
Human Factors : Confusion
Human Factors : Troubleshooting
Human Factors : Time Pressure
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 : Clearance
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

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

Narrative: 1

While at FL310 and just given direct to DRK (from a heading of 040), our plane went direct to DRK, but then started turning to the right to compensate for winds. The winds started fluctuating between 35 and 200 plus kts (for about 5 minutes) direct crosswind out of the south. I pushed the TCS (Touch Controlled Steering) button to stop the continued right turn while watching the winds fluctuate. In all the confusion and distraction, we climbed 270 ft. high with traffic out ahead of us and coming toward us showing plus 800 [ft.] higher than us. I pushed the nose back over and descended to FL310. LA Center asked if we were given a climb. At the time, we were in a possible GPS testing area from the BVL VOR from XA09 till XB29 (but it seems it was probably a little too far to the north to affect us). We're not sure if that contributed to the plane turning to the right. We received no indications of a fault of any sort. I should have left the autopilot on and gone into heading mode until the winds were figured out.

Narrative: 2

We were operating a flight on Aircraft X from ZZZ to ZZZ1. We were between the LANCY fix and DRK on J134 at 31,000 ft. waiting for a climb to our filed altitude of 41000 ft. We were flying an assigned heading of 040 for traffic. We then were given direct to DRK. I entered the direct and as I was monitoring, I noticed the winds in the FMS were wildly fluctuating anywhere between 27 kts to 200 plus kts from the south. The winds that day were really around 27 kts. The FMS was thinking we had a 200 plus kts crosswind and turned 45 plus degrees from our true course to ZZZ into the wind. I brought all of this to the attention to the PF (Pilot Flying) as I was noticing it. He agreed that something was wrong and as I was trying to figure out what was going, on the PF TCS'd (Touch Control System) the controls to stop the turn. At that time, I noticed the aircraft began a slight climb and I brought that to the attention of the PF. At one point, I mentioned we have to stop climbing and get back down to 31000 ft. I believe we ended up anywhere from 250 to 270 ft. high. LAX Center said he saw us turning way off course and then queried us, "Have you been issued a climb clearance?" At that point, I notified ATC we did not receive a climb clearance and he asked what our altitude was. At that point, we were heading back down through 31,100 ft. and I advised him of that. We also informed him our FMS winds were acting strange causing the extra turn. There was traffic off of our left and I noticed the TCAS said they were above 800 ft. during the TCS maneuver. This whole event lasted about 4 minutes in total. After returning to 31000 ft. and back in the general direction of DRK, the FMS winds settled in to the correct appropriate winds between 25 to 35 kts. There was some GPS testing at the time at BVL that ended at XA29 and our event began around XA25. After that event, no other issues happened with the FMS/GPS for the rest of the flight. Both pilots now believe if something like this happens again, to put the aircraft into HDG (Heading) mode and not TCS mode to prevent any altitude gain or loss.

Synopsis

Fractional aircraft pilots reported a problem holding an assigned heading and altitude. Reporters stated GPS testing in the area may have contributed to the deviations.

Time / Day

Date : 202308

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.TRACON

State Reference : US

Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : IMC

Weather Elements / Visibility : Rain

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility.Visibility : 3

Light : Daylight

Ceiling.Single Value : 1400

Aircraft

Reference : X

ATC / Advisory.TRACON : ZZZ

Aircraft Operator : Personal

Make Model Name : Skylane 182/RG Turbo Skylane/RG

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Nav In Use : GPS

Nav In Use.Localizer/Glideslope/ILS : ILS ZZL

Flight Phase : Final Approach

Route In Use : Direct

Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Single Pilot

Function.Flight Crew : Captain

Qualification.Flight Crew : Private

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 400

ASRS Report Number.Accession Number : 2028563

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Training / Qualification

Human Factors : Workload

Human Factors : Other / Unknown

Human Factors : Distraction

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

Events

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

Assessments

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

Narrative: 1

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

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

Synopsis

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

Time / Day

Date : 202308

Place

Altitude.MSL.Single Value : 30000

Aircraft

Reference : X
ATC / Advisory.Center : ZZZZ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Cruise
Route In Use : Oceanic
Airspace.Class A : ZZZ

Component : 1

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

Component : 2

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2027953
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Overrode Automation
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Overcame Equipment Problem

Assessments

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

Narrative: 1

I was in the bunk on my rest break when the event occurred. We were at cruise altitude of 30,000 ft. When I returned to the cockpit after my break I was told by the Captain that they had experienced an erroneous indication in the GPWS system that caused the pilots flying to depart from our cruise altitude and climb to a higher altitude in response to those indications in the cockpit. After the event they returned to their assigned altitude. There is a bulletin regarding GPWS errors in environments where GPS jamming occurs. Perhaps we should emphasize it more.

Synopsis

Air carrier relief pilot reported GPS jamming which caused an excursion from the assigned altitude.

Time / Day

Date : 202308
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : RJJJ.ARTCC
State Reference : FO
Altitude.MSL.Single Value : 30000

Aircraft

Reference : X
ATC / Advisory.Center : RJJJ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Cruise
Route In Use : Oceanic
Airspace.Class A : ZZZ

Component : 1

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

Component : 2

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2027712
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Overrode Automation
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

North west of Solon intersection level at flight level 300. We received a GPS terrain warning followed by oral pull up indications. The Captain who was flying the aircraft follow the procedures per the aircraft FOM. Finished the climb with LVL off at approximately flight level 320. We determined that we were on course and there was no terrain in the area. Return to flight level 300 after turning off GPS and resetting the system. No further warnings were encountered. GPS jamming was occurring. GPS jamming may have played a role in this false terrain warning. Training should include a description of the possibility of GPS jamming, causing fostering warning.

Synopsis

Air carrier pilot reported GPS jamming northwest of Solon intersection. The crew deviated from the assigned altitude and then returned after resetting the GPS system.

Time / Day

Date : 202308

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : VIDF.ARTCC

State Reference : FO

Altitude.MSL.Single Value : 30000

Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : B777-300

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 : Cruise

Route In Use : Oceanic

Airspace.Class A : ZZZ

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : Navigation Database

Aircraft Reference : X

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

ASRS Report Number.Accession Number : 2027708

Human Factors : Situational Awareness

Human Factors : Human-Machine Interface

Human Factors : Distraction

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Overrode Automation
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 : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Ambiguous

Narrative: 1

Departed VIDP enroute to ZZZ, as Aircraft X. Approximately 30 minutes after departure and level at FL300 just northwest of the SULOM fix and roughly 250 miles from the VIDP airport, we received a GPWS "TERRAIN TERRAIN" warning (both aural and visual). We executed the GPWS Actions and Callouts per the B777 AOM. The warning continued up to the aircraft's Max Altitude of FL325. At that point, we confirmed both on our own and with ATC that we were on course and above all terrain. The GPWS warning continued to display and sound until we manually switched it off. After cycling the TERRAIN OVRD switch, the system appeared to reset itself and operated normally. It should be noted that the GPWS warning was preceded by a GPS jamming display received earlier in the flight; GPS Jamming warning. With GPS jamming occurring on a regular frequency on flights in the Middle East, I believe that a thorough review of jamming affects on the different aircraft systems during recurrent ground school training would be very advantageous to those who fly these routes.

Synopsis

Air carrier B777 Captain reported GPS jamming in-flight. Although well above any terrain, the pilot received a terrain warning and earlier, a GPS jamming message.

Time / Day

Date : 202308
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Relative Position.Angle.Radial : 270
Relative Position.Distance.Nautical Miles : 3
Altitude.MSL.Single Value : 1100

Environment

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

Aircraft : 1

Reference : X
Aircraft Operator : Corporate
Make Model Name : Skywagon 185
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Climb

Aircraft : 2

Reference : Y
Make Model Name : Otter DHC-3
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 121
Flight Plan : None
Flight Phase : Descent
Route In Use : Visual Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Single Pilot
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 13300
Experience.Flight Crew.Last 90 Days : 85
Experience.Flight Crew.Type : 300

ASRS Report Number.Accession Number : 2027217
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Situational Awareness

Events

Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
Miss Distance.Horizontal : 300
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

Flight was an organization orientation flight departing ZZZ, in a Cessna 185 floatplane. The passenger had switched seats from an earlier flight, before casting off from the NW Public Dock at ZZZ. The primary flow of floatplane traffic for the afternoon had been taking off and landing to the SW on XXW. Local ATIS was obtained, and reported to ZZZ Radio at Startup, along with our planned departure, waterway, and direction of flight to the northwest along the shoreline for our northbound VFR routing. The departure ATIS was reporting winds light with no preferential runway, a change from the prior hours suggested SW landing on XXW. Our takeoff was announced on CTAF, and ZZZ Radio didn't report any inbound traffic for our departure or routing. No inbound radio calls were heard on the CTAF. Takeoff was performed to the SW off waterway XXW. After departure and setting cruise climb power, and passing 1,100 ft MSL/AGL, flight controls were being transferred to the passenger as part of their orientation flight. I looked down to observe the passenger taking the Yoke, looked up and saw a near coaltitude float equipped turbine Otter at approximately 500 ft at our 1230 relative position. I immediately resumed full control of the airplane and banked left, extend for around 10 seconds, then rolled back to observe the Otter. From my perspective after turning back, the Otter hadn't altered its flightpath. Within the minute of the event, an aircraft reported on final for the water, and our departure and route was reported by ZZZ Radio to the reporting aircraft. The organization aircraft being flown has ADSB IN and OUT installed. The airplane is equipped with a Garmin 650 GPS and an additional Garmin 275 Traffic display. Both units were operational and in use. No ADSB "Traffic Alert" was aurally announced or displayed throughout the event. All exterior lights were in use, i.e.: LED Taxi/Land Lights in Pulse mode, LED Nav Position lights were ON and Strobe Lights were all ON. Recommended Self-announced radio calls from the Otter approaching the seaplane base would have helped prevent this event. Use of ADSB out by the Otter would also have helped. A potential midair was avoided only through "see and avoid."

Synopsis

C-185 floatplane Captain reported a NMAC event during initial climb with a non-reporting landing aircraft. The floatplane Captain took immediate evasive action to avoid a collision.

Time / Day

Date : 202308

Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 21000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : A319

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Climb

Airspace.Class A : ZZZ

Component

Aircraft Component : Turbine Engine

Aircraft Reference : X

Problem : Failed

Person : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Last 90 Days : 111

Experience.Flight Crew.Type : 476

ASRS Report Number.Accession Number : 2026312

Human Factors : Time Pressure

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
Experience.Flight Crew.Last 90 Days : 229
Experience.Flight Crew.Type : 1237
ASRS Report Number.Accession Number : 2026340
Human Factors : Time Pressure

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
Detector.Person : Flight Attendant
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.Flight Crew : Returned To Departure Airport
Result.Air Traffic Control : Provided Assistance
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

Departed ZZZ around XA:00, and during the climb out through roughly FL210, a loud "bang" is heard, significant airframe vibration felt, and engine indications on Engine 1 showing rapid rollback to near idle, with associated yaw and bank. Autopilot and autothrust were both on during the climb/incident and remained activated through the engine stall. Requested an immediate level-off at FL220 and instructed ATC to vector us in the ZZZ area. After the engine rolled back, upper ECAM caution "ENG 1 Stall" displayed, and duties designated for flying/radios/checklists. Then, the ECAM caution cleared prior to completing action items. Engine 1 regained normal thrust, and engine indications appeared normal. The QRH for Engine 1 stall was reviewed, as a precaution. At this moment the aft FAs (Flight Attendant) called and reported the loud bang and aircraft vibrations, as well as "very loud" noise coming from door 2R. The noise was loud enough to be heard throughout the cabin. During this call the aft FA also mentioned the same door had a large hole in the door seal, and expressed significant concern because she could see outside. Flight crew immediately monitored pressurization and door indications. All appeared normal. Around this time [priority handling was requested] for the engine problem. Aircraft speed was reduced and landed uneventfully on Runway XXR. Taxied clear of the runway and stopped for a visual inspection from the ARFF (Airport Rescue and Firefighting) crew. All appeared normal, aircraft was taxied uneventfully to the gate and deplaned. Aircraft was squawked. Throughout the process, Dispatch was contacted via ARINC, FAs "briefed," and PAs for passengers made. Crew debrief completed. Chief Pilot/Dispatch/Maintenance Control all debriefed following the event also.

Narrative: 2

Engine 1 stall. After a routine departure from ZZZ, we were climbing on ZZZZZ Departure. During the climb, around FL210, there was abruptly loud "bang" noise and significant yaw to the left accompanied by Engine 1 rolling back with loss of thrust. Immediately, we leveled off at FL220. There was also a momentary vibration throughout the entire aircraft. The upper E/WD (Engine Warning Display) displayed caution message for ENG 1 STALL. The Captain was the original pilot flying and I was the pilot monitoring. The associated caution message on ECAM disappeared by itself about 10 - 15 seconds thereafter. We then transferred our duties and Captain became pilot monitoring. At the same time flight attendants called and informed us there was a loud noise coming from door 2R along with obvious loud bang. On the second call from FA, they reported a visible hole on door 2R sealant and the associated loud noise now can be heard throughout half of the cabin. Based the circumstances at hand, Captain contacted Dispatch via voice. We reviewed the QRH for ENGINE 1 STALL and [requested priority handling]. On the other hand, pressurization during that time was normal even with visible large hole in door 2R sealant. We eventually returned back to ZZZ after conducting RNAV GPS XZR with a normal landing below the max landing weight flown by the Captain. Upon vacating the runway we requested a visual inspection of the aircraft exterior from ARFF (Airport Rescue and Firefighting) team. The inspection appeared to be normal and therefore we elected to do a normal taxi to the gate and deplaned the passengers.

Synopsis

A319 flight crew reported hearing a loud bang and the airframe vibrating during climb-out, followed by Engine #1 rolling back to idle which made the aircraft yaw and bank. The flight attendants informed the flight crew there was a large hole in Door 2R, and a loud noise was coming from the affected door. The flight crew diverted to an alternate airport.

Time / Day

Date : 202308
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : BIRD.ARTCC
State Reference : FO

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 4
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Cruise
Route In Use : Oceanic
Airspace.Class A : ZZZ

Component : 1

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

Component : 2

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

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2024697
Human Factors : Workload
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Confusion
Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2024684
Human Factors : Workload
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface
Human Factors : Confusion
Human Factors : Troubleshooting

Person : 3

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Relief Pilot
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2024694
Human Factors : Workload
Human Factors : Human-Machine Interface
Human Factors : Confusion
Human Factors : Troubleshooting
Human Factors : Training / Qualification
Human Factors : Situational Awareness

Person : 4

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2025007
Human Factors : Troubleshooting
Human Factors : Training / Qualification
Human Factors : Human-Machine Interface
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Automation : Aircraft Other Automation

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.Flight Crew : Became Reoriented
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

Aircraft X from Tel Aviv. Encountered GPS jamming from Takeoff and had subsequent loss of GPS signals Left and/or Right. Followed the company location manual and selected RAD NAV INHIBIT OFF. This drove the FMC to display the guidance it was using to INERTIAL. We continued to experience loss of one or both GPS systems continually as we flew near the border of Ukrainian. Then I went on my rest break while we were flying over Eastern Europe. Navigation updated well while land based sources like VOR's were available. The Relief Pilot called me about two hours later to return early from break when we were approaching the coast of Iceland. We were in radar contact with Reykjavik. The Relief Pilot had reset the RAD NAV INHIBIT to OFF to recapture the use of the single GPS signal the aircraft was receiving as the source of navigation. This did not work. The NAV system was using INERTIAL and the ANP (Actual Nav Performance) was steadily increasing past 3.00 toward 4.00, which we believed would preclude us from entering Oceanic Airspace since the limit is 4.00. Upon seeing this I quickly called company Maintenance on the Satellite phone. The technician indicated he was unsure how to proceed but told us to use the CDU on the FMC and select the INIT REF key, INDEX, POS, Page 2. On Page 2 of the POS REF display at the 1R key position select UPDATE ARM and then select GPS at 3R. Just as we were working through this the ANP (Actual NAV Performance) increased to 4.02 and received FMC checklist message NAV UNABLE RNP. Within seconds we worked through the above steps described by Maintenance and were able to force the FMC to use GPS as its navigation source. The aircraft immediately made a turn to the left and the ANP value decreased to 0.05. This was a perfect result: on course and within navigation accuracy limitations. A aircraft malfunction was not the cause of this eventual navigation problem. I believe it was the continual GPS jamming in the vicinity of Israel, Turkey and Ukraine. In speaking to my three First Officers we agree we never trained in how to force the Navigation system to return to using GPS as its navigation source. Once we called the maintenance technician he also voiced his uncertainty how to proceed. Thankfully he quickly came up with a successful set of keystrokes via the CDU to fix our problem. After we were confidently back navigating properly we dug into our flight manual. We found instruction on selecting GPS vice INERTIAL as the navigation source. We found it in our flight manual. Receiving an Oceanic Clearance by voice from Iceland Radio at the same time our navigation accuracy was nearing unacceptable limits made this a very difficult situation. The additional guidance I mentioned above from the flight manual placed in the Company location manual would really have helped. Cause: Sustained GPS jamming for hours after leaving Tel Aviv all the way by Ukrainian boarder. Nav System did not automatically return to highly accurate GPS even after following the procedure in our Tel

Aviv Briefing Guide. Suggestions: Add steps to the Company location manual on what to do to recover GPS as the navigation source once the GPS is available if it hasn't done so automatically.

Narrative: 2

Aircraft X from LLBG to ZZZ. Departed LLBG uneventfully. Encounter GPS jamming from shortly after takeoff until well past the Ukrainian border area. Followed the procedures from the manual (Rad/Nav inhibit off.) Upon returning from crew rest break, approaching Iceland, and under Reykjavik radar control we were unable to get nav systems to use GPS for navigation even though we now had Rad/Nav inhibit on and we had at least one good GPS. The Nav system was still using inertial, and since we were now coast out, the ANP was increasing fairly quickly towards RNP of 4.0. Captain immediately called Maintenance via Satcom. Maintenance advised crew to select: init ref/index/pos/page2. Now select update/arm and then select GPS. This forced FMC to use the good GPS signal. At this very moment ANP exceeded RNP and received message : NAV UNABLE RNP. ANP was in excess of RNP on the oceanic portion of our routing although we were still under Reykjavik radar control. Upon forcing the FMC to use GPS the aircraft made an immediate left turn to intercept what was now the correct track. No further issues with Nav systems the rest of flight. Suggestion: Increased training and awareness in Nav systems in recurrent/initial would have greatly helped. Previously in my experience when Rad/Nav has been switched back to on, FMC will now switch back to GPS for position. Have never been trained or seen a situation where crew had to force FMC to accept a good GPS position. Company location manual does not address this. Additional info included in Company location manual.

Narrative: 3

During climb out, the Captain and First Officer (FO) selected to turn VOR NAV INHIBIT to OFF because our GPS was being jammed. Relief Pilot and I (other Relief Pilot) then went on break. After returning from break, we noticed GPS L did not have a signal but GPS R was receiving what appeared to be an accurate signal. We also noticed "inertial" on the Navigation Display (ND) and immediately selected the VOR NAV INHIBIT to ON. Upon selecting NAV INHIBIT to ON, it did not change our navigational source and it remained in "INERTIAL" rather than GPS, even though we had a GPS R signal. (GPS L was still blank). As we were approaching VALDI, our inertial began to drift and our ANP was increasing. We referenced the checklists, manuals for information on how to force the navigation back into GPS while it was in inertial but found no information on this procedure. While the ANP was still less than RNP, I decided to wake the Captain early and advise him of our GPS issue. We called Maintenance on the SAT phone and after not having any procedures off hand to offer us, he said one last thing you could try is to select the "ARM" on R 1 POS REF page 2/3 and see if it will manually update GPS position. Shortly before we received this information, our ANP exceeded our RNP. We immediately selected ARM then "update" next to GPS R. This then changed our navigation source from INERTIAL to GPS. Upon the switch, it then went back on GPS course. Our ANP was right of course by 0.05 and went to zero within seconds. Cause: There is a lack of information on how to force the navigation source back to GPS after it is in inertial. I believe this should happen automatically but it didn't and there isn't a checklist or procedure listed. Suggestion: I highly recommend publishing a fleet bulletin explaining how to force the navigation source back to GPS if it remains stuck in inertial. The solution is on page 2/3 of POS REF page and at R1 you select "ARM" then select the source you wish to update, which was the GPS R, since GPS L still had no signal. This immediately fixed our issue and forced it back into GPS navigation. With a majority of our flights from DEL and TLV experiencing GPS jamming, I really believe other crews can greatly benefit from this information and potentially save a diversion.

Narrative: 4

Encountered GPS jamming enroute while in radar contact w Iceland Control. Aircraft reverted to inertial nav and was unable to recapture GPS nav until RNP reached 4.02. Contacted Maintenance and with all 4 pilots was able to force aircraft back into proper nav source in which the aircraft recaptured center line course. Cause: Erroneous known GPS jamming in the regions operated. Suggestion: Train crews more on these procedures involving gps jamming events.

Synopsis

Air carrier pilot crew reported GPS jamming departing Tel Aviv and continuing for hours. The crew used an alternate method to regain GPS guidance and continued the flight.

Time / Day

Date : 202307

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : MCC.Airport

State Reference : CA

Altitude.MSL.Single Value : 600

Environment

Flight Conditions : VMC

Light : Daylight

Aircraft : 1

Reference : X

ATC / Advisory.UNICOM : MCC

Aircraft Operator : Personal

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

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : VFR

Mission : Training

Mission.Other

Flight Phase : Final Approach

Route In Use : Visual Approach

Airspace.Class E : MCC

Aircraft : 2

Reference : Y

ATC / Advisory.UNICOM : MCC

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

Flight Phase : Final Approach

Airspace.Class E : MCC

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Personal

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Private

Experience.Flight Crew.Total : 150

Experience.Flight Crew.Type : 120

ASRS Report Number.Accession Number : 2023441

Human Factors : Communication Breakdown

Human Factors : Time Pressure

Human Factors : Training / Qualification

Human Factors : Situational Awareness

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

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 400
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

While practicing VFR ILS approaches into MCC (no view limiting of any kind), on short final, another aircraft turns final directly onto me, and I am forced to take extreme action (45 degrees or more of bank) to avoid a collision, while only ~500ft AGL, with full flaps. In retrospect this was an extremely dangerous situation, and I am very confident had I not taken any steps to avoid this collision, there is a high likelihood an accident would have occurred. From memory, I made 10 mile, 5 mile, 3 mile, and short final callouts on the CTAF 122.975. I do not believe there was any radio issue on my end, as I had just spoken to someone else on CTAF shortly beforehand (an instructor I know flying another airplane). Someone calls their base, I again inform them I am on short final, my flight logs show me about 0.5nm from the numbers; seemingly ignoring my communications, they call their final. I get a TCAS alert from Foreflight (connected directly to my plane's GPS & ADS-B receiver via a GTX 345 + FlightStream), confirm it visually, and see them on a rapid collision course for where I was going to be in a few seconds, and did a hard 360 to avoid. At about XA:46Z time, limited ADS-B replay data shows me at 600ft and Aircraft Y, the plane in question, at 1125ft. Upon looking up the tail number, it seems Aircraft Y is a low wing. It is very well possible that the pilot did not see me due to this fact, as forward-below visibility can be reduced for certain low wings. It is also possible he either did not receive my communications, or did not heed them appropriately. In retrospect, there are a few things I could've done better: Although I made an attempt by trying to call my short final multiple times, I could've communicated to the pilot on base directly that if he wanted to avoid a collision, he should hold off on turning base until he had me in sight as passing his wing. I could've retracted my flaps BEFORE taking corrective action. I could have taken corrective action as soon as he called base; albeit there was not much time between the base and final call, so I was still processing the decision the other pilot made - was he trying to get there first, or did he just not know I was there? I could have broken off to the left instead of the right in this particular case. After the collision was avoided, I should have immediately discussed it with the pilot in question. I was a bit shocked, and due to adrenaline dump, I instead opted to rejoin the traffic pattern on a 45 and immediately land so I could collect my thoughts.

Synopsis

General aviation pilot reported a near miss on final approach at a non-tower airport while proficiency training. The pilot performed an evasive maneuver at low altitude to avoid the other aircraft, re-entered the pattern and landed safely.

Time / Day

Date : 202307
Local Time Of Day : 1801-2400

Place

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

Environment

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

Aircraft

Reference : X
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : Personal
Make Model Name : Citation V/Ultra/Encore (C560)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Nav In Use : GPS
Flight Phase : Landing
Route In Use : Visual Approach
Airspace.Class G : ZZZ

Component

Aircraft Component : Nosewheel Steering
Aircraft Reference : X
Problem : Improperly Operated

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 5088
Experience.Flight Crew.Last 90 Days : 47
Experience.Flight Crew.Type : 1304
ASRS Report Number.Accession Number : 2022197
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Excursion : Runway
Anomaly.Ground Event / Encounter : Loss Of Aircraft Control
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

This was the fourth flight leg of the day, none of which were over one hour. Both crewmembers were well rested, had eaten supper before this flight and had not had flight duties the day before the occurrence. Total flight time for the day was 3.3 hours. We were on a night approach to ZZZ at the end of a flight leg of about 42 minutes, from ZZZ1. The approach had been briefed before the start of the flight and reviewed during the short cruise portion of the flight. The airport was visible from at greater than 5 miles out. The surrounding area is very dark. We were flying a visual approach while using the RNAV (GPS) RWY XX approach for back-up to the visual. Wind was missing from the airport weather, but the winds at nearby stations was light and variable. Both pilots confirmed we were on course, on the proper descent path, needles centered, and on approach and ref speeds. Runway lights were illuminated using 5 radio clicks, while some distance from the airport and again on final approach. Both pilots believed that we touched down on the center-line of the runway, just prior to the end of the 1000 ft, fixed distance markers. The landing was smooth, but shortly after the nose-wheel touched down the aircraft veered left and partially onto the grass to the left of the runway. I was able to get the aircraft back on the runway with rudder pedal control and completed the roll-out and taxi to parking without further issues. In debriefing the event with the other pilot, we were both quite sure the aircraft had touched down on the centerline of the runway. On short final, we had verbally confirmed that we were on the glidepath and on the extended centerline of the runway. Despite that, the review of the tire marks and tracks in the grass the next day (I was not a part of that review) apparently showed the aircraft touched down on the left edge striping of the runway and probably veered left when the nosewheel touched down on the edge of the pavement of the runway. The aircraft landing lights were on, the runway lights were on medium, which is the setting I generally prefer at night, and the cockpit and cabin lights were set at an appropriate level for night flight. To date, neither pilot can understand how we were not on the runway centerline for touchdown, assuming the review of the tire-tracks is correct. I have a recurrent training coming up, scheduled well before this event occurred, and plan to request that we recreate this approach in the simulator.

Synopsis

CE-560 Captain reported a runway excursion onto the adjacent grass after landing at night at a non-towered airport. The Captain was able to maneuver back onto the runway with rudder control and taxied off the runway without damage.

Time / Day

Date : 202307

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : LLBG.Airport

State Reference : FO

Altitude.MSL.Single Value : 30000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.TRACON : LLBG

Aircraft Operator : Air Carrier

Make Model Name : Widebody, Low Wing, 2 Turbojet Eng

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Descent

Component

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : 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 : 15235

Experience.Flight Crew.Last 90 Days : 105

Experience.Flight Crew.Type : 2418

ASRS Report Number.Accession Number : 2021847

Events

Anomaly.Aircraft Equipment Problem : Less Severe

Detector.Person : Flight Crew

When Detected : In-flight

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Environment - Non Weather Related

Primary Problem : Environment - Non Weather Related

Narrative: 1

On the AMMOS 1E arrival, we noticed that our GPS was being jammed. We followed the supplementary procedures in the flight manual regarding GPS interference. We received the typical indications i.e Inertial (versus GPS) updating and did also receive notice from the airplanes automatic reporting system that the right GPS had failed.

Synopsis

Wide body air carrier Captain reported GPS jamming on the AMMOS 1E arrival into LLBG.

Time / Day

Date : 202307

Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZAB.ARTCC

State Reference : NM

Altitude.MSL.Single Value : 34000

Aircraft

Reference : X

ATC / Advisory.Center : ZAB

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Cruise

Airspace.Class A : ZAB

Component

Aircraft Component : GPS & Other Satellite Navigation

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 : Multiengine

Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 2021354

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 : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 2021358

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Person : Flight Crew
When Detected : In-flight
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

Aircraft X, FL 340, approaching ABQ with reported electromagnetic interference in the area by ATC and other aircraft. Aircrew noticed the Advanced Gauge Display (AGD) was displaying ADS-B Inop. Subsequently, the aircrew received the NAV FM/GPS POS DISAGREE ECAM caution. After running the appropriate ECAM action, the Captain (pilot monitoring (PM) referenced the QRH and ran the NAV FM/GPS POS DISAGREE checklist. Estimated accuracy was below required accuracy, and FM position agreed with onside Global Positioning/Inertial Reference System (GPIRS) position. First Officer (pilot flying (PF) navigated through several areas of convective activity with heading mode, while verifying aircraft's position with ground NAVAIDS. NAV FM/GPS POS DISAGREE ECAM resolved itself west of ABQ, aircrew confirmed aircraft position via ground NAVAIDS, estimated accuracy and FM/GPS comparison and then proceeded directly to BLD [VOR] via NAV mode, then to ZZZ via flight planned route without further incident. While preparing for the visual approach XXR into ZZZ, aircrew determined that GPS 2 Position display was blank. Weather at ZZZ was VMC and aircrew flew the visual approach and landed in ZZZ without further incident. Aircrew requesting further information regarding electromagnetic interference and resulting GPS failure, if available. Cause: Electromagnetic Interference.

Narrative: 2

During cruise at FL320 and while deviating around some thunderstorms, aircraft exhibited NAV FM GPS Pos Disagree ECAM message. I was pilot flying (PF) and continued flying while Captain ran QRH checklist. We verified ANP was better than RNP and Global Positioning/Inertial Reference System (GPIRS) solution was usable. ADS-B in fail message and ATC fail light were on during period where both GPS were unreliable. Continued flight using FMS position solutions and ground based nav aids. GPS1 restored itself about an hour later and flight landed in ZZZ uneventfully. Wrote up GPS2 which was blanked out. Cause: Flight through EMI. Suggestions: Don't plan flights near missile ranges and other locations employing GPS jamming.

Synopsis

Air carrier flight crew reported they encountered GPS jamming in cruise flight in the vicinity of ABQ.

Time / Day

Date : 202307

Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZLC.ARTCC

State Reference : UT

Altitude.MSL.Single Value : 9600

Environment

Flight Conditions : VMC

Light : Daylight

Ceiling : CLR

Aircraft

Reference : X

ATC / Advisory.Center : ZLC

Aircraft Operator : FBO

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Training

Flight Phase : Descent

Flight Phase : Cruise

Route In Use.Other

Airspace.Class E : ZLC

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : FBO

Function.Flight Crew : Instructor

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Commercial

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 342

Experience.Flight Crew.Last 90 Days : 129

Experience.Flight Crew.Type : 326

ASRS Report Number.Accession Number : 2020565

Human Factors : Situational Awareness

Human Factors : Physiological - Other

Events

Anomaly.Deviation - Altitude : Overshoot

Anomaly.Deviation - Track / Heading : All Types

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

Anomaly.Deviation / Discrepancy - Procedural : Clearance

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Air Traffic Control

When Detected : In-flight

Result.Flight Crew : Took Evasive Action

Result.Flight Crew : Returned To Clearance

Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

Before attempting this specific flight, As an instructor, I had done this exact flight a few times both under VFR rules and IFR rules, My student and I were doing an IFR training flight. We had planned to go from PVU to DTA to U14 (Nephi) and then back to PVU. We were going to do 3 instrument approaches at each airport preformed under an IFR flight plan. After being cleared for the first approach (VOR 35) into Delta, the controller asked what we were planning on doing after either the missed approach/touch and go. We advised the controller that we were planning on doing the missed approach then we would continue to Nephi to do an approach, then head back to Provo for the final approach. The controller acknowledged it. We decided to do a touch and go at Delta to comply with the cross country logging. After consideration of the runway length, the winds and the high density altitude we decided to take it to the end of the runway and to takeoff in the opposite direction to preform the missed approach for safety precautions. Upon doing the missed approach, we advised ATC of the missed approach. We noticed it was a different controller, and the controller acknowledged the missed approach. We continued to climb in the hold until 9,600 ft. In previous flights, the controller either had us climb higher or had us climb after the hold. I assumed that we were good to leave the hold and continue toward Nephi for the RNAV 35 approach since that is would we had talked about. This is where I made the mistake as the instructor. Because I was unsure of the clearance or what was expected, I should of just asked the controller in the hold what he would of liked us to do instead of assuming that we were okay to continue to the next approach. After leaving the hold (because the DTA VOR is the IAF for the RNAV 35 approach) we were briefing the approach as we were going direct to the next fix, which was RAPPO. The controller came on and said, "Where are you going?" We replied, "We have began the approach segment for Nephi". The controller was not happy and said that we weren't given a clearance to leave the hold. He advised us of the altitude restriction on the approach plate and advised us to climb to 10,800 ft and then he would be able to clear us for the approach. So we climbed to 10,800 ft and he cleared us for the approach. After having the approach already plugged in, we were unable to plug in the minimums. The small FMS knob was not functioning so my student used the FMS on the MFD (Multi-function display). Because there wasn't a way to only input in the minimums, my student just ended up re-inputting the approach on the MFD. Just a few miles before RAPPO, instead of putting the IAF as the Delta VOR and changing it in the FMS, my student put PILTE as the initial approach fix. This then took us from 070 to 050 direct to PILTE. Because we were so close to RAPPO, I had assumed that we had already crossed over RAPPO and now we were going direct to the next fix, PILTE. After picking up the weather for Nephi, I told my student to advise the controller that we had the weather for Nephi and that's when the controller asked us where we were going. My student then responded direct to "PILTE". The controller said that there was a low altitude alert that that we needed to climb because going direct to PILTE we needed a minimum altitude of 11,400 ft. So we climbed to 11,400

ft. We had already cleared the mountainous terrain at this point and by a lot. At that moment I knew there was some sort of confusion and something was not right. That's when I realized that by inputting the flight plan it changed. As we were getting close to PILTE the controller said, cross PILTE at 10,600 ft so we complied and began the descent. Upon doing the descent, we were given the phone number for Salt Lake Center. After so, we cancelled our IFR flight plan while doing the approach. Factors that may have contributed to the event/situation include: Time of day...it being very warm in temperature. As a CFI, this was my second cross country flight of the day. Perhaps I may have been slightly dehydrated or somewhere along those lines. To correct for this, I will always carry water with me even when the temperature is cooler. As a CFI, I assumed things when I should of taken initiative and not assume them. This was a learning experience for both the student and I. I will do my very best to not make the same mistake again. I take full responsibility as the instructor. Corrective actions that we could do would be to ask and verify if uncertain of anything. Also when replugging in the GPS to verify that it is doing exactly what it should be doing or just reference the minimums instead of trying to play with the GPS to input it. In conclusion, remain in the hold until cleared to leave. And if you are uncertain of the matter, just ask.

Synopsis

GA flight instructor with student reported a track heading deviation after turning to the wrong intersection resulting in a CFTT event. ATC advised the pilots of the terrain issue prompting the crew to take evasive action.

Time / Day

Date : 202307

Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 1000

Environment

Flight Conditions : VMC

Weather Elements / Visibility : Haze / Smoke

Weather Elements / Visibility.Visibility : 7

Light : Daylight

Aircraft

Reference : X

Aircraft Operator : Personal

Make Model Name : PA-32 Cherokee Six/Lance/Saratoga/6X

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : None

Mission : Personal

Flight Phase : Cruise

Component

Aircraft Component : Navigational Equipment and Processing

Aircraft Reference : X

Problem : Failed

Person

Location Of Person.Aircraft : X

Reporter Organization : Personal

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Private

Experience.Flight Crew.Total : 2870

Experience.Flight Crew.Last 90 Days : 25

Experience.Flight Crew.Type : 2570

ASRS Report Number.Accession Number : 2020242

Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Critical

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Speed : All Types

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

Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Maintenance Action

Assessments

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

Narrative: 1

I was taking my plane to the avionics shop to have a fuel transducer rerouted. When I took off my primary radio's, a Garmin GTN650, screen went black. I proceeded to ZZZ and it was determined that the radio may have experienced water damage from an unknown source. The radio has been removed and is being repaired by the manufacturer. Upon return to the airport, it was noted that the flight aware had my altitude identified as being 8600 FT and my airspeed at about 200 knots. Neither was the case as I was at about 1600 FT and my aircraft was probably cruising at 120 knots. I never violated any airspace during the 10 to 15 minute flight to and from the avionics shop. It looks like my transponder may get its GPS from the inoperative radio.

Synopsis

PA-32 pilot reported the primary navigation and communication screen went black after takeoff resulting in possible altitude and airspeed deviations. The reporter continued to destination where the avionics shop determined water damage may have caused the malfunction.

Time / Day

Date : 202305

Local Time Of Day : 0001-0600

Place

Altitude.MSL.Single Value : 32000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : Commercial Fixed Wing

Crew Size.Number Of Crew : 3

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Nav In Use : GPS

Nav In Use : FMS Or FMC

Flight Phase : Cruise

Route In Use : Direct

Component : 1

Aircraft Component : Navigational Equipment and Processing

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : GPS & Other Satellite Navigation

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 19082

Experience.Flight Crew.Last 90 Days : 200

Experience.Flight Crew.Type : 2834

ASRS Report Number.Accession Number : 2000093

Human Factors : Situational Awareness

Human Factors : Troubleshooting

Human Factors : Workload
Human Factors : Distraction

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.General : Maintenance Action
Result.Flight Crew : Overcame Equipment Problem
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

On two occasions worse COMM Jamming I've experienced. We got NAV unable RNP, Runway SYS, GPS, TERR POS and ADS-B OUT L messages. Completed checklists, informed dispatch and maintenance control, continued on after the systems reset, automatic maintenance write ups occurred. Occurrences were just abeam Syria and Southwest of Ukraine transiting North.

Synopsis

Air carrier Captain reported GPS jamming in the vicinity of Ukraine and Syria.

Time / Day

Date : 202304
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : SMO.Tower
State Reference : CA
Relative Position.Angle.Radial : 023
Relative Position.Distance.Nautical Miles : 4
Altitude.MSL.Single Value : 1800

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Fog
Weather Elements / Visibility.Visibility : 2.5
Light : Dusk
Ceiling.Single Value : 300

Aircraft

Reference : X
ATC / Advisory.Tower : SMO
Aircraft Operator : Air Taxi
Make Model Name : Small Transport, Low Wing, 2 Turbojet Eng
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Route In Use.Other
Airspace.Class D : SMO

Component

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

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 6700
Experience.Flight Crew.Last 90 Days : 147
Experience.Flight Crew.Type : 690
ASRS Report Number.Accession Number : 1998026

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Overcame Equipment Problem
Result.Aircraft : Equipment Problem Dissipated

Assessments

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

Narrative: 1

During the RNAV GPS Runway 21 approach into Santa Monica, after passing the final approach fix and descending through approximately 1800 feet, experienced a loss of the glide path associated with a GPS LOI (loss of integrity) warning. Immediately executed the published missed approach. Regained full GPS functionality during the climb and successfully executed the same approach to a landing at SMO. No further GPS anomalies in later flights. Subsequently heard from my company that other pilots had experienced GPS failure in same location.

Synopsis

Corporate jet Captain reported executing a go-around from approach to SMO after experiencing GPS anomalies. Reporter stated he was notified that other aircraft experienced similar anomalies in that area.

Time / Day

Date : 202303

Place

Altitude.AGL.Single Value : 60

Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 4

Work Environment Factor : Excessive Wind (UAS)

Light : Daylight

Ceiling : CLR

Aircraft

Reference : X

Aircraft Operator : Recreational / Hobbyist (UAS)

Make Model Name : Ruko F11 Mini

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Recreational Operations / Section 44809 (UAS)

Mission : Recreational / Hobbyist (UAS)

Flight Phase : Hovering (UAS)

Airspace.Class G : ZZZ

Operating Under Waivers / Exemptions / Authorizations (UAS) : N

Weight Category (UAS) : Small

Configuration (UAS) : Multi-Rotor

Flight Operated As (UAS) : VLOS

Flight Operated with Visual Observer (UAS) : N

Control Mode (UAS) : Manual Control

Flying In / Near / Over (UAS) : Private Property

Flying In / Near / Over (UAS) : Critical Infrastructure

Flying In / Near / Over (UAS) : Open Space / Field

Flying In / Near / Over (UAS) : Moving Vehicles

Type (UAS) : Purchased

Number of UAS Being Controlled (UAS).Number of UAS : 1

Component : 1

Aircraft Component : Receiver (UAS)

Manufacturer : Ruko

Aircraft Reference : X

Problem : Malfunctioning

Component : 2

Aircraft Component : GPS Module (UAS)

Manufacturer : Ruko

Aircraft Reference : X

Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 45.00
Experience.Flight Crew.Type (UAS) : 5.00
ASRS Report Number.Accession Number : 1994554
Human Factors : Troubleshooting
Analyst Callback : Completed

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : UAS Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

This is a portion of the information I sent to the manufacturer. They did send me a replacement drone. Which the issues are reduced by a good 10 fold however I still don't have complete control. I still can't land on a 25x25 landing pad because the drone likes to wander it is a GPS drone. I discovered NASA reporting online and felt this was a good way to report what this drone is doing. Simple terms I had a loss of control event. I am having some problems with my F11 mini drone. I had hoped to make a video and explain it in there but the weather for the next week is bad. Flying outside I will start up and everything is running well. I will fly for a long time and all of a sudden it is like somebody else is fighting me for the controls. What happened the last time was with no increase in wind the front props pitched up sending me to the rear. I counter acted that with full right stick forward, front pitch remained up and back pitch raised as well. This allowed me to inch forward at the same time the drone ascended a good 20 feet in the air with my fingers not even touching the yaw/elevation stick. I did manage to get it back to a safe landing area. I re-calibrated compass and gyro with the start up procedure again. I armed the props, took off and hovered at 10 feet for 1 minute and it was all good again. Needless to say this is an unsafe flight condition and it is a reoccurring problem. The exact problem changes but overall it remains very similar. I have also noticed I can't land within arms reach of my 25x25 landing pad outside, however, inside in ATTI (Attitude) mode I have no problem landing within 1 foot. I also ran it for 15 minutes inside on ATTI mode and it was rock steady and responsive to controls. Outside it feels like the GPS is dealing with a very heavy lag and it doesn't agree with my control inputs I'll roll left several feet, then it will push me to the right where my last stable position was. I have been flying the drone for quite some time now and these have been issues the entire time, however, I've flown it enough where I know its a problem that isn't going away by itself.

Callback: 1

The reporter indicated they believe the issue is with the remote controller but they have no way to verify it.

Synopsis

Recreational/hobbyist UAS pilot reported controllability issues flying their UAS and believes the GPS module or remote controller are possible causes.