

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.....	12.0
Date of Update	February 17, 2009
Number of Records in Report Set.....	50
Number of New Records in Report Set	30
Type of Records in Report Set.....	For each update, new records received at ASRS will displace a like number of the oldest records in the Report Set, with the objective of providing the fifty most recent relevant ASRS Database records. Records within this Report Set have been screened to assure their relevance to the topic.

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 of the following points, which must be considered when evaluating these data.

ASRS reports are submitted voluntarily. 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.

Reports submitted to ASRS may be amplified by further contact with the individual who submitted them, but the information provided by the reporter is not investigated further. Such information represents the reporting of a specific individual who is describing their experience and perception of a safety related event.

After preliminary processing, all ASRS reports are de-identified. Following de-identification, there is no way to identify the individual who submitted a report. All ASRS report processing systems are designed to protect identifying information submitted by reports, such as, names, company affiliations, and specific times of incident occurrence. There is, therefore, no way to verify information submitted in an ASRS report after it has been de- identified.

The National Aeronautics and Space Administration and its ASRS 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.



Linda J. Connell, Director
Aviation Safety Reporting System

CAVEAT REGARDING STATISTICAL USE OF ASRS INFORMATION

Certain caveats apply to the use of ASRS statistical 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, air carriers, or other participants in the aviation system, are equally aware of the ASRS or equally willing to report to us. Thus, the data reflect **reporting biases**. These biases, which are not fully known or measurable, may influence ASRS statistics. 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 supportive of the ASRS program and more inclined to report to us should an NMAC occur.

One thing that can be known from ASRS statistics is that they represent the **lower measure** of the true number of such events that are occurring. For example, if ASRS receives 881 reports of track deviations in 1999 (this number is purely hypothetical), then it can be known with some certainty that at least 881 such events have occurred in 1999. Because of these statistical limitations, we believe that the **real power** of ASRS lies in the **report narratives**. Here pilots, controllers, and others, tell us about aviation safety incidents and situations in detail. They explain what happened, and more importantly, **why** it happened. The values of these narrative reports lie in their qualitative nature. Using report narratives effectively requires an extra measure of study, but the knowledge derived is well worth the added effort.

Report Synopses

ACN: 817738 (1 of 49)

Synopsis

A PC-12 CAS ALERTED 'UNABLE FMS-GPS MON,' 'GPS 1 FAIL' AND 'TAWS FAIL.' THE PILOT BELIEVED THE INDICATIONS WERE ERRONEOUS, BUT ON A RETURN FERRY FLIGHT A MAP SHIFT OCCURRED ALONG WITH FAILURES OF THE AUTOPILOT, YAW DAMPENER, AND FLIGHT DIRECTOR.

ACN: 813205 (2 of 49)

Synopsis

A LR24 PILOT WAS DISTRACTED WHILE ENTERING RNAV ARRIVAL LAT/LONG DATA FOR AN ARRIVAL THAT WAS NOT IN THE GPS DATABASE AND HAD A TRACK DEVIATION AS WELL AS FAILING TO LEVEL AT THE ASSIGNED ALTITUDE.

ACN: 812057 (3 of 49)

Synopsis

A PA46T PILOT EXECUTED A MISSED APPROACH AFTER A LOW VISIBILITY APPROACH BUT FAILED TO REENGAGE AUTOPLT. THE AIRCRAFT DID NOT LEVEL AT THE ASSIGNED ALTITUDE AND FLEW THROUGH THE ASSIGNED HEADING. FATIGUE WAS A FACTOR.

ACN: 811037 (4 of 49)

Synopsis

A CL30'S ANTI-ICE SYSTEM FAILED DURING A MISSED APPROACH IN ACTUAL ICING CONDITIONS. UNFAMILIAR WITH SOCIAL AREA AND GIVEN A NON-PUBLISHED HOLDING PATTERN THE CREW, NOW IN A VERY HIGH WORKLOAD SITUATION, HAD A TRACK DEVIATION INTO AND OUT OF HOLDING.

ACN: 810325 (5 of 49)

Synopsis

DIFFICULTIES IN INSTALLING A TARDY REPROGRAMMING OF THE RNAV APPROACH RESULTS IN CE68 FLIGHT CREW FAILING TO MAKE THE CROSSING RESTRICTION AT THE FAF.

ACN: 810089 (6 of 49)

Synopsis

A B36TC PILOT RAN OUT OF FUEL NEAR HIS DESTINATION IN PART BECAUSE THE JPI FUEL FLOW INDICATOR WAS MALFUNCTIONING. HE MANAGED A SAFE DEAD STICK LANDING AT HIS DESTINATION.

ACN: 809010 (7 of 49)

Synopsis

CITATION FLT CREW HAS AN ALTITUDE DEVIATION WHILE ENCOUNTERING UNFORECAST DESTINATION WEATHER ACCOMPANIED BY FMS ISSUES AND DIVERSION AIRPORT PROBLEMS. SECOND ALTERNATE RECOMMENDED BY ATC PROVES TO BE THE ANSWER TO A VERY BUSY FLIGHT.

ACN: 808891 *(8 of 49)*

Synopsis

THE PILOT OF A LIGHT AIRCRAFT ENTERED THE TRAFFIC PATTERN OF A TOWER CONTROLLED AIRPORT AND LANDED WITHOUT CLEARANCE BECAUSE HIS GPS NAV DATABASE WAS OUT OF DATE.

ACN: 808330 *(9 of 49)*

Synopsis

A CL30 FLT CREW EXPERIENCED FAILURE OF ALL NAV AND COM TUNING CAPABILITY, AS WELL AS LOSS OF FO'S MFD. THEY WERE ABLE TO COMMUNICATE ON GUARD USING THE REVERSION FEATURE.

ACN: 808203 *(10 of 49)*

Synopsis

A KING AIR CAPT ALTIMETER WAS IN ERROR. THE ACFT WAS REMOVED FROM SVC AFTER RETURNING TO HOME BASE.

ACN: 808066 *(11 of 49)*

Synopsis

PA28 PILOT INADVERTENTLY ENTERS RESTRICTED AIRSPACE AT 1000 FT DURING A LIVE FIRE EXERCISE.

ACN: 807680 *(12 of 49)*

Synopsis

EMB135 FO REPORTS STRANGE FMC MALFUNCTION DURING ARGAL ARRIVAL TO RDU CAUSING TRACK DEV.

ACN: 807488 *(13 of 49)*

Synopsis

AN LNAV APCH PLATE MINIMUM ALT FORMATTING CAUSED A C172 PLT TO USE THE LPV DECISION ALT VERSUS THE LNAV MDA NEARLY CAUSING A CFTT EVENT.

ACN: 806589 *(14 of 49)*

Synopsis

IMPROPER PROGRAMMING OF ACTIVE WAYPOINT FOR GPS RESULTS IN VIOLATION OF CLASS D AIRSPACE BY SMA PLT.

ACN: 806358 *(15 of 49)*

Synopsis

PILOT OF SMA REPORTS NMAC WITH LIGHT TWIN IN TRAFFIC PATTERN AT SOP. REPORTER IS USING WRONG CTAF FREQUENCY.

ACN: 806215 *(16 of 49)*

Synopsis

A SMA ON A VOR A/GPS-A APCH TO AUW RWY 30 MADE A LOW APCH TO CWA RWY 26. A TRANSITION FROM IMC TO VMC CAUSED A QUICK INCORRECT DECISION.

ACN: 804728 *(17 of 49)*

Synopsis

AN IFR COLUMBIA 400 PILOT BEGAN A DSCNT WITHOUT ATC CLRNC WHILE DISTRACTED ON A VMC DAY AND MINDLESSLY FOLLOWING THE ACFT'S FMC.

ACN: 804417 *(18 of 49)*

Synopsis

WITH NO FLT PLAN FILED AND NOT UTILIZING FLT FOLLOWING, NON-INSTRUMENT RATED SMT PLT DEPARTS ON 700+ NM CROSS COUNTRY ACROSS THE ROCKY MOUNTAINS AND IS COMPELLED TO CLIMB ABOVE FL180 TO AVOID IMC. ATC ADVISES HIM OF HIS ERROR.

ACN: 802960 *(19 of 49)*

Synopsis

A PLT FERRYING A BE36 EXPERIENCED ELECTRICAL COMPONENT FAILURES AFTER TKOF AND HAD AN ALT DEV WHILE TROUBLESHOOTING THE CAUSE.

ACN: 802866 *(20 of 49)*

Synopsis

BE23 PLT REPORTS GARMIN 30SL FAILED TO SHOW FLAGS WHEN DISPLAYING FAULTY INFORMATION.

ACN: 802531 *(21 of 49)*

Synopsis

INDECISION AS TO WHICH APCH TO FLY OVER MOUNTAINOUS TERRAIN INTO MFR RESULTS IN LOSS OF SITUATIONAL AWARENESS AND A DESCENT BELOW CLRED ALT.

ACN: 802384 *(22 of 49)*

Synopsis

AN ECLIPSE 500 WITH 10 TOTAL AIRFRAME HRS HAD THE GPS AND AUTOPLT FAIL AT FL270. A PLT DEV WAS FILED WHEN THE DISTRACTED PILOT ALLOWED THE ACFT TO CLB 300 FT.

ACN: 802108 *(23 of 49)*

Synopsis

B777 CAPT REPORTS FMC NAVIGATION DATABASE ANOMALIES DURING FLIGHT TO ASIA.

ACN: 801842 *(24 of 49)*

Synopsis

A SMA PILOT AT SBA GIVEN INCOMPLETE PROGRESSIVE TAXI INSTRUCTIONS, CROSSED THE ACTIVE RWY USING A GPS WITH AN INCOMPLETE ARPT MAP.

ACN: 801156 *(25 of 49)*

Synopsis

C182 PILOT LOSES CONTROL IN IMC WHEN ATTEMPTING TO ENTER WRONG VOR IDENTIFIER IN GPS.

ACN: 800916 *(26 of 49)*

Synopsis

UNFAMILIAR WITH NAV EQUIPMENT ABOARD HIS PA31, AIR AMBULANCE PLT IS LATE IN RECOGNIZING PRESSURIZATION FAILURE AND RETURNS TO DEP ARPT.

ACN: 799307 *(27 of 49)*

Synopsis

PA46 PLT SUFFERS INACCURATE PITOT STATIC INDICATIONS AFTER TKOF. ATC FEARS HE WILL BE UNABLE TO CLEAR HIGH TERRAIN AND DECLARES EMERGENCY. ACFT LANDS AT A NEARBY ARPT NOT FAR FROM DEP ARPT.

ACN: 796943 *(28 of 49)*

Synopsis

AN APPARENTLY MISPROGRAMMED GPS CONTRIBUTES TO AN UNWITTING TRACK DEVIATION FOLLOWED BY A REPRIMAND FROM ATC FOR A SMA PLT.

ACN: 796411 (29 of 49)

Synopsis

A LR55 FO SELECTED THE FMS 'HOLD' BUTTON PUTTING THE ACFT INTO HOLDING 20 NM FROM THE ASSIGNED HOLD. THE CONFUSED CREW DID NOT UNDERSTAND THE BUTTON'S FUNCTION.

ACN: 759932 (30 of 49)

Synopsis

PIPER PLT RPTS CTAF FREQUENCY ERROR ON COMMERCIAL CHART FOR TZT.

ACN: 759369 (31 of 49)

Synopsis

FLT CREW MANUALLY ENTERED DEPARTURE FROM CLE. CREW INADVERTENTLY ENTERED SIMILAR FIX RATHER THAN FIX DEPICTED ON DEP.

ACN: 753502 (32 of 49)

Synopsis

A PLT AND INSTRUCTOR ON A FDK RNAV Z RWY 23 PRACTICE FLEW INTO THE ADIZ ON THE MISSED APCH BECAUSE OF A GPS CONFIGURATION AND NO ADIZ PLOTTED ON THE APCH PLATE.

ACN: 748405 (33 of 49)

Synopsis

AN EMB 145 EXPERIENCED DUAL GPS FAILURES CAUSING AN FMS LNAV DIFFERENCE BETWEEN THE CAPT AND FO. THE EICAS DID NOT ALERT ABOUT THE GPS FAILURES.

ACN: 747186 (34 of 49)

Synopsis

FLT CREW REPORTS QUESTIONABLE ALTITUDE CLEARANCES BY SKBP TRACON DURING RNAV GPS RWY 33 APPROACH TO SBKP AND TRAFFIC CONFLICT DURING THE PROCEDURE TURN INBOUND.

ACN: 745159 (35 of 49)

Synopsis

PILOT REPORTS ATC ASSIGNS THE MIKEE FOUR ARR TO VPC WHEN VPC IS NOT AN APPLICABLE ARPT. PLTS ARE UNABLE TO PROGRAM APCHS FROM THE MIKEE STAR TO VPC.

ACN: 745153 (36 of 49)

Synopsis

A CESSNA PILOT REPORTS NCT WAS NOT AWARE OF DME CHANGES AT INTXNS SUDGE AND JOCPI UNTIL HE BEGAN THE HWD RNAV (GPS) Z RWY 28L APCH.

ACN: 741081 (37 of 49)

Synopsis

C340 PLT EXECUTED GO-AROUND AFTER FAILING TO TRACK LOC. DURING THE MANEUVER, THE PLT BECAME DISORIENTED, BUT WAS ABLE TO REGAIN COMPOSURE, PROPERLY TUNE LOC, AND COMPLETE THE APCH.

ACN: 736691 (38 of 49)

Synopsis

FOLLOWING MAX FUEL RANGE CROSS COUNTRY, PA28R LOSES POWER AND LANDS SHORT OF RWY AT DESTINATION.

ACN: 736412 (39 of 49)

Synopsis

C208 PLT, UNFAMILIAR WITH NEW FMS SYSTEM -- FOR WHICH THE GPS FUNCTION WAS INOPERATIVE -- ENCOUNTERS NUMEROUS PROBLEMS WITH NAVIGATION AND ACFT ATTITUDE CONTROL.

ACN: 735290 (40 of 49)

Synopsis

FOLLOWING A DEP INTO MARGINAL VFR CONDITIONS AND DISTRACTED BY A MALFUNCTIONING GENERATOR, A LOW TIME PRIVATE PLT FINDS HIMSELF IN SOLID IMC.

ACN: 733122 (41 of 49)

Synopsis

A B33 EXECUTED A GO AROUND ON THE AIK RWY 7 GPS AFTER DESCENDING TOWARD THE FAF PRIOR TO THE IAF.

ACN: 732454 (42 of 49)

Synopsis

A CESSNA'S IFR FLT STATUS WAS CONFUSED WHEN TRANSFERRING FROM ONE ATC FAC (NUW) TO ANOTHER (S46 TRACON) WITH TERRAIN BECOMING A FACTOR.

ACN: 732180 (43 of 49)

Synopsis

B737 CREW RPTS GPWS WARNING DURING RNAV APCH TO RWY 8 AT MDPP.

ACN: 731001 (44 of 49)

Synopsis

PLT VOICED CONCERN REGARDING ATC ASSIGNED STAR PROCS THAT DO NOT TERMINATE AT RNH, REQUIRING FIX INPUTS FOR FMS.

ACN: 729632 (45 of 49)

Synopsis

A IFR/IMC C206 PILOT REPORTS CONFUSION AND ATTITUDE CTL PROBLEMS USING AN UNFAMILIAR ADVANCED NAV SYSTEM IN FLT FOLLOWING AN ADI FAILURE.

ACN: 728453 (46 of 49)

Synopsis

A C172 PLT RPTS NMAC WITH PA46 WHILE TRAINING AT 4500 FT.

ACN: 727789 (47 of 49)

Synopsis

INSTRUCTOR AND STUDENT PLTS EXPERIENCE CFTT ON NIGHT VFR CROSS COUNTRY.

ACN: 727728 (48 of 49)

Synopsis

B737-300 CREW DEVIATES FROM TRACK DURING INITIAL PHASE OF HOLTZ RNAV DEPARTURE FROM LAX.

ACN: 726815 (49 of 49)

Synopsis

A BE35 AT 3500 FT NOTED DROP IN OIL PRESSURE. ADVISED ATC AND ADVISED TO DSND TO 2000 FT. ON DSCNT LOST DIRECTIONAL GYRO AND AUTOPLT. ADVISED TO DSND TO 600 FT AND BROKE OUT OF CLOUDS AND PROCEEDED TO ARPT.

Report Narratives

ACN: 817738

Time / Day

Date : 200812
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 15000

Environment

Flight Conditions : IMC
Weather Elements : Rain
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Personal
Make Model Name : PC-12
Operating Under FAR Part : Part 91
Navigation In Use.Other : FMS or FMC
Navigation In Use.Other : GPS
Flight Phase.Cruise : Level

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 100
Experience.Flight Time.Total : 2800
Experience.Flight Time.Type : 300
ASRS Report : 817738

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Independent Detector.Aircraft Equipment.Other Aircraft Equipment : Master
Caution/Visual
Resolatory Action.Flight Crew : Overcame Equipment Problem
Consequence.Other

Assessments

Problem Areas : Aircraft

Narrative

I DEPARTED ZZZ ON AN IFR FLIGHT PLAN TO ZZZ1. THE PLANNED ROUTE HAD BEEN ENTERED INTO THE FMS AFTER WHAT I CONSIDERED TO BE AN UNUSUALLY LONG PERIOD FOR THE FMS TO INITIALIZE. AFTER DEPARTURE I ENGAGED THE YD AND SHORTLY AFTERWARD, THE AP, IN HEADING MODE, FOLLOWING ASSIGNED RADAR VECTORS UNTIL BEING CLEARED DIRECT TO THE ZZZ VOR. AFTER ACTIVATING DIRECT I SWITCHED TO NAV MODE AND PROCEEDED. I REACHED THE CRUISE ALTITUDE OF 15000 FT AND CONTINUED. AT THIS POINT I HAD NOT ENCOUNTERED ANY ANOMALIES. APPROXIMATELY 15-20 MINUTES INTO THE FLIGHT THE MASTER CAUTION ALERTED WITH FOLLOWING CAS MESSAGES APPEARING SIMULTANEOUSLY: UNABLE FMS-GPS MON, GPS 1 FAIL FOLLOWING A FEW SECONDS LATER WAS: TAWS FAIL. SEVERAL SECONDS AFTER THE INITIAL WARNINGS THE CAS MESSAGES CLEARED AND I RESET THE MASTER CAUTION. DURING THIS PERIOD THE FMS AND AP REMAINED ACTIVATED AND ENGAGED AND SEEMED TO BE TRACKING THE ENTERED FLIGHT PLAN. AT THIS POINT I BELIEVED THIS WAS AN ERRONEOUS MESSAGE AND CONTINUED TO MONITOR THE TRACK AND FLIGHT ATTITUDE INDICATIONS. THIS SAME SEQUENCE THEN REPEATED 2-3 MINUTES LATER AND REPEATED AT AN AVERAGE OF A 2-3 MINUTE INTERVALS THROUGHOUT THE 45 MINUTES REMAINING OF THE FLIGHT. DURING THE CRUISE PORTION OF THE FLIGHT I PROGRAMMED THE GARMIN 496 AS A BACKUP TO THE ONBOARD GPS. DURING THE DESCENT AND INITIAL APPROACH TO ZZZ1 I BEGAN TO ENCOUNTER IMC CONDITIONS. THE AWOS AT ZZZ1 REPORTED OVCO21. ANTICIPATING THE NEED FOR AN INSTRUMENT APPROACH I REQUESTED AND RECEIVED VECTORS TO ZZZZ INTERSECTION, AN IAF ON THE GPS RUNWAY 35 APPROACH. I ESTIMATED THE TIMING OF THE GPS FAILURES TO ARRIVE AT THE IAF WITH THE GPS FUNCTIONING WHILE I BEGAN THE APPROACH, ANTICIPATING THAT I WOULD BE IN VMC BEFORE BEGINNING THE FINAL APPROACH BASED ON THE REPORTED WEATHER. I CHECKED THE RAIM PREDICTION AND MONITORED THE STATUS OF THE GPS ON THE SENSORS PAGE OF THE MFD. I THEN PROGRAMMED THE GARMIN 496 FOR THE MISSED APPROACH AS A WAY TO CROSS CHECK THE FMS AND IN THE EVENT OF A COMPLETE FAILURE, AN EMERGENCY MEANS OF NAVIGATION SINCE THE MISSED APPROACH PROCEDURE WAS GPS BASED. AS I BEGAN THE APPROACH THE FMS AND GPS AND ALL SEEMED TO FUNCTION PROPERLY. WHEN I JOINED THE APPROACH AT ZZZZ INTERSECTION AT 2000 FT MSL I WAS STILL IN IMC WITH INTERMITTENT GROUND CONTACT. THE FMS LEAD THE TURN TO FINAL AND ONCE ESTABLISHED I BEGAN THE DESCENT TO THE INTERMEDIATE ALTITUDE OF 1700 FT MSL. I BROKE OUT AT APPROXIMATELY 1850 FT MSL PRIOR TO THE FAF AND BEGAN TO LOOK FOR THE FIELD. UNABLE TO INITIALLY LOCATE THE RUNWAY I CROSS CHECKED THE POSITION WITH THE 496 AND IT INDICATED THE AIRPORT TO BE AT APPROXIMATELY 10 O'CLOCK AND 3 MILES. LOOKING VISUALLY I IMMEDIATELY LOCATED THE AIRPORT, DISCONNECT THE AP AND CONTINUED THE APPROACH AND LANDING VISUALLY. AFTER LANDING I NOTIFIED THE OWNER OF THE SITUATION AND BEGAN THE PROCESS OF DETERMINING A COURSE OF ACTION. AFTER AGREEING TO RETURN THE PLANE TO ZZZ, SINCE THE WEATHER HAD IMPROVED TO VMC. I FLEW UTILIZING THE NAV RADIOS AS THE PRIMARY NAV SOURCE AND MONITORED THE GPS. THE GPS CONTINUED TO OPERATE INTERMITTENTLY THOUGH THE FAILURES BECAME LONGER AND LONGER FINALLY REACHING THE POINT AT WHICH THE FMS WENT INTO THE DR (DEAD RECKONING) MODE. ALL OTHER MODES OF THE FMS AND FLT DECK (HDG, TRK, SPD, VS, BL AND ALT) OPERATED PROPERLY DURING THE RETURN FLIGHT. AT ONE POINT I ATTEMPTED TO UTILIZE THE FMS IN THE DR MODE AND WHILE IT SEEMED TO BE LEADING DIRECT TO ZZZ1 VOR WHILE CROSS CHECKING ON THE GARMIN 496 WE WERE NOT COMPENSATING FOR THE CROSSWIND AND WERE

HEADING APPROXIMATELY 100 RIGHT OF COURSE. THE FLIGHT CONCLUDED IN VMC CONDITIONS WITHOUT OTHER ANOMALIES. THE FERRY FLIGHT FOR MAINTENANCE WAS CONDUCTED IN VMC CONDITIONS. THE GPS OPERATED AS DESCRIBED ABOVE, HOWEVER, AN EVEN MORE DISTURBING FAILURE OCCURRED. APPROXIMATELY 5 MINUTES INTO THE FLIGHT WHILE IN STRAIGHT AND LEVEL CRUISE, THE PILOT'S PFD DISPLAY INDICATED A SUDDEN SHIFT OF THE HORIZON INDICATING AN 8-100 TURN TO THE LEFT. THIS WAS FOLLOWED ALMOST IMMEDIATELY BY A MASTER WARNING INDICATING AN AUTOPLT FAILURE AND LOSS OF THE FD AND YD. I LOOKED AT THE COPILOT'S SIDE PFD DISPLAY AND IT ALSO SHOWED THE ERRONEOUS BANK. OUTSIDE VISUAL CUES CONTINUED TO INDICATE STRAIGHT AND LEVEL FLIGHT AS DID THE ESIS (ELECTRONIC STANDBY INSTRUMENT SYSTEM). I CONTINUED THE FLIGHT IN VMC AND UTILIZED THE ESIS AS THE EADI SOURCE. I REPORTED THE NEW FAILURES TO MAINT AND WAS INFORMED OF A PENDING PILATUS SERVICE LETTER REGARDING THIS ISSUE. AT THIS POINT I HAVE SERIOUS CONCERNS WITH OPERATING THIS AIRCRAFT IN IMC. THE POSSIBILITY OF RECEIVING CONFLICTING INFORMATION FROM INCORRECT PFD INDICATIONS AND A CORRECT ESIS DISPLAY COULD LEAD TO PILOT CONFUSION WHILE IN IMC.

Synopsis

A PC-12 CAS ALERTED 'UNABLE FMS-GPS MON,' 'GPS 1 FAIL' AND 'TAWS FAIL.' THE PILOT BELIEVED THE INDICATIONS WERE ERRONEOUS, BUT ON A RETURN FERRY FLIGHT A MAP SHIFT OCCURRED ALONG WITH FAILURES OF THE AUTOPILOT, YAW DAMPENER, AND FLIGHT DIRECTOR.

ACN: 813205

Time / Day

Date : 200811
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 38000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Personal
Make Model Name : Learjet 24
Operating Under FAR Part : Part 91
Flight Phase.Cruise : Level
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Experience.Flight Time.Last 90 Days : 80
Experience.Flight Time.Total : 7800
Experience.Flight Time.Type : 450
ASRS Report : 813205

Person : 2

Affiliation.Other : Personal
Function.Flight Crew : First Officer

Person : 3

Affiliation.Government : FAA
Function.Controller : Radar

Events

Anomaly.Altitude Deviation : Overshoot
Anomaly.Non Adherence : Clearance

Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 3
Resolatory Action.Controller : Issued Advisory
Resolatory Action.Flight Crew : Returned To Assigned Altitude

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

THIS FLT ORIGINATED AT ZZZ AND WE WERE ENRTE TO ZZZ1. I HAD FILED, AND WAS FLYING, THE RTE 'DIRECT ATL J45 OMN STOOP DIRECT' BUT RECEIVED A NEW CLRNC BEFORE REACHING OMN CONSISTING OF 'DIRECT TAY AND THE ZZZ1 1 ARR.' BASICALLY REROUTING US TO THE OTHER SIDE OF THE STATE. WE HAD PLANNED TO GO DOWN THE E COAST OF FLORIDA AS WE USUALLY DO AND WERE NOW HEADED DOWN THE W COAST WHICH OUR PAX/OWNER ALSO NOTED WITH DISPLEASURE. THE SIC PROGRAMMED XYZ IN THE GPS (A GARMAN 530) AND PROCEEDED DIRECT TO XYZ. THE GPS DIDN'T HAVE THE ARR IN THE DATABASE BECAUSE THE DATABASE WAS OUT OF DATE. THE ARRS FOR ZZZ1 ARE LISTED UNDER ZZZ2. WE ALREADY HAD THE OTHER ARRS OUT BECAUSE WE FLY THIS TRIP FREQUENTLY BUT DIDN'T HAVE THIS ONE OUT BECAUSE IT IS NEW, LISTED UNDER ANOTHER ARPT AND WE WERE NOT PLANNING TO DO AN ARR ANYWAY. THERE ARE NO ARRS FOR ZZZ1 FROM THE NE SIDE COMING DOWN THE COAST FROM OVER THE SPACE CTR, THE WAY WE HAD PLANNED AND USUALLY GO. I QUICKLY CHKED THE ARR TO SEE IF WE QUALIFIED. I DIDN'T SEE THE NOTE THAT IT WAS A RNAV ARR WHICH IS IN THE BODY OF THE CHART. I SHOULD HAVE KNOWN SOMETHING WAS UP BECAUSE THE WAYPOINTS HAVE NO REF FROM A VOR OR LAT/LONGS. THAT WAS STUPID BUT I PROCEEDED TO LOAD THE WAYPOINTS AS RADIAL DISTANCE FROM THE LAST ONE AND DAISY CHAIN THEM TOGETHER FROM ONE ANOTHER STARTING FROM XYZ. THAT WAS STUPID TOO. I WILL NEVER DO THAT AGAIN. WHILE I WAS INPUTTING WAYPOINTS (OR HELPING THE SIC INPUT THEM) AND FLYING (ON AUTOPLT) AT THE SAME TIME, BECAUSE I DIDN'T THINK THE SIC WAS CAPABLE OF INPUTTING WAYPOINTS THAT WAY, AT LEAST NOT FAST ENOUGH TO BE EFFECTIVE, I DSNDED BELOW OUR LAST ASSIGNED ALT OF FL350 DURING A DSCNT FROM FL380 TO FL350 (I BELIEVE IT WAS FL350, I WILL USE FL350 FOR REF ANYWAY). THE ACFT DOESN'T HAVE ALT PRESELECT. I CAUGHT THIS MISTAKE AT 300 OR 400 FT BELOW THE ASSIGNED ALT AND MADE AN IMMEDIATE CORRECTION BACK TO THE ASSIGNED ALT. THE CTLR THEN SAID TO MAINTAIN FL350 AND THAT WE HAD TFC UP AHEAD A WAYS. THE SIC READ THE ALT ASSIGNMENT BACK AGAIN. WE SWITCHED TO THE NEXT CTLR AND WHILE STILL INPUTTING AND CHKING WAYPOINTS AND JUST FLYING OFF THE HDG BUG WHILE TYPING UP THE GPS THE NEXT CTLR SAID WE WERE OFF 2.5 MI TO THE E OFF THE ARR COURSE AND DIVERGING. I REPLIED THAT WE WERE FIXING THE PROB AND MADE A HDG ADJUSTMENT. WHEN ON THE GND AND FEELING BAD ABOUT THE QUALITY OF THE FLT AND HOW HECTIC THINGS WERE WITH THE ARR I REVIEWED IT WITH THE SIC, DISCUSSING WHAT HAD HAPPENED, WHAT WAS SAID, WHO WAS DOING WHAT AND WHO SHOULD HAVE BEEN DOING WHAT, GOING OVER THE CHARTS, RESEARCHING THE RNAV1 REQUIREMENTS, ETC. I VERIFIED WHAT I NOW SUSPECTED, AND WHAT I SHOULD HAVE KNOWN ALL ALONG, THAT IT WAS A RNAV1 ARR WHICH WE SHOULDN'T HAVE ACCEPTED GIVEN OUR DATABASE. CONCLUSIONS: I SHOULD HAVE KNOWN IT WAS AN RNAV ARR AND NOT HAVE ACCEPTED IT GIVEN THAT IT WAS NOT IN

THE DATABASE ON THE GPS AND COULDN'T BE FLOWN WITH CONVENTIONAL NAV. I ALSO SHOULD HAVE KNOWN IT WAS A RNAV ARR SINCE THE WAYPOINTS WERE NOT DEFINED BY LAT/LONGS OR BY A RADIAL DISTANCE FROM A VOR ON THE CHART. I ALSO SHOULD HAVE SEEN THE NOTE ON THE CHART. SOME ARRS ARE OR HAVE BEEN VAGUE ABOUT THE EQUIP REQUIREMENTS. MANY IN THE PAST HAVE JUST SAID DME/DME/IRU OR GPS. AS WE MIGRATE/EVOLVE TO ICAO FORMATS THIS HAS BEEN A LITTLE VAGUE IN MY OPINION. WITH RNAV1 ARRS IT HAS BEEN CLRED UP AND IS CLR NOW I THINK THAT YOU CAN'T INPUT THE WAYPOINTS INDIVIDUALLY AND THEY MUST BE CANNED OR PREPROGRAMMED IN A FMS OR GPS. ALSO NAV MODE OR ROLL STEERING SHOULD BE REQUIRED ON A FLT DIRECTOR/AUTOPLT TO MAINTAIN THAT KIND OF ACCURACY ON AN ARR. THE WIND WAS COMING FROM THE NW OUT OF ABOUT 330 DEGS AT JUST UNDER 100 KTS, DROPPED DOWN TO LESS THAN 80 KTS AND THEN CAME BACK UP TO AROUND 95 KTS AGAIN. THIS VARIABLE XWIND AND THE REQUIRED CORRECTION CHANGES WERE A FACTOR IN THE LATERAL DEV GIVEN WE WERE NOT COUPLED TO THE GPS IN NAV MODE, FLYING OFF HDG, OR MONITORING THE RESULTS OFTEN ENOUGH DUE TO THE FIXATION ON PROGRAMMING THE GPS. CRM ARR ISSUES ASIDE, WHEN MESSING WITH A PIECE OF EQUIP, LIKE LOADING A FLT PLAN, I SHOULD HAVE, AND WILL IN THE FUTURE, MAKE IT CLR WHO IS DOING WHAT. I ALREADY KNOW AND DO THAT IN MOST CASES, BUT THIS WAS A VALUABLE REINFORCEMENT ON WHAT CAN HAPPEN IF OVERLOOKED. EVEN THOUGH IT SEEMS SOMEWHAT LESS THREATENING AT FL350 THAN WHEN NEAR THE GND ON APCH, IF NOT HANDLED PROPERLY IT CAN STILL CAUSE PROBS AND I DROPPED MY GUARD. THE SIC ALSO FELT REMISS THAT HE DIDN'T BACK ME AND XCHK INSTS BUT I SHOULD HAVE TOLD HIM WHAT TO DO AND WE BOTH SHOULD HAVE CAUGHT THE FACT THAT WE WERE BOTH ENGROSSED IN THE SAME BOX TOGETHER FOR AN EXTENDED PERIOD OF TIME. AND, NOBODY WAS FLYING OR MONITORING THE AUTOPLT FLYING OFTEN ENOUGH FOR A PERIOD OF A FEW MINS.

Synopsis

A LR24 PILOT WAS DISTRACTED WHILE ENTERING RNAV ARRIVAL LAT/LONG DATA FOR AN ARRIVAL THAT WAS NOT IN THE GPS DATABASE AND HAD A TRACK DEVIATION AS WELL AS FAILING TO LEVEL AT THE ASSIGNED ALTITUDE.

ACN: 812057

Time / Day

Date : 200811
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2800

Environment

Flight Conditions : IMC
Light : Night

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.General Aviation : Personal
Make Model Name : PA-46 Malibu
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach
Flight Phase.Landing : Missed Approach

Component : 1

Aircraft Component : Autopilot

Person : 1

Affiliation.Other : Contracted Service
Function.Flight Crew : Single Pilot
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 170
Experience.Flight Time.Total : 6300
Experience.Flight Time.Type : 650
ASRS Report : 812057

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Altitude Deviation : Overshoot
Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Published Procedure
Anomaly.Other Anomaly
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2

Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Controller : Issued Alert
Resolatory Action.Flight Crew : Became Reoriented
Resolatory Action.Flight Crew : Regained Aircraft Control

Assessments

Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

IT WAS THE END OF A LONG DAY OF FLYING FOR ME, AND I WAS SINGLE PLT. COMING INTO MY DEST I KNEW I WOULD HAVE TO EXECUTE A NIGHTTIME APCH IN 'HARD IFR.' THE APCH WENT WELL, BUT AT THE BOTTOM (MDA) OF THIS NON-PRECISION LOC ONLY, I HAD TO MISS, I RPTED TO TWR THAT I WAS MISSED APCH AND FLYING THE PUBLISHED MISS. TWR HANDED ME OVER TO APCH AGAIN. DURING THE MISS I USED THE 'GAR' FEATURE ON THE FLT DIRECTOR (WHICH DISCONNECTS THE AUTOPLT) AND BEGAN HAND FLYING THE MISS. SEQUENCING THE GPS, AND PROGRAMMING THE AUTOPLT TO FLY THE MISS, I REENGAGED, (OR SO I THOUGHT), THE AUTOPLT. I FAILED TO OBSERVE THAT THE AUTOPLT DID NOT ACTUALLY ENGAGE (THE ANNUNCIATOR IS NOT BRIGHTLY LIT, AND I MUST NOT HAVE HIT THE BUTTON FIRMLY ENOUGH). THE AIR WAS FAIRLY SMOOTH AND THE AIRPLANE WAS IN THE CLBING TURN, AND STEADY, AS I EXPECTED IT TO BE. BUT ACTUALLY 'NO-ONE' WAS FLYING THE AIRPLANE FOR SEVERAL SECONDS. I LOOKED DOWN TO AGAIN, REVIEW THE PROC, AND WHEN I LOOKED UP, THE AIRPLANE WAS STILL IN THE SLIGHT L TURN PAST THE DESIRED HDG, AND ABOVE THE DESIRED MISSED APCH ALT OF 2000 FT, BY SEVERAL HUNDRED FEET. WITHIN SECONDS THE APCH CTLR ASKED (NICELY) IF THE TWR HAD GIVEN DIFFERENT MISSED APCH PROCS TO FLY, OR WOULD I FLY THE PUBLISHED MISSED, TO WHICH I REPLIED, I WOULD FLY THE PUBLISHED MISS. HE THEN ADVISED TO 'FLY THE PUBLISHED MISS, AND MAINTAIN 2000.' SINCE I WAS NEARING 2900 FT, I IMMEDIATELY BEGAN A DSCNT TO ALT AND BACK ON COURSE, BY HAND FLYING, THEN REENGAGED THE AUTOPLT, CONFIRMING ITS OP! THERE WAS NOTHING ELSE SAID FROM ATC OTHER THAN THE NORMAL COM FOR THE APCH CLRNC. THE SECOND APCH WAS ALSO GOOD AND RESULTED IN AN UNEVENTFUL LNDG. THE POINT IS, THAT AUTOMATION IS GOOD, BUT MUST BE MONITORED CAREFULLY, EVEN IF WE ARE VERY FAMILIAR WITH IT (AS I AM WITH THIS GLASS PANELED MERIDIAN). MORE IMPORTANTLY, AS WAS THE CASE FOR ME HERE, WHEN WE HAVE HAD A LONG DAY, WE MUST BE EVEN MORE DILIGENT IN MONITORING OURSELVES FOR FATIGUE, AND DOUBLE (OR EVEN TRIPLE) CHK AGAINST OURSELVES, FOR SMALL OR LARGE ERRORS. I FLY SINGLE PLT MOST OF THE TIME FOR MY COMPANY, AND I KNOW THIS, YET WAS STILL VULNERABLE. I'M SO GLAD NOTHING SERIOUS HAPPENED DUE TO THIS.

Synopsis

A PA46T PILOT EXECUTED A MISSED APPROACH AFTER A LOW VISIBILITY APPROACH BUT FAILED TO REENGAGE AUTOPLT. THE AIRCRAFT DID NOT LEVEL AT THE ASSIGNED ALTITUDE AND FLEW THROUGH THE ASSIGNED HEADING. FATIGUE WAS A FACTOR.

ACN: 811037

Time / Day

Date : 200811
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Bound Lower : 6000
Altitude.MSL.Bound Upper : 11000

Environment

Flight Conditions : Mixed
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : SCT.TRACON
Operator.General Aviation : Corporate
Make Model Name : Continental (Bombardier)
Operating Under FAR Part : Part 91
Flight Phase.Landing : Go Around
Flight Phase.Landing : Missed Approach
Route In Use.Arrival : On Vectors

Component : 1

Aircraft Component : Ice/Rain Protection System

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 75
Experience.Flight Time.Total : 6400
Experience.Flight Time.Type : 200
ASRS Report : 811037

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Encounter : Weather
Anomaly.Non Adherence : Clearance

Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Exited Adverse Environment
Consequence.FAA : Reviewed Incident With Flight Crew

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

WHILE PERFORMING THE MISSED APCH ON THE GPS 18 FROM ZZZ ARPT, OUR ACFT ANTI-ICE SYS FAILED, WHILE WE WERE IN ICING CONDITIONS. THE WORKLOAD WAS OBVIOUSLY HVY, AND WE WERE RUNNING CHKLISTS AND COORDINATING WITH ATC FOR A CLOUD FREE ALT AND A SAFE HDG. THE FIRST ISSUE IN COM OCCURS WHEN ATC SENDS US TO ZZZ VOR AND TO HOLD AS PUBLISHED. THE CREW AT THIS POINT IS NOT SHOWING A PUBLISHED HOLD ON ANY OF OUR COCKPIT MATERIALS, AND ATC ONLY KNOWS IT'S A SE HOLD/R TURNS/1 MIN LEGS. THIS WAS NOT A PROB. OUR ISSUE WAS WHEN SOCAL APCH GIVES US A HDG TO INTERCEPT V64 TO TRM VOR. WE ARE UNFAMILIAR WITH THE AREA, AND HAVE NO IDEA WHERE V64 RUNS TO/FROM. THE PROCESS OF FINDING V64 ON THE CHARTS AND SETTING UP THE RADIOS TAKES SEVERAL MINS AND ATC INFORMED US WE JUST FLEW THROUGH V64, AND IF WE WERE NOT ABLE TO NAV AN AIRWAY WE SHOULD HAVE TOLD HIM. I DON'T THINK ATC REALIZES HOW LONG IT TAKES TO FIND AN UNPLANNED AIRWAY AND SET UP THE RADIOS TO INTERCEPT. WE TOLD ATC WE WERE IN CLR CONDITIONS ON TOP, SO TERRAIN AVOIDANCE WAS NOT AN ISSUE. EVEN COMING OUT OF THE PRIOR HOLD COMS WERE POOR. WE WERE CLRED OUT OF THE HOLD, AND THEN TOLD NO, WE NEED YOU IN THE HOLD UNTIL THE SOCAL HDOF. CONTRIBUTING FACTORS -- WHILE OUR SITUATION WAS NOT AN EMER, THE WORKLOAD WAS HIGH, AND COM ON BOTH SIDES WAS POOR. WHILE WE WERE COMMUNICATING OUR ISSUES TO ATC, WE SHOULD HAVE JUST ASKED FOR A HDG ON THEIR CTL, SO ALL WE HAD TO WORRY ABOUT WAS THE ACFT ISSUE/CHKLISTS.

Synopsis

A CL30'S ANTI-ICE SYSTEM FAILED DURING A MISSED APPROACH IN ACTUAL ICING CONDITIONS. UNFAMILIAR WITH SOCAL AREA AND GIVEN A NON-PUBLISHED HOLDING PATTERN THE CREW, NOW IN A VERY HIGH WORKLOAD SITUATION, HAD A TRACK DEVIATION INTO AND OUT OF HOLDING.

ACN: 810325

Time / Day

Date : 200810
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Airport : DTS.Airport
State Reference : FL
Altitude.MSL.Bound Lower : 2000
Altitude.MSL.Single Value : 500

Environment

Flight Conditions : IMC
Weather Elements : Rain
Light : Night

Aircraft : 1

Controlling Facilities.TRACON : VPS.TRACON
Operator.General Aviation : Corporate
Make Model Name : Sovereign
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : FMS/FMC

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 50
Experience.Flight Time.Total : 16000
Experience.Flight Time.Type : 400
ASRS Report : 810325

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Altitude Deviation : Crossing Restriction Not Met
Anomaly.Altitude Deviation : Overshoot
Anomaly.Inflight Encounter : Weather
Anomaly.Non Adherence : Published Procedure
Independent Detector.Other.Flight CrewA : 1
Resolutive Action.None Taken : Unable
Resolutive Action.Other

Assessments

Problem Areas : ATC Human Performance

Problem Areas : Aircraft

Problem Areas : Flight Crew Human Performance

Narrative

WE WERE ENRTE TO DTS AND SHORTLY BEFORE BEING HANDED OFF FROM JAX ARTCC TO EGLIN APCH CTL WE WERE ON VECTORS AND THEN CLRED DIRECT TO THE ARPT. AT THAT POINT, I PUNCHED DTO TO DTS (1ST MISTAKE). SHORTLY THEREAFTER, WE WERE HANDED OFF TO EGLIN APCH CTL AND WERE CLRED FOR THE RNAV (GPS) RWY 14 APCH. THE FMS HAD PREVIOUSLY BEEN PROGRAMMED FOR THIS APCH. THE PNF THEN ATTEMPTED TO REPROGRAM THIS APCH AND WAS UNSUCCESSFUL. I, THE PF, THEN ATTEMPTED TO REPROGRAM THE APCH AND WAS ALSO UNSUCCESSFUL. I THEN ASKED THE PNF TO ENTER ILOPE, THE IAF, WHICH HE DID AND WE PROCEEDED TO THAT FIX TO BEGIN THE APCH. HOWEVER, NOZEC, THE FAF AT 3.6 NM, WAS NOT ENTERED INTO THE FMS (ANOTHER MISTAKE). WE CROSSED ILOPE APPROX 500 FT ABOVE THE PRESCRIBED ALT OF 2000 FT. AT THIS POINT WE WERE DSNDING AND PNF WAS ATTEMPTING TO FIGURE WHERE THE 3.6 MI FIX WAS INSTEAD OF PROGRAMMING IT ITO THE FMS. SINCE THE VNAV FUNCTION WAS QUESTIONABLE AT THIS POINT, I SWITCHED OFF THE AUTOPLT AND BEGAN TO FLY THE AIRPLANE BY HAND. DURING THIS TIME I FAILED TO MONITOR THE ALT AND RATE OF DSCNT AND DSNDND TO APPROX 1200 FT AGL PRIOR TO XING NOZEC (1600 FT IS THE PRESCRIBED XING ALT) PRIOR TO DSCNT TO MDA. WHEN THE PNF NOTED THE ALT, I IMMEDIATELY ARRESTED THE DSCNT AND HELD THIS ALT UNTIL XING WHAT WE EXPECTED TO BE NOZEC. I THEN BEGAN A 500 FPM RATE OF DSCNT AND WE BEGAN TO GET GND CONTACT. WE BROKE OUT UNDER A RAGGED CEILING AT 900-1000 FT AGL WITH BETTER THAN 5 MI VISIBILITY AND APPROX 2 MI FROM THE END OF THE RWY. WE WERE CONFIGURED TO LAND AND A LNDG WAS SUCCESSFULLY ACCOMPLISHED WITH A STRONG XWIND FROM THE L. AT NO TIME DID WE DSND BELOW MDA UNTIL THE RWY WAS IN SIGHT AND THE LNDG WAS ASSURED. WE CANCELED IFR WITH EGLIN APCH ONCE WE WERE ON THE GND. IN RETROSPECT I FEEL THE FOLLOWING MISTAKES WERE MADE AND LESSONS WELL LEARNED: 1) DUE TO FAMILIARITY WITH THIS APCH, BOTH PLTS WERE COMPLACENT, NO ADEQUATE APCH BRIEFING WAS GIVEN. HAD THIS NOT BEEN THE CASE, I BELIEVE THAT NOZEC WOULD HAVE BEEN PROGRAMMED INTO THE FMS EVEN IF THE REST OF THE PROC WAS NOT. 2) AFTER FIRST UNSUCCESSFUL ATTEMPT TO REPROGRAM THE CORRECT APCH PROC, A REQUEST FOR VECTORS OR HOLDING SHOULD HAVE BEEN MADE UNTIL THE REPROGRAMMING ISSUE WAS RESOLVED. IN LIEU OF THIS, A MISSED APCH SHOULD HAVE BEEN CALLED AND INITIATED WHEN THE EXCESSIVE DSCNT BECAME APPARENT. EITHER PLT COULD HAVE CALLED FOR THIS, FAILURE TO DO SO REFLECTS POOR CRM. 3) BOTH PLTS STILL FAIL TO UNDERSTAND WHY NEITHER WAS ABLE TO REPROGRAM THE FMS. A THOROUGH EXAM OF THE FMS MANUAL WILL BE CONDUCTED TO ANSWER THIS QUESTION. BOTH CREWMEN ARE EXPERIENCED IN THIS ACFT AND THIS PROB HAD NOT BEEN ENCOUNTERED PRIOR TO THIS OCCASION. 4) BOTH PLTS SHOULD NOT HAVE BEEN ATTEMPTING TO SOLVE THE FMS PROB AT THE SAME TIME, BEFORE PF ATTEMPTED TO REPROGRAM HE SHOULD HAVE TURNED CTL OF THE ACFT TO PNF. AT THIS POINT ATTN TO THE FMS BECAME MORE IMPORTANT THAN FLYING THE AIRPLANE. THIS SHOULD NEVER HAVE HAPPENED. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: REPORTER WAS STILL UNCERTAIN AS TO WHY

THE APPROACH COULD NOT BE REINSTALLED. HE STATED THAT THE FLIGHT CREW WAS GETTING BEHIND THE AIRPLANE AND FELT IT WAS MOST LIKELY THAT BOTH PILOTS WERE MAKING ERRORS OUT OF HASTE. THE EVENT OCCURRED BECAUSE THE FLIGHT WAS PREVIOUSLY CLEARED DIRECT TO THE AIRPORT BY ARTCC AND WHEN THAT CLEARANCE WAS INSTALLED AND EXECUTED IN THE FMS ALL PRIOR WAYPOINTS WERE ERASED, INCLUDING THOSE ASSOCIATED WITH THE PREVIOUSLY INSTALLED RNAV RWY 14 IAP.

Synopsis

DIFFICULTIES IN INSTALLING A TARDY REPROGRAMMING OF THE RNAV APPROACH RESULTS IN CE68 FLIGHT CREW FAILING TO MAKE THE CROSSING RESTRICTION AT THE FAF.

ACN: 810089

Time / Day

Date : 200810
Local Time Of Day : 1201 To 1800

Place

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

Environment

Flight Conditions : Mixed
Light : Dusk

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Personal
Make Model Name : Bonanza 36
Operating Under FAR Part : Part 91
Flight Phase.Cruise : Level
Flight Phase.Descent : Approach

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : CFI
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 134
Experience.Flight Time.Total : 1320
Experience.Flight Time.Type : 236
ASRS Report : 810089

Events

Anomaly.Aircraft Equipment Problem : Critical
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Flight Crew : Declared Emergency
Resolatory Action.Flight Crew : Landed In Emergency Condition

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

AFTER ESTIMATING THE WT AND BAL, I ADDED THE MINIMUM FUEL PLUS RESERVE THAT I THOUGHT I WOULD NEED FOR THE 1 HR 15 MIN FLT FROM ZZZ1

TO ZZZ. THIS EXTRA FUEL PUT MY TOTAL TO 40 GALLONS ACCORDING TO THE JPI FUEL FLOW DIGITAL DISPLAY. AFTER LOADING UP THE PEOPLE AND BAGS, WE TOOK OFF EASIER THAN EXPECTED. MY FIRST CLUE THAT SOMETHING WAS NOT NORMAL WAS THE 'GALLONS USED' INDICATION FROM THE JPI AFTER LEVELING OFF AT 11000 FT. THE JPI INDICATED WE HAD USED 39 GALLONS ON CLBOUT. WE ONLY CLBED FOR 17 MINS OR SO AND WE BURN ABOUT 33 GPH ON CLBOUT. SOMEHOW THE JPI DID NOT RESET THE 'GALLONS USED' COUNTER ON THE LAST PWR OFF AND ON AS IT USUALLY DOES. THE 'GALLONS REMAINING,' HOWEVER, STILL SEEMED CORRECT SO I CONTINUED. ABOUT 30 MINS INTO THE FLT, I NOTICED THE L TANK FUEL GAUGE WAS VERY CLOSE TO EMPTY. SOMETIMES THE NEEDLES WILL MOVE ERRATICALLY SO I DISMISSED IT AS A POSSIBLE GAUGE ERROR. NEVERTHELESS, BECAUSE I WAS NOT 100% CERTAIN, I LET ATC KNOW THAT I WAS ON 'MINIMUM FUEL' TO AVOID ANY UNNECESSARY VECTORING. ATC WAS VERY HELPFUL AND UPDATED ME WITH WINDS ALOFT FOR BETTER DSCNT PLANNING. AT THIS POINT I SHOULD HAVE LANDED AT THE NEAREST ARPT FOR SAFETY, BUT BECAUSE I WAS RUNNING A LITTLE LATE AND THE JPI SAID I HAD ABOUT 18 GALLONS LEFT, I CONTINUED BECAUSE I REQUIRED ONLY ABOUT 9 GALLONS TO REACH ZZZ. IT WAS ONLY A FEW MOMENTS LATER WHEN THE L TANK RAN DRY. I SWITCHED TO THE R TANK IMMEDIATELY WITH THE FIRST SIGNS OF ENG FUEL STARVATION. AGAIN, I LET ATC KNOW THAT I WAS DRY ON ONE SIDE AND I NEEDED PRIORITY IN LNDG. AT THIS POINT I WAS ABOUT 12 NM S OF ZZZ4 AND ABOUT 24 NM N OF ZZZ3. MY R TANK GAUGE SHOWED 1/4 TANK AND THE JPI METER SHOWED 16 'GALLONS REMAINING.' I PWRED DOWN THE AIRPLANE TO 22 INCHES MANIFOLD PRESSURE AND 2200 RPM. I ALSO LEANED IT AS MUCH AS I COULD TO CONSERVE FUEL. I WAS NOW FLYING OVER AN OVCST AREA THAT COVERED MOST OF CENTRAL AND WESTERN STATE. THERE WAS NO TERRAIN VISIBLE AS FAR AS I COULD SEE. THE CEILINGS RPTED IN THE AREA WERE ABOUT 3000-4000 FT AGL. I WAS AT ABOUT 11000 FT MSL, AND THE OVCST TOP WAS AT ABOUT 5500 FT MSL. THE TIME WAS NOW ABOUT XA30Z. BECAUSE OF THESE FACTORS, I WAS NOT EAGER TO TRY AND LAND AT AN UNFAMILIAR ARPT IN THE IMMEDIATE AREA. IF I DID RUN DRY ANYTIME SOON, I WANTED TO APCH A FAMILIAR ART, WHICH IN THIS CASE WAS ZZZ. SO I CONTINUED TO ZZZ. I STARTED A STEEP DSCNT INTO ZZZ, ABOUT 23 NM FROM ZZZ. WHEN I REACHED AN ALT OF ABOUT 8000 FT AND ABOUT 13 NM FROM ZZZ, THE ENG STARTED RUNNING ROUGH, SO I SWITCHED THE FUEL SELECTOR 'OFF,' SQUAWKED 7700, AND NOTIFIED ATC (CTR) THAT I RAN OUT OF FUEL AND WAS GOING TO ATTEMPT A GLIDE APCH INTO ZZZ. THEY CLRED ME FOR THE VISUAL APCH RWY 5 AT ZZZ. I SET THE PLANE TO ITS BEST GLIDE SPD OF 105 KIAS. I STAYED THE COURSE USING GPS AND ENTERED THE CLOUDS ABOUT 5500 FT MSL, AND BROKE OUT AT ABOUT 4000 FT MSL. I LOCATED THE FIELD ALMOST IMMEDIATELY AND WAS CONFIDENT THAT I COULD MAKE IT THAT FAR. I RPTED THE FIELD IN SIGHT TO ATC, THEY APPROVED THE FREQ CHANGE, AND I MADE A QUICK CALL ON THE ZZZ CTAF. WHEN I WAS ABSOLUTELY CONFIDENT I WOULD MAKE IT, I PUT FLAPS TO APCH AND THE LNDG GEAR DOWN. I LANDED IN THE LNDG ZONE. THERE WERE EMER VEHICLES AND A TUG WAITING. ONCE WE ROLLED TO A STOP JUST A LITTLE OFF THE RWY, I CALLED CTR AND LET THEM KNOW WE WERE SAFE ON THE GND. THEY CLOSED MY IFR FLT PLAN AND WE SHUT DOWN ALL ELECTRICAL SYSTEMS WHILE THE TUG TOOK US TO THE PARKING RAMP. AFTER PARKING I TURNED ON THE PWR TO CHK THE 'FUEL REMAINING' READING ON THE JPI. ACCORDING TO IT, I HAD 10.2 GALLONS LEFT. NOW LOOKING BACK, I SHOULD HAVE LANDED OR TURNED BACK TO ZZZ1 AT THE FIRST SIGN OF UNCERTAIN FUEL QUANTITIES. AND I SHOULD HAVE NOT

ALLOWED THE LATE SCHEDULE TO BE A FACTOR IN THE 'GO, NO-GO' DECISION-MAKING PROCESS.

Synopsis

A B36TC PILOT RAN OUT OF FUEL NEAR HIS DESTINATION IN PART BECAUSE THE JPI FUEL FLOW INDICATOR WAS MALFUNCTIONING. HE MANAGED A SAFE DEAD STICK LANDING AT HIS DESTINATION.

ACN: 809010

Time / Day

Date : 200810

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Bound Lower : 11000

Altitude.MSL.Bound Upper : 11500

Environment

Flight Conditions : Mixed

Weather Elements : Ice

Weather Elements : Snow

Weather Elements : Turbulence

Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC

Operator.General Aviation : Corporate

Make Model Name : Citation V

Operating Under FAR Part : Part 91

Flight Phase.Landing : Go Around

Person : 1

Affiliation.Company : Corporate

Function.Flight Crew : First Officer

Qualification.Pilot : CFI

Qualification.Pilot : Commercial

Qualification.Pilot : Instrument

Qualification.Pilot : Multi Engine

Experience.Flight Time.Last 90 Days : 46

Experience.Flight Time.Total : 530

Experience.Flight Time.Type : 26

ASRS Report : 809010

Events

Anomaly.Aircraft Equipment Problem : Less Severe

Anomaly.Altitude Deviation : Overshoot

Anomaly.Inflight Encounter : Turbulence

Anomaly.Inflight Encounter : Weather

Independent Detector.Other.Flight CrewA : 1

Independent Detector.Other.Flight CrewB : 2

Resolatory Action.Flight Crew : Diverted To Another Airport

Assessments

Problem Areas : Aircraft
Problem Areas : Airport
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

I FLY SIC FOR A PART 91 CPR FLT DEPT. WE WERE FLYING INTO ZZZ. THIS ARPT SITS IN A PLATEAU/VALLEY BTWN SEVERAL MOUNTAIN RANGES. TO THE E AND N ARE THE MOUNTAINS, AND TO THE W ARE MORE MOUNTAINS. ALSO, ON APCH TO RWY, THERE IS A LARGE RIDGE LINE ABOUT 1/4 MI BEFORE THE THRESHOLD, WITH THE ARPT ON A PLATEAU ON TOP OF THE RIDGE. AS PNF, WE BEGAN DSCNT INTO ZZZ1 OVER THE E/N MOUNTAINS. BEFORE THE TOP OF THE DSCNT, THE WX AT ZZZ1 WAS HIGH CLOUDS (10000-ISH FT), WINDS WNW 31 DEGS GUSTING TO 38 KTS. OTHER AREA ARPTS WERE RPTING LOWER CEILINGS, 2500 FT SCATTERED-BROKEN, SOME HAD THE SAME HIGH WINDS, AND SOME WERE WNW AT 10 KTS. THE DRASTIC DIFFERENCES IN AREA WX WERE CONFUSING, AND WE DISCUSSED THIS DURING DSCNT. WE ALSO STARTED PICKING UP ICE (LIGHT RIME) IN THE DSCNT. ALTHOUGH THE ACFT HAS HEATED WINGS, I DO NOT HAVE VERY MUCH EXPERIENCE IN ICING AND THIS DISTR MY ATTN. AS WE DSNDDED, WE CHKED THE WX AGAIN, WHICH HAD DROPPED TO 2500 FT SCATTERED, 4500 FT BROKEN. BECAUSE OF THIS, THE PF DECIDED TO BRIEF THE APCH, NDB/GPS 31. AS WE BEGAN TO SET UP FOR THE APCH, WE NOTICED THAT OUR FMS DID NOT LIST THE IAF AS A WAYPOINT ON THE DIRECT-TO LIST AFTER LOADING IT. INSTEAD, THE FIRST FIX WHICH CAME UP ON THE LIST WAS ABC01, A GPS WAYPOINT INBOUND ON THE APCH. WE TRIED LOADING THE APCH MULTIPLE TIMES, BUT IT WOULD NOT LET US FLY TO THE IAF, AND THUS, WOULD NOT ARM THE APCH. THE PF CONTINUED TO FLY THE ACFT WHILE I TRIED TO SORT OUT THE PROB. AS WE DSNDDED THROUGH THE MID 10,000'S, WE ENTERED CONTINUOUS MODERATE TURB FROM THE WINDS AND MOUNTAINS. AS WE GOT CLOSE TO THE IAF, WE NOTICED THAT THE WX E (AND BELOW) THE RIDGE LINE WAS VMC AND W OF IT (ABOVE IT, WHERE THE ARPT IS) WAS LOW IMC IN SNOW. WHEN WE GOT TO THE IAF, I HAD NOT YET WORKED OUT THE PROB WITH THE FMS, SO THE PF QUICKLY FLIPPED TO RADIO NAV AND BEGAN TO FLY THE APCH THAT WAY. I THEN TRIED TO LOAD THE APCH AS A VECTORS TO FINAL, SO WE COULD FLY THE OUTBOUND AND PROC TURN MANUALLY, THEN FLY INBOUND WITH THE FMS. HOWEVER, AFTER TURNING AROUND, WE COULD SEE THAT THE ARPT WAS VERY LOW IMC, AND THAT WE WOULD NOT BE ABLE TO LAND. WE DECIDED THAT, INSTEAD OF ENTERING IMC AND ICING AND FLYING A MISSED APCH WITH TERRAIN NEARBY, WE WOULD ABANDON THE APCH AND STAY VMC. THE PF DECIDED TO DIVERT TO ZZZ2, AN ARPT 15 MI AWAY. THIS HAD NOT BEEN BRIEFED PRIOR TO THE APCH AND GOT US OFF OUR IFR CLRNC UNTIL WE COORDINATED WITH CTR. AT THIS POINT, WE WERE SKIMMING THE EDGE OF IMC, IN TURB, TRYING TO RUN MULTIPLE CHKLISTS, SETTING UP OUR NAV, AND TRYING TO BRIEF OURSELVES FOR THE NEW ARPT. DUE TO THIS, THE PF FLEW THE ACFT THROUGH OUR ASSIGNED ALT OF 11000 FT TO ABOUT 11500 FT. HE QUICKLY CAUGHT THE DEV AND CORRECTED. MEANWHILE, CTR INFORMED US OF SEVERAL NOTAMS AT THE DIVERSION ARPT, INCLUDING CLOSED RWYS. AT THIS, WE DECIDED TO DIVERT TO ZZZ3. BY THE TIME WE WERE OUT OF THE TURB AND ABOVE THE TERRAIN, WE HAD CAUGHT BACK UP WITH ALL CHKLISTS AND ATC COMS. THE TIME FROM FIRST STARTING THE APCH TO FINALLY DIVERTING TO ZZZ3 COULD NOT HAVE BEEN MUCH MORE THAN 4 OR 5 MINS. AFTER LNDG IN ZZZ3, THE PF AND I DEBRIEFED. WE BOTH LEARNED A LOT FROM THIS FLT AND WE CAME TO SEVERAL CONCLUSIONS: 1) WITH THE WX AS UNPREDICTABLE AS

IT IS IN THE MOUNTAINS, AND WITH A LARGE DISCREPANCY IN THE RPTED WX IN THE AREA, WE SHOULD HAVE BRIEFED THE APCH INTO ZZZ1 MUCH EARLIER, IN CRUISE. THIS WOULD HAVE 1 LESS MAJOR DISTR WHILE FLYING IN ICING AND TURB, AND WOULD HAVE ALLOWED US MUCH MORE TIME TO FIGURE OUT WHY THE FMS WOULD NOT NAVIGATE TO WHERE WE WANTED IT TO. 2) IN ADDITION TO BRIEFING THE APCH, A FEW DIFFERENT POSSIBLE COURSES OF ACTION AFTER A MISSED APCH SHOULD BE COVERED, SO AS NOT TO SURPRISE EITHER PLT WHEN THINGS ARE GOING DOWNHILL. 3) THE CAUSE OF THE FMS ISSUE WAS A LOADING ERROR. OUR FMS REQUIRES SOME SORT OF TRANSITION RTE TO THE APCH. IN THE CASE OF THE NDB/GPS APCH AT ZZZ1, THE ONLY TRANSITION RTE IS FROM ZZZ1, A VOR SW OF THE FIELD. THIS WAS THE OPPOSITE DIRECTION OF OUR ARR, SO WE SIMPLY SKIPPED THIS STEP. AS SUCH, THE FMS ONLY LOADED HALF OF THE APCH, THE INBOUND PORTION. 4) THE SAFETY OF OUR FLT WAS NEVER IN JEOPARDY. EVEN THOUGH WE WERE BOTH VERY BUSY DOING SEPARATE TASKS, OUR DECISION TO STAY IN VMC KEPT US IN VISUAL CONTACT OF THE TERRAIN UNTIL WE GOT A NEW CLRNC. 5) ATC WAS VERY HELPFUL AND PROFESSIONAL. THEY GAVE US THEIR FULL ATTN, WERE GIVING US SUGGESTIONS, ALL THE HELP WE ASKED FOR, AND KEPT US FROM LNDG AT A CLOSED ARPT. WE BELIEVE THAT, DESPITE OUR ERRORS, WE WORKED VERY WELL AS A CREW AND HANDLED THE SITUATION AS WELL AS ANY FLT CREW COULD HAVE. EACH OF US PERFORMED OUR OWN SEPARATE DUTIES AND TRIED TO KEEP THE OTHER AS INFORMED AS POSSIBLE. BTWN THE TERRAIN, ICING, CHANGING WX, HIGH WINDS, TURB, FMS PROBS, FLYING AN NDB APCH AND THE SUBSEQUENT MISSED, DIVERTING TWICE, ATC COORD, RUNNING CHKLISTS AND BRIEFINGS, SETTING UP AND CLEANING UP THE ACFT, AND MY OWN INEXPERIENCE, WE SIMPLY GOT OVERWHELMED. ON THEIR OWN, NONE OF THESE WERE MUCH OF AN ISSUE, BUT WITH ALL OF THEM LUMPED ON US AT ONCE, IT MADE FOR A VERY BUSY FLT.

Synopsis

CITATION FLT CREW HAS AN ALTITUDE DEVIATION WHILE ENCOUNTERING UNFORECAST DESTINATION WEATHER ACCOMPANIED BY FMS ISSUES AND DIVERSION AIRPORT PROBLEMS. SECOND ALTERNATE RECOMMENDED BY ATC PROVES TO BE THE ANSWER TO A VERY BUSY FLIGHT.

ACN: 808891

Time / Day

Date : 200810
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : VMC
Light : Dusk

Aircraft : 1

Controlling Facilities.Tower : ZZZ.Tower
Operator.General Aviation : Personal
Make Model Name : Cessna Aircraft Undifferentiated or Other Model
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 10
Experience.Flight Time.Total : 1000
Experience.Flight Time.Type : 800
ASRS Report : 808891

Person : 2

Affiliation.Government : FAA
Function.Controller : Local

Events

Anomaly.Airspace Violation : Entry
Anomaly.Incursion : Landing Without Clearance
Anomaly.Non Adherence : Published Procedure
Independent Detector.Other.ControllerA : 2
Resolatory Action.None Taken : Detected After The Fact
Consequence.FAA : Reviewed Incident With Flight Crew

Assessments

Problem Areas : Flight Crew Human Performance

Narrative

ENTERED THE DOWNWIND AT THE ZZZ ARPT UNAWARE THAT THE TWR WAS IN OP AND HAD DIALED IN THE WRONG RADIO FREQ. TFC WAS OBSERVED ON FINAL AND HOLDING SHORT FOR DEP. MAINTAINED ADEQUATE SPACING WHILE BROADCASTING INTENTIONS OVER MY RADIO AND LANDED UNEVENTFULLY ON RWY XX CLRING THE ACTIVE AT THE FIRST TXWY. GND TAXI TO PARK I WAS GIVEN GREEN LIGHT GUN SIGNALS FROM THE TWR AUTHORIZING CLRNC TO CROSS THE XING RWY AND ONCE PARKED I HEADED TO THE TWR TO TALK TO THE CTLR. I TOLD HIM I HAD BEEN TO ZZZ ONCE BEFORE, YRS AGO AND THAT MY GPS DATABASE SHOWED 122.7 AS THE FREQ. HE ADVISED OF THE CHANGES AND GAVE ME THE CORRECT FREQS FOR DEP. I APOLOGIZED, FILLED UP MY TANKS WITH FUEL AND DEPARTED AFTER THE TWR WAS CLOSED, USING THE APPROPRIATE GND AND CTAF FREQS. NEGLECTED TO MAINTAIN UP TO DATE DATA IN MY GPS DATABASE AND DID NOT REVIEW ZZZ SECTIONAL PRIOR TO ARR. NEGATIVE RADIO RESPONSES WHILE BROADCASTING IN THE BLIND SHOULD HAVE BEEN AN INDICATION THAT SOMETHING WAS WRONG. MY BEST OPTION WOULD HAVE BEEN TO DEPART THE TFC AREA, MAKE A CALL TO ANOTHER PLT ON MY FREQ WHO POSSIBLY COULD HAVE ADVISED ME OR REVIEWED MY OWN SECTIONAL. THIS INCIDENT HIGHLIGHTED THE NECESSITY TO BE DISCIPLINED IN PROPER ARPT ENVIRONMENT PROCS, REVIEW OF THE AIRMEN INFO MANUAL AND PROPER PREFLT PLANNING WHILE CONSIDERING A CONTINGENCY OF RADIO OUT PROCS. I MISSED IT ALL AND AM QUITE EMBARRASSED TO HAVE ENOUGH EXPERIENCE TO ADEQUATELY KNOW BETTER.

Synopsis

THE PILOT OF A LIGHT AIRCRAFT ENTERED THE TRAFFIC PATTERN OF A TOWER CONTROLLED AIRPORT AND LANDED WITHOUT CLEARANCE BECAUSE HIS GPS NAV DATABASE WAS OUT OF DATE.

ACN: 808330

Time / Day

Date : 200810
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Navaid : ZZZ.VORTAC
State Reference : US
Altitude.MSL.Single Value : 43000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Corporate
Make Model Name : Challenger Jet Undifferentiated or Other Model
Operating Under FAR Part : Part 91
Flight Phase.Cruise : Level

Component : 1

Aircraft Component : FMS/FMC

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : First Officer
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 63
Experience.Flight Time.Total : 3580
Experience.Flight Time.Type : 328
ASRS Report : 808330

Events

Anomaly.Aircraft Equipment Problem : Critical
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Unable

Assessments

Problem Areas : Aircraft

Narrative

WE EXPERIENCED AN UNUSUAL AND POTENTIALLY HAZARDOUS AVIONICS FAILURE IN OUR CHALLENGER 300. THE INCIDENT INVOLVED A COMPLETE LOSS OF TUNING CAPABILITY FOR COM AND NAV RADIOS INCLUDING THE XPONDER CODES ACCOMPANIED BY A FAILURE OF THE COPLT'S MFD. ALL ATTEMPTS AT RADIO TUNING FAILED AND THE AVIONICS BEGAN CHANGING FREQS AND

XPONDER CODES WITHOUT PLT INPUTS. THE EVENTS DEVELOPED AS FOLLOWS: DURING CRUISE FLT, WE NOTICED FLUCTUATIONS IN THE NAV DISPLAY ON THE COPLT'S MFD. THIS INVOLVED RAPID FLICKERING OF THE COURSE LINE DISPLAY. WITHIN 1 MIN, THE SAME THING BEGAN TO OCCUR ON THE PLT'S MFD. WE RECEIVED A FREQ CHANGE AND I NOTED THAT I WAS NOT ABLE TO INPUT THE NEW FREQ EITHER THROUGH THE FMS OR MFD RADIO TUNING FUNCTIONS. ALL FREQ DISPLAYS EXCEPT FOR HF TURNED AMBER (INCLUDING XPONDER CODE DISPLAY). WITHIN 60 SECONDS OF THE AMBER DISPLAY INDICATIONS, THE FREQS AND XPONDER CODE BEGAN CHANGING WITHOUT PLT INPUT. WE ATTEMPTED TO USE THE REVERSIONARY TUNING FEATURE BY INDEPENDENTLY SELECTING FMS OR MFD ONLY TUNING. THIS HAD NO EFFECT. WE SELECTED THE COM #1 121.5 OPTION ON THE REVERSIONARY PANEL. THIS FEATURE WORKED AS ADVERTISED AND ALLOWED US TO REGAIN COMS ON 121.5 ONLY. APPROX 10-15 MINS INTO THE EVENT, THE COPLT'S MFD FAILED COMPLETELY WITH A BLANK SCREEN. WE WERE NOT ABLE TO DISPLAY ELECTRONIC APCH CHARTS. GIVEN THE CONDITIONS, WE ELECTED NOT TO MAKE FURTHER ATTEMPTS AT CHANGING SWITCH POS ON THE REVERSIONARY PANEL -- WE DID NOT ATTEMPT TO DISPLAY CHARTS ON THE PLT'S MFD AND I DON'T KNOW IF THIS WOULD HAVE WORKED. OVER THE NEXT 30 MINS WE WERE ASKED REPEATEDLY BY ATC TO EITHER MAINTAIN OUR ASSIGNED XPONDER CODE OR SQUAWK 7600. WE WERE NOT ABLE TO DO EITHER BECAUSE THE XPONDER CODE ALONG WITH COM AND NAV FREQS CONTINUED TO CHANGE WITHOUT PLT INPUTS. AFTER SELECTING THE XPONDER TO STANDBY AND THEN BACK ON, IT SEEMED TO HOLD 7600 FOR SEVERAL MINS AT A TIME. WE WERE ABLE TO CONFIRM WITH ATC THAT THE XPONDER CODES WERE IN FACT CHANGING SO THE PROB WASN'T JUST LIMITED TO A DISPLAY ISSUE. WE LANDED WITH 121.5 ON COM #1 AS OUR ONLY MEANS OF COM. THE MDC RECORDED A TOTAL OF 9 EVENTS ASSOCIATED WITH VARIOUS TYPES OF AVIONICS AND STALL PROTECTION FAILURES DURING THE EVENT. ALL WERE RECORDED WITHIN A FEW MINS OF EACH OTHER. WE TOOK PHOTOGRAPHS OF THE MDC ENTRIES AND SENT THEM TO MAINT FOR RECORDING. AFTER A PWR-DOWN AND RE-START, ALL AVIONICS RETURNED TO NORMAL FUNCTIONING. THE FMS REMAINED FUNCTIONAL FOR NAV WITH GPS CAPABILITY ONLY. RNAV WAS LOST DUE TO LACK OF VOR TUNING CAPABILITY. THE ILS APCH FOR THE LNDG ARPT HAD BEEN SELECTED IN THE FMS PRIOR TO THE FAILURE. DESPITE THE LOSS OF MANUAL TUNING CAPABILITY, THE NAV-TO-NAV XFER DID OCCUR WHEN INTERCEPTING THE ILS.

Synopsis

A CL30 FLT CREW EXPERIENCED FAILURE OF ALL NAV AND COM TUNING CAPABILITY, AS WELL AS LOSS OF FO'S MFD. THEY WERE ABLE TO COMMUNICATE ON GUARD USING THE REVERSION FEATURE.

ACN: 808203

Time / Day

Date : 200810
Local Time Of Day : 0001 To 0600

Place

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

Environment

Flight Conditions : VMC
Light : Dawn

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.Common Carrier : Charter
Make Model Name : King Air C90 E90
Operating Under FAR Part : Part 135
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : Altimeter

Person : 1

Affiliation.Company : Charter
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 250
Experience.Flight Time.Total : 3150
Experience.Flight Time.Type : 285
ASRS Report : 808203

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Altitude Deviation : Undershoot
Anomaly.Non Adherence : Clearance
Independent Detector.Other.ControllerA : 2
Independent Detector.Other.Flight CrewA : 1
Resolutive Action.Controller : Issued Advisory
Resolutive Action.Flight Crew : Returned To Assigned Altitude
Consequence.Other

Assessments

Problem Areas : Aircraft

Narrative

I AM A PLT IN AZ. I WAS DISPATCHED TO ZZZ TO PICK UP A PATIENT WHO WAS IN CRITICAL CONDITION AND NEEDED TRANSPORT TO ZZZ1. AFTER I WAS HANDED OFF TO ZZZ1 APCH I WAS TOLD I WAS LOWER THAN THE ALT I WAS ASSIGNED AT 8000 FT. THERE WAS A DISCREPANCY BTWN THE PLT AND COPLT'S ALTIMETER, SO I DECIDED TO GO OFF THE ALT MY GPS WAS RPTING. I WAS GIVEN A PHONE NUMBER, AND CALLED WHEN I LANDED. THE PATIENT WAS TRANSPORTED, AND WE LEFT AN HR LATER VFR BACK HOME. I RPTED THE ISSUE TO MY LEAD PLT, AND MAINT DIRECTOR. THEY BOTH TOOK THE PLANE UP WHEN I RETURNED AND NOTED THE ALTIMETER PROB THAT I HAD ENCOUNTERED WITH ZZZ1 APCH, AND DECIDED THAT MAINT NEEDED TO BE DONE. THE LEAD PLT THEN FLEW THE PLANE TO ZZZ3 (THAT DAY) WHERE IT WAS TAKEN OTS, AND MAINT WAS UNDERWAY. THE FOLLOWING DAY IT WAS NOTED THAT THERE WAS IN FACT AN ALTIMETER ENCODING DISCREPANCY BTWN THE PLT AND COPLT'S ALTIMETER, AND A BROKEN PIPE IN THE STATIC SYS. THE ALTIMETER WAS REPLACED, MAINT WAS DONE, AND THE PLANE WAS BACK IN SVC THAT EVENING.

Synopsis

A KING AIR CAPT ALTIMETER WAS IN ERROR. THE ACFT WAS REMOVED FROM SVC AFTER RETURNING TO HOME BASE.

ACN: 808066

Time / Day

Date : 200810
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Special Use Airspace : R5311.Restricted
State Reference : NC
Altitude.MSL.Bound Lower : 1000
Altitude.MSL.Bound Upper : 3500

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Operator.General Aviation : Personal
Make Model Name : PA-28 Cherokee/Archer II/Dakota/Pillan/Warrior
Operating Under FAR Part : Part 91
Navigation In Use.Other : GPS
Flight Phase.Cruise : Enroute Altitude Change

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Experience.Flight Time.Last 90 Days : 15
Experience.Flight Time.Total : 800
Experience.Flight Time.Type : 600
ASRS Report : 808066

Events

Anomaly.Airspace Violation : Entry
Anomaly.Non Adherence : FAR
Independent Detector.Aircraft Equipment.Other Aircraft Equipment : GPS
Resolatory Action.Flight Crew : Took Precautionary Avoidance Action

Assessments

Problem Areas : Airspace Structure
Problem Areas : Flight Crew Human Performance

Narrative

NORMALLY BEFORE FLT I LAY OUT THE XCOUNTRY COURSE ON MY SECTIONALS TO OBSERVE ANY RESTR AIRSPACE, MOA'S, ETC. BECAUSE THE WX IN SOUTH CAROLINA WAS ONLY MVFR, I KNEW I'D HAVE TO FLY TOWARDS THE W FIRST BEFORE TURNING N WHEN THE CEILINGS AND VISIBILITY IMPROVED. SO, IT WASN'T POSSIBLE TO LAY OUT A COURSE BEFORE HAND. NO FLT PLAN WAS FILED AND I WAS NOT USING FLT FOLLOWING. I PICKED MY WAY W AND NORTHWARD

TO STAY CLR OF THE CLOUDS AND THE HEAVIEST RAIN. AS I APCHED THE NC/SC STATE LINE ABOUT XA30, I NOTED A MIL AREA ON MY KING KX150 MOVING MAP GPS. IT WAS FORT BRAGG, NC. THE VARIOUS MOA'S WERE DEPICTED AND I DETERMINED TO FLY THROUGH THEM AT 1000 FT BECAUSE THE WX HAD JUST IMPROVED AND VISIBILITY (GREATER THAN 10 MI) AND CEILING (GREATER THAN 15000 FT) WERE QUITE GOOD ALTHOUGH I WAS STILL IN MODERATE CHOP. I DECIDED TO CLB TO 3500 FT IN ORDER TO IMPROVE THE RIDE AND HAD JUST STARTED THE CLB WHEN I HEARD A RPT WHICH SOUNDED LIKE SOMETHING IN THE AFT PART OF THE PLANE. WHILE WONDERING WHAT HAPPENED AND SEEING NOTHING IN THE CTLS OR ENG, I HEARD 2 MORE THAT I IDENTED AS ARTILLERY FIRE AND IMMEDIATELY SWEEPED THE BOUNDARIES ON THE GPS SCREEN TO CONFIRM I WAS ONLY IN AN MOA. WHEN THE POINTER HIT THE BOUNDARY LINE, IT BECOMES WIDER AND BRIGHTER GIVING ALT LIMITS AND HIGHLIGHTING THE ENTIRE BOUNDARY PERIMETER. AT THAT POINT, I WAS ABLE TO SEE THAT I WAS IN A RESTR AREA, UNFORTUNATELY, I AM COLOR BLIND AND DID NOT DISCERN THE COLOR DIFFERENCES BTWN THE VARIOUS BOUNDARIES AROUND THIS MIL FACILITY IN THEIR UN-HIGHLIGHTED MODE. I IMMEDIATELY WENT TO A FULL PWR CLB AND TURNED L TO THE NEAREST BOUNDARY OF THE RESTR AIRSPACE. I WAS ALONE IN THE ACFT AND THERE WAS NOTHING ELSE TO RPT (OTHER THAN A GOOD SCARE!). I FLY AROUND THE PATUXENT NAS AREA REGULARLY AND KNOW THE RESTR AIRSPACES AROUND MY HOME BASE. I DON'T NEED COLOR PERCEPTION TO IDENT THE AIRSPACE ON MY GPS BECAUSE I KNOW GENERALLY WHERE THEY ARE. THIS IS ALSO TRUE WHEN I LAY OUT A XCOUNTRY FLT AND SEE WHERE THE RESTR AIRSPACES ARE BEFOREHAND. WHEN I SEE THEM ON MY GPS, I KNOW WHAT I'M LOOKING AT -- NOT USING COLOR TO IDENT THEM. THIS EXPERIENCE HAS TAUGHT ME THAT WHEN I'M 'OFF COURSE' OR OTHERWISE FLYING WHERE I'M UNFAMILIAR AND WHERE I HAVEN'T REFERRED TO MY SECTIONAL, I'LL HAVE TO BE MORE INQUISITIVE OF BOUNDARIES BY HIGHLIGHTING THEM ON THE GPS BEFORE ENTERING.

Synopsis

PA28 PILOT INADVERTENTLY ENTERS RESTRICTED AIRSPACE AT 1000 FT DURING A LIVE FIRE EXERCISE.

ACN: 807680

Time / Day

Date : 200810
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : RDU.Airport
State Reference : NC

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZDC.ARTCC
Operator.Common Carrier : Air Carrier
Make Model Name : EMB ERJ 135 ER&LR
Operating Under FAR Part : Part 121
Navigation In Use.Other : FMS or FMC
Flight Phase.Cruise : Level
Route In Use.Arrival.STAR : ARGAL 4

Component : 1

Aircraft Component : FMS/FMC

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
ASRS Report : 807680

Person : 2

Affiliation.Government : FAA
Function.Controller : Radar

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Non Adherence : Published Procedure
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Resolatory Action.Controller : Issued Alert
Resolatory Action.Flight Crew : Regained Aircraft Control
Resolatory Action.Flight Crew : Returned To Original Clearance

Assessments

Problem Areas : Aircraft

Problem Areas : Flight Crew Human Performance

Narrative

WE WERE AT CRUISE ALT AND WERE TOLD TO GO DIRECT TO HPW. WE DID, THEN WITHOUT ANY COCKPIT INDICATIONS THE L SEAT FMS AND R SEAT FMS DUMPED THE ARGAL 4 ARR AND WENT FROM HPW DIRECT TO RDU. WHEN THE ACFT PASSED HPW IS WHEN WE THINK THE FMS'S DUMPED THE ARR. THEN ATC CALLED US AND SAID YOU ARE OFF COURSE AND TO TURN 30 DEGS L. WE DID. NEITHER MYSELF, THE FO OR THE JUMPSEATER COULD FIGURE OUT WHY THE FMS DUMPED THE ARR. WE WERE THEN TOLD BY ATC TO GO DIRECT GREKI. THEN AFTER GREKI TO DUFFI AND RESUME THE ARGAL 4 ARR. HOWEVER MY FMS DID NOT SHOW THE ARGAL 4 IN THE FMS FLT PLAN ARR PAGE ANYMORE, BUT IT WAS IN THE FLT PLAN. WE COULD NOT FIGURE OUT WHY THIS HAPPENED AS WELL. I THEN SAT THERE AND WATCHED THE FO'S FMS ADD A GND TRACK WITHOUT ANYONE TOUCHING THE FMS'S. THIS CONFUSED US EVEN MORE. THERE WERE 3 HIGHLY EXPERIENCED EMB PLTS IN THE COCKPIT AND WE HAD NEVER SEEN THESE FMS ANOMALIES BEFORE. AS A RESULT OF BOTH FMS'S DOING THINGS THAT NONE OF US IN THE COCKPIT COULD EXPLAIN OR UNDERSTAND, I ELECTED TO INFORM ATC OF THE FMS -- GPS PROBS AND INFORMED THEM THAT WE FELT THE FMS'S WERE UNRELIABLE. WE THEN CONVERTED TO VOR NAV AND REQUESTED ATC TO GIVE US VECTORS AND MONITOR OUR FLT PATH MORE CLOSELY. WE AS A CREW HAD LOST CONFIDENCE IN THE ACFT'S FMS -- GPS SYS. WE AS A CREW OF 3 HIGHLY QUALIFIED AND EXPERIENCED EMB PLTS TRIED TO CORRECT THE FMS'S BUT THEY BOTH KEPT ON CREATING UNCOMMANDED GND TRACKS. WE ALL SAT AND WATCHED THE FO'S FMS ADD A WAYPOINT FROM DUHAM WHICH IS A HOLDING FIX FOR THE ILS RWY 23R IN RDU TO GREKI WITHOUT ANYONE TOUCHING AN FMS KEY. THE ONLY THING I CAN THINK OF IS THE FACT THAT THE ACFT HAD 4 AVIONICS RELATED MEL'S. THIS MIGHT HAVE CAUSED SOME OTHER AVIONICS PROB THAT CAUSED BOTH FMS'S TO DO THINGS THAT OVER 25000 HRS OF EXPERIENCE IN AVIATION BTWN ALL 3 OF US IN THE COCKPIT COULD NOT EXPLAIN. MAKE EVERY ATTEMPT TO REPAIR ACFT WITH MULTIPLE AVIONICS ISSUES BEFORE SENDING IT INTO THE MOST CONGESTED COMPLEX AIRSPACE IN THE WORLD. OPERATING THIS HIGHLY AUTOMATED ACFT IN A DEGRADED MODE LOWERS THE SAFETY MARGIN IN AN ENVIRONMENT WHERE THERE IS VERY LITTLE IF ANY ROOM FOR ERROR. WE HAD NO TCAS, NO RADIO ALTIMETER, NO EGPWS, NO TERRAIN ALERT. WE WERE LEGALLY DISPATCHABLE ACCORDING TO MEL 37-10 TO FLY IN THE MOST CONGESTED AIRSPACE IN THE WORLD WITHOUT ANY OF THIS CRITICAL SAFETY EQUIP. THIS CREATES A SITUATION WERE THE AIRLINE'S OPERATIONAL RISK MGMNT PRACTICES ARE QUESTIONABLE.

Synopsis

EMB135 FO REPORTS STRANGE FMC MALFUNCTION DURING ARGAL ARRIVAL TO RDU CAUSING TRACK DEV.

ACN: 807488

Time / Day

Date : 200809
Local Time Of Day : 1801 To 2400

Place

State Reference : WA

Environment

Flight Conditions : VMC
Light : Night

Aircraft : 1

Operator.General Aviation : Personal
Make Model Name : Skyhawk 172/Cutlass 172
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach
Route In Use.Approach : Instrument Non Precision

Person : 1

Affiliation.Other : Instructional
Function.Instruction : Trainee
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 35
Experience.Flight Time.Total : 120
Experience.Flight Time.Type : 120
ASRS Report : 807488

Events

Anomaly.Altitude Deviation : Crossing Restriction Not Met
Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Published Procedure
Anomaly.Other Spatial Deviation
Independent Detector.Aircraft Equipment : GPWS
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Detected After The Fact

Assessments

Problem Areas : Chart Or Publication

Situations

Chart.Approach : LNAV

Narrative

DESCRIPTION: WHILE SHOOTING LNAV APCH, USED LPV DECISION ALT INSTEAD OF LNAV MDA. DETAILED DESCRIPTION: WHILE SHOOTING LNAV (GPS) APCH, LOOKED AT THE COMMERCIAL APCH PLATE AND GOT CONFUSED WITH THE LPV

DECISION ALT WHILE APCH BRIEFING. USED THE LPV DECISION ALT INSTEAD OF LNAV MDA AS THE FORMER APPEARS IN THE BRIEFING AREA OF THE APCH PLATE. ALSO LPV AND LNAV ARE RESEMBLING. THIS IS COMPOUNDED BY THE FACT THAT IT WAS NIGHT WITH DIM COCKPIT LIGHT AND LOW PLT EXPERIENCE. THIS COULD HAVE BEEN FATAL AS LPV DECISION ALT IS 763 FT AND LNAV MDA IS 1600 FT. POSSIBLE CAUSE: 1) LOW EXPERIENCE, 2) PLT STRESS, 3) PLT OVERSIGHT. DISCOVERY OF THE PROB: 1) INSTRUCTOR FOUND THE ISSUE AND CORRECTION WAS MADE. 2) ONBOARD GPS ALSO GAVE THE LOW TERRAIN WARNING. SUGGESTION CORRECTIVE ACTIONS: 1) IFR FLT TRAINING SHOULD PLACE EMPHASIS ON REVIEWING APCH PLATES MANDATORY BEFORE FLT, LIKE WX REVIEW. 2) COMMERCIAL APCH PLATES MUST NOT LIST DA(H)/MDA(H) IN THE BRIEFING STRIP AT THE TOP. THIS IS THE STYLE FOLLOWED BY GOVT CHARTS. INEXPERIENCED PLTS/STRESSED PLTS MAY LOOK AT THE NUMBER IN BRIEFING STRIP AND USE IT RATHER THAN LOOKING DOWN FOR THE DETAILS. POSSIBLE ERROR SCENARIOS: 1) USING ILS DECISION ALT INSTEAD OF LOC MDA. 2) USING LPV DECISION ALT INSTEAD OF LNAV MDA. 3) USING STRAIGHT-IN MINIMUMS INSTEAD OF CIRCLING MINIMUMS.

Synopsis

AN LNAV APCH PLATE MINIMUM ALT FORMATTING CAUSED A C172 PLT TO USE THE LPV DECISION ALT VERSUS THE LNAV MDA NEARLY CAUSING A CFTT EVENT.

ACN: 806589

Time / Day

Date : 200809
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : RST.Airport
State Reference : MN
Altitude.MSL.Single Value : 25000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.Tower : RST.Tower
Operator.General Aviation : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Operating Under FAR Part : Part 91
Flight Phase.Descent : Intermediate Altitude

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Experience.Flight Time.Last 90 Days : 20
Experience.Flight Time.Total : 360
Experience.Flight Time.Type : 120
ASRS Report : 806589

Events

Anomaly.Airspace Violation : Entry
Anomaly.Non Adherence : FAR
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Flight Crew : Exited Penetrated Airspace

Assessments

Problem Areas : Airspace Structure
Problem Areas : Flight Crew Human Performance

Narrative

SET KLN 94 GPS TO KOWA INADVERTENTLY. SHOULD HAVE BEEN KOWA FOR OWATONNA, MN. THE INITIAL READ FROM ZZZ APPEARED TO BE APPROPRIATE.

HDG AND DISTANCE WERE WITHIN REASON. HOWEVER, BECAUSE THERE WAS A '0' RATHER THAN AN 'O,' I FLEW THE GPS TO ROCHESTER, MN, NDB. WHILE TRYING TO DETERMINE MY WHEREABOUTS, I DID NOT DETERMINE THE COM FREQ FOR ROCHESTER'S APCH UNTIL I WAS 2.5 NM FROM ARPT. TO PREVENT THE RECURRENCE, I WILL NEVER SET GPS WITHOUT A DOUBLECHK OF THE DEST IDENT AND I WILL ALWAYS BE CONCERNED AND VIGILANT ABOUT ANY AND ALL USE OF '0.'

Synopsis

IMPROPER PROGRAMMING OF ACTIVE WAYPOINT FOR GPS RESULTS IN VIOLATION OF CLASS D AIRSPACE BY SMA PLT.

ACN: 806358

Time / Day

Date : 200809
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : SOP.Airport
State Reference : NC
Altitude.MSL.Single Value : 1500

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Make Model Name : Small Aircraft, Low Wing, 1 Eng, Retractable Gear
Operating Under FAR Part : Part 91
Navigation In Use.Other : Pilotage
Flight Phase.Descent : Approach
Route In Use.Approach : Traffic Pattern

Aircraft : 2

Make Model Name : Small Aircraft, Low Wing, 2 Eng, Retractable Gear
Navigation In Use.Other : Pilotage
Flight Phase.Descent : Approach
Route In Use.Approach : Traffic Pattern

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 28
Experience.Flight Time.Total : 2395
Experience.Flight Time.Type : 129
ASRS Report : 806358

Person : 2

Affiliation.Company : Corporate
Function.Flight Crew : First Officer

Events

Anomaly.Conflict : NMAC
Anomaly.Non Adherence : Published Procedure
Independent Detector.Other.Flight CrewA : 2

Resolatory Action.Flight Crew : Took Evasive Action
Miss Distance.Horizontal : 100
Miss Distance.Vertical : 10

Assessments

Problem Areas : Airport
Problem Areas : Chart Or Publication
Problem Areas : Flight Crew Human Performance

Narrative

AFTER CANCELING MY IFR CLRNC AND QUICKLY DSNDING ON A SLAM DUNK DSCNT TO MOORE COUNTY ARPT, MY COPLT ANNOUNCED ON 122.7 OUR INTENTION TO ENTER A L-HAND PATTERN ON A L XWIND LEG FOR FULL STOP LNDG ON RWY 23, WHICH I DID. THERE WAS A 3 KT WIND FAVORING RWY 23. SHORTLY AFTER TURNING L DOWNWIND, MY COPLT LET OUT AN EXPLETIVE AND GRABBED THE YOKE TO TAKE EVASIVE ACTION TO TURN THE AIRPLANE TO THE R. I IMMEDIATELY LOOKED UP AND SAW A PISTON TWIN ENG AIRPLANE JUST TO THE L OF US VERY CLOSE TO OUR ALT, AND I ALSO ASSISTED IN THE EVASIVE ACTION TO TURN OUR AIRPLANE TO THE R. THE TWIN WAS IN A SLIGHT L BANK. WE BARELY MISSED HITTING THAT AIRPLANE HEAD-ON. AFTER LNDG, WE DISCOVERED THAT THE OTHER PLANE HAD LANDED ON RWY 5, APPARENTLY FROM A R-HAND PATTERN. THAT AIRPLANE QUICKLY DEPARTED BEFORE WE HAD A CHANCE TO TALK TO THE PLT. WE ASKED THE ARPT LINEMAN IF 122.7 WAS THE CORRECT CTAF, AND HE INDICATED IT IS 123.05. I THEN ASSUMED THAT THE APCH PLATE FROM WHICH I GOT THE FREQ WAS NOT CURRENT DUE TO AN ERROR IN POSTING TERMINAL PLATE REVISIONS. LATER INVESTIGATION YIELDED THE FACT THAT I WAS MOST LIKELY LOOKING AT THE APCH PLATE FOR THE WRONG ARPT, THAT OF MONROE COUNTY, NC, INSTEAD OF MOORE COUNTY, NC. THE FACTS THAT THE ARPT NAMES ARE VERY CLOSE IN THE ALPHABET, SOUND, AND APPEARANCE, THEY BOTH HAVE A SINGLE RWY ORIENTED 5/23, THEY BOTH HAVE A GPS 23 APCH, AND THE RWYS ARE NEARLY THE SAME IN LENGTH MADE THE ERROR LESS APPARENT. MY COPLT QUESTIONED WHETHER OR NOT THE ARPT NAME WAS CORRECT, FOR THE APCH CTLR HAD REFERRED TO THE ARPT AS SOUTHERN PINES. WHEN I LOOKED UP THE ARPT IN MY FLT GUIDE DURING PREFLT PLANNING, I REMEMBERED THAT THE ARPT HAD 2 NAMES, SOUTHERN PINES/MOORE COUNTY (REMEMBERED INCORRECTLY AS MONROE COUNTY), SO I FELT ASSURED THE ARPT NAME ON THE PLATE WAS CORRECT. AS A RESULT, WE HAD XMITTED OUR ANNOUNCEMENT TO ENTER THE PATTERN ON THE WRONG FREQ, AND HENCE THE OTHER PLANE DID NOT HEAR US, AND WE DID NOT HEAR WHATEVER XMISSIONS THEY MADE EITHER. ON OUR NEXT FLT LEG, WE LOOKED IN THE GNS530 DATABASE ON BOARD AND FOUND THE CORRECT FREQ TO BE 123.05. AFTER TALKING MORE TO MY COPLT LATER, HE INDICATED TO ME HE SAW THE OTHER PLANE ENTER THE PATTERN FROM A 45 DEG TO THE R DOWNWIND FOR RWY 5 AND IT TURNED TO THE L RIGHT TO INTERCEPT THE R DOWNWIND DIRECTLY IN FRONT OF US. NEITHER MYSELF NOR MY COPLT REMEMBER SEEING A SEGMENTED CIRCLE. PUBLISHED DATA ONLINE AND IN AIR GUIDE PUBS 'FLT GUIDE' INDICATE L-HAND PATTERNS AT SOP.

Synopsis

PILOT OF SMA REPORTS NMAC WITH LIGHT TWIN IN TRAFFIC PATTERN AT SOP. REPORTER IS USING WRONG CTAF FREQUENCY.

ACN: 806215

Time / Day

Date : 200810
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : CWA.Airport
State Reference : WI
Altitude.MSL.Single Value : 39000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZMP.ARTCC
Operator.General Aviation : Personal
Make Model Name : Small Aircraft, Low Wing, 2 Eng, Retractable Gear
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach
Route In Use.Approach : Instrument Non Precision

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 80
Experience.Flight Time.Total : 2125
Experience.Flight Time.Type : 1800

Events

Anomaly.Airspace Violation : Entry
Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Published Procedure
Anomaly.Other Spatial Deviation
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Flight Crew : Became Reoriented
Resolatory Action.Flight Crew : Executed Go Around
Consequence.FAA : Reviewed Incident With Flight Crew

Assessments

Problem Areas : Airspace Structure
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

APCHING AUW I WAS CLRED FOR A VISUAL APCH. WENT INTO IMC AND ABANDONED APCH AND CLBED TO SAFE ALT AND REQUESTED VOR A/GPS-A APCH. WAS CLRED FOR THE APCH FROM THE N SIDE OF THE ARPT VIA IAF OF PAFDE 7 MI DME ARC OFF OF AUW. WHILE ON THE ARC I WAS IN IMC. I STARTED THE TURN ONTO THE INBOUND APCH COURSE. AFTER I WAS IN THE TURN I WENT INTO VMC CONDITIONS AND THE ARPT APPEARED. I HAD A CLR SHOT TO THE ARPT AND WAS CLRED FOR THE VISUAL AND I CANCELED MY IFR. I CONTINUED TO THE RWY AND NOTED THAT THE RWY NUMBER WAS NOT THE ONE OF MY INTENDED LNDG. ACTUALLY, AUW HAS RWY 30 AND THE RWY IN FRONT OF ME WAS RWY 26. I REALIZED THAT I WAS AT CWA AND NOT A AUW. I HAD BUSTED THE CLASS D AIRSPACE. I IMMEDIATELY DID A GAR AND CALLED CTR TO INFORM THEM OF MY ERROR. I WAS THEN CLRED FOR THE VOR A/GPS-A APCH AT AUW AND MADE A SUCCESSFUL APCH AND LNDG. I CALLED TWR AT CWA AND EXPLAINED THE EVENT. LATER IN THE DAY I WAS ASKED TO CALL MSP CTR WHERE I WAS ASKED ABOUT WHAT CAUSED THE EVENT BECAUSE I WAS NOT THE FIRST TO DO THIS. THIS WAS A VERY GOOD DISCUSSION ABOUT THE CIRCUMSTANCES AND EVENTS THAT LED TO THIS WITH SOME GOOD DISCUSSION ABOUT THE DESIGN OF THE APCH. MY RECOMMENDATION IS THAT THE DME ARC SEGMENT OF THE APCH THAT POINTS YOU TOWARD CWA (NORTHEASTERN ARC) AS YOU ARE MAKING YOUR TURN ONTO THE FINAL APCH SHOULD BE ELIMINATED FROM THE APCH. ALSO, THERE ARE NO RADAR SVCS BELOW 3500 FT IN THE AREA.

Synopsis

A SMA ON A VOR A/GPS-A APCH TO AUW RWY 30 MADE A LOW APCH TO CWA RWY 26. A TRANSITION FROM IMC TO VMC CAUSED A QUICK INCORRECT DECISION.

ACN: 804728

Time / Day

Date : 200809
Local Time Of Day : 0601 To 1200

Place

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

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Corporate
Make Model Name : Lancair Columbia
Operating Under FAR Part : Part 91
Navigation In Use.Other : FMS or FMC
Flight Phase.Cruise : Level
Flight Phase.Descent : Approach
Route In Use.Enroute : Direct

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 50
Experience.Flight Time.Total : 9200
Experience.Flight Time.Type : 105
ASRS Report : 804728

Events

Anomaly.Altitude Deviation : Excursion From Assigned Altitude
Anomaly.Non Adherence : Clearance
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Detected After The Fact

Assessments

Problem Areas : Environmental Factor
Problem Areas : Flight Crew Human Performance

Narrative

WHILE ON AN IFR CLRNC IN CRUISE FLT, I WAS HALFWAY TO MY DEST AND I LOADED MY VERT PROFILE IN THE FLT PLAN FUNCTION OF THE FMS. AS I NEARED THE 'TOD' (TOP OF DSCNT), I STARTED MY DSCNT TO STAY AHEAD OF THE

AIRPLANE. AFTER DESCENDING JUST OVER 1000 FT I REALIZED THAT I HAD FORGOTTEN TO ASK FOR A LOWER ALT FROM CTR. AT THIS POINT I CALLED ATC AND ASKED TO CANCEL IFR. THE CTLR SAID SOMETHING LIKE, 'WELCOME BACK, CONTACT CTR ON 1XX.6 AND LET THEM KNOW OF YOUR INTENTIONS.' SO NOT ONLY DID I BEGIN A DSCNT WITHOUT A CLRNC, BUT I MUST HAVE MISSED A RADIO CALL ALSO. I CONTACTED THE NEW CTLR, AND TOLD HIM 'CTR...ACFT X...CANCEL IFR.' HE ACKNOWLEDGED AND TOLD ME TO SQUAWK VFR. PART OF THE CAUSE FOR THE ABOVE INCIDENT WAS THE WX WAS SO CLR, VERY VFR. I HAD BEEN IN VFR CONDITIONS SINCE I BROKE OUT ON TOP OF A MARINE LAYER AT 2500 FT ON MY CLBOUT JUST AFTER TKOF. I HAD BEEN CLRED DIRECT TO ZZZ, AND HAD BEEN IN VFR CONDITIONS FOR OVER AN HR WITHOUT COMING NEAR ANY CLOUDS. FOR SOME REASON, I DIDN'T REMEMBER BEING ON AN IFR CLRNC, AND I JUST STARTED MY DSCNT USING THE AUTOPLT AT THE 'RECOMMENDED' TIME ACCORDING TO THE GPS. ANOTHER CAUSE MIGHT HAVE BEEN BEING TIRED FROM A LONG VFR FLT THE PREVIOUS DAY, AND NOT GETTING ENOUGH SLEEP. TO PREVENT THE SITUATION FROM RECURRING I MUST REMEMBER THAT WHENEVER I LOAD THE 'VERT PROFILE/DSCNT' INTO THE FLT PLAN FUNCTION OF THE FMS THAT I MUST ASK FOR THE CLRNC BEFORE BEGINNING THE DSCNT. I WAS TRYING TO STAY AHEAD OF THE AIRPLANE, BY PLANNING AHEAD, AND PRELOADING THE DSCNT. BUT I STILL NEED TO VERIFY THAT I ASK PERMISSION FOR A LOWER ALT WHEN THE 'TOD' IS GETTING CLOSE. IT IS ALSO IMPORTANT TO GET THE PROPER AMOUNT OF REST BEFORE FLYING, SO THAT 'STUPID' MISTAKES LIKE THIS ARE LESS LIKELY TO HAPPEN.

Synopsis

AN IFR COLUMBIA 400 PILOT BEGAN A DSCNT WITHOUT ATC CLRNC WHILE DISTRACTED ON A VMC DAY AND MINDLESSLY FOLLOWING THE ACFT'S FMC.

ACN: 804417

Time / Day

Date : 200809
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Navaid : HVE.VORTAC
State Reference : UT
Altitude.MSL.Bound Lower : 18000
Altitude.MSL.Bound Upper : 18800

Environment

Flight Conditions : Mixed
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZLC.ARTCC
Operator.General Aviation : Personal
Make Model Name : Small Transport, Low Wing, 2 Recip Eng
Operating Under FAR Part : Part 91
Navigation In Use.Other.VORTAC
Flight Phase.Cruise : Level

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Multi Engine
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 16
Experience.Flight Time.Total : 2650
Experience.Flight Time.Type : 134
ASRS Report : 804417

Person : 2

Affiliation.Government : FAA
Function.Controller : Radar

Events

Anomaly.Airspace Violation : Entry
Anomaly.Inflight Encounter : Weather
Anomaly.Non Adherence : FAR
Independent Detector.Other.ControllerA : 2
Resolatory Action.Controller : Issued Advisory
Resolatory Action.Flight Crew : Exited Penetrated Airspace
Consequence.FAA : Assigned Or Threatened Penalties
Consequence.FAA : Reviewed Incident With Flight Crew

Assessments

Problem Areas : Aircraft
Problem Areas : Airspace Structure
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

I TOOK OFF FROM CALHAN, CO (5V4) FOR TRIP TO RENO, NV. COS, CO, WAS CLR -- VAIL, CO, WAS RAINING AND CLOUDY. MY WX SHOWED SOME BROKEN CLOUDS COMING IN FROM THE S ALONG MY RTE TO MILFORD, UT, WHICH MILFORD WAS RPTING CLR SKIES AND SO WAS RENO, NV. ENRTE TO PUEBLO, CO, I SAW A FEW CLOUDS OVER MONARCH PASS. I WAS AT 10500 FT MSL AND I WAS LISTENING TO DENVER ATC. I DID NOT CALL ZDV. I WENT OVER MONARCH PASS AT 14500 FT MSL AND I STAYED AT 14500 FT MSL. I WENT OVER GUNNISON, CO, WHICH HAD BROKEN CLOUDS. I WAS VFR ON TOP. I SET MY GPS TO MILFORD, UT (MLF). AT MONTROSE, COL, THERE WERE JUST A FEW CLOUDS. I STAYED AT 14500 FT MSL. AT MOAH, UT, THE CLOUDS BELOW ME WERE GETTING THICKER AND HIGHER, SO I CLBED TO 16500 FT MSL. I ENDED UP AT 17500 FT MSL E OF HAWKSVILLE. I CHKED ON MILFORD, UT, WITH FSS AND IT WAS RPTING (BY OTHER ACFT) AS CLR. MILFORD IS MY STOP FOR FUEL. SO WITH THIS INFO, I DECIDED TO CONTINUE ON TO MILFORD ON TOP. I STILL DID NOT TALK TO ZLC. BUT I WAS LISTENING TO THEM. I DIDN'T HEAR THEM TALKING TO ANYONE IN MY AREA OR ALT. AT THIS TIME I NEEDED TO CLB TO STAY OUT OF THE CLOUDS. I KNEW THAT THE MOUNTAINS ARE HIGH IN THIS AREA, SO I ELECTED NOT TO GO DOWN. SO I STARTED TO CLB. AT FL185, ZLC CALLED FOR AN ACFT AT MY SPD AND ALT AND CLBING AT HANKSVILLE WITH MY DIRECTION OF FLT TO CALL THEM, WHICH I DID CALL THEM. I GAVE THEM MY INTENTIONS. THEY ADVISED ME OF MY VIOLATION AND SUGGESTED I DSND. HE SAID DENVER AND SALT LAKE HAD BEEN TRACKING ME. THERE WAS A VERY LARGE BREAK IN THE CLOUDS TO MY S, SO I DSNDDED DOWN TO 10000 FT MSL. I TURNED N AND WENT AROUND THE HILL AT BURRVILLE AND MONROE, UT, AND LANDED AT MILFORD, UT. ZLC GAVE ME A PHONE NUMBER TO CALL. I HAD NO PHONE SVC AT MILFORD. I FUELED THE PLANE AND DEPARTED FOR RENO. I STAYED AT 12500 FT MSL AND LISTENED TO ATC INTO RENO AND I LANDED AT RENO. AT MY MOTEL I CALLED AND TALKED TO A NICE MAN (EITHER A CTRLR OR SUPVR -- I DIDN'T GET HIS NAME). HE EXPLAINED MY VIOLATION AND SAID HE DIDN'T KNOW IF HE WAS GOING TO RPT THIS. I EXPLAINED THAT I KNOW I WAS WRONG, BUT TO BE SAFE, I NEEDED TO STAY OUT OF THE CLOUDS AND I DID NOT WANT TO BE WANDERING AROUND THE HILLS TRYING TO GET TO CLR SKIES. I AM RPTING THIS TO SAY: I MADE A MISTAKE. I DIDN'T CALL ZDV OR ZLC FOR FLT FOLLOWING. I WILL NEXT TIME CALL. I WAS IN CLASS A AIRSPACE (FOR A SHORT PERIOD OF TIME) AND THIS WILL NEVER HAPPEN AGAIN. I AM WORKING ON MY IFR TICKET. THE NEXT TIME I AM AT CLASS A AIRSPACE I WILL HAVE MY IFR TICKET AND I WILL CONTACT ATC. I NEEDED TO COMMUNICATE BETTER. SORRY. THIS IS MY FIRST VIOLATION AND I HAVE BEEN FLYING SINCE THE LATE 1960'S (1967).

Synopsis

WITH NO FLT PLAN FILED AND NOT UTILIZING FLT FOLLOWING, NON-INSTRUMENT RATED SMT PLT DEPARTS ON 700+ NM CROSS COUNTRY ACROSS THE ROCKY MOUNTAINS AND IS COMPELLED TO CLIMB ABOVE FL180 TO AVOID IMC. ATC ADVISES HIM OF HIS ERROR.

ACN: 802960

Time / Day

Date : 200808
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 6300

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Make Model Name : Bonanza 36
Operating Under FAR Part : Part 91
Navigation In Use.Other : GPS
Flight Phase.Climbout : Intermediate Altitude
Route In Use.Departure : On Vectors

Component : 1

Aircraft Component : Flight Dynamics Navigation and Safety

Person : 1

Affiliation.Other : Contracted Service
Function.Flight Crew : Single Pilot
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 20
Experience.Flight Time.Total : 450
Experience.Flight Time.Type : 30
ASRS Report : 802960

Person : 2

Affiliation.Government : FAA
Function.Controller : Departure

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Altitude Deviation : Excursion From Assigned Altitude
Anomaly.Non Adherence : Clearance
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Independent Detector.Other.Flight CrewB : 1

Resolatory Action.Controller : Issued Advisory
Resolatory Action.Flight Crew : Returned To Assigned Altitude
Resolatory Action.Flight Crew : Returned To Intended or Assigned Course

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

I AM A SELF-EMPLOYED COMMERCIAL FERRY PLT. I AM TYPICALLY HIRED BY NEW ACFT OWNERS OR ACFT BROKERS TO RELOCATE ACFT THROUGHOUT NORTH AMERICA. I ARRIVED AT ZZZ EARLY IN THE AFTERNOON. I HAD BEEN HIRED TO RELOCATE A NEWLY PURCHASED BEECHCRAFT A36 BONANZA FROM ZZZ TO ZZZ1. THE WX WAS GOOD WITH MOSTLY CLOUDY SKIES, HOT, STEADY WIND FROM THE S, AND WX FORECASTED TO DETERIORATE LATER IN THE AFTERNOON. WHEN I ARRIVED MY PREFLT PREPARATION BEGAN AS USUAL. I FIRST MET WITH THE ACFT BROKER THAT WAS RESPONSIBLE FOR THE SALE OF THE ACFT. AS USUAL, I INQUIRED ABOUT ANY KNOWN DISCREPANCIES WITH THE ACFT. BROKER STATED, 'I AM NOT AWARE OF ANY.' I THEN REQUESTED TO REVIEW THE ACFT LOGBOOKS TO VERIFY FAR PART 91 ACFT INSPECTION REQUIREMENTS. I DETERMINED THAT THE ACFT COMPLIED WITH ALL PART 91 REQUIREMENTS TO INCLUDE: ANNUAL INSPECTION, ATC XPONDER INSPECTION, ALTIMETER INSPECTION, PITOT-STATIC CHK, AND ELT BATTERIES REPLACED. THE LAST KNOWN FLT OF THE ACFT WAS APPROX 2 WKS PRIOR. MY PREFLT PREPARATION CONTINUED BY REVIEWING THE ACFT POH. THE REVIEW CONSISTED OF ACFT SYS, EMER PROCS, AND ACFT PERFORMANCE. I DETERMINED MY RANGE PROFILE AND CONFIRMED THAT THE ACFT WOULD BE WITHIN THE PRESCRIBED WT AND BAL LIMITATIONS. THE NEXT PHASE OF THE PREFLT PREPARATION WAS THE FLT PLANNING PHASE. I HAD PLANNED TO FILE AN IFR FLT PLAN. THE WX PROGNOSIS FOR TX WAS MARGINAL FOR VFR CONDITIONS, SO I ELECTED TO FLY A SHORTER AND MORE CONSERVATIVE RTE. THIS DECISION WAS TO ASSURE ADEQUATE FUEL ONBOARD IN THE EVENT THAT I WILL NEED TO DIVERT TO ANOTHER ARPT DUE TO WX. ALTHOUGH THIS ACFT IS EQUIPPED WITH AN IFR CERTIFIED GARMIN 430 GPS, I ELECTED TO FILE A PLAN USING LOW ALT VICTOR AIRWAYS. THIS WILL SERVE AS A CONTINGENCY FORM OF NAV AS OPPOSED TO RELYING SOLELY ON GPS NAV. THE LAST PHASE OF THE PREFLT PREPARATION WAS THE PREFLT INSPECTION. I CONDUCTED A THOROUGH PREFLT INSPECTION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED GUIDELINES. NO DISCREPANCIES WERE NOTED DURING THE INSPECTION AND I DETERMINED THE ACFT WAS READY FOR A SAFE FLT. FLT: I OBTAINED MY IFR CLRNC FROM ZZZ CLRNC DELIVERY. I BEGAN MY TKOF ROLL ON RWY XX. AS THE ACFT ACCELERATED I PERFORMED A XCHK OF ALL ENG INSTS. ALL ENG INSTS WERE NORMAL. AFTER ROTATION I BEGAN A NORMAL CLB FOR 5000 FT. I ENGAGED THE AUTOPLT FOR A R TURN TO HDG 300 DEGS. THE AUTOPLT WAS FUNCTIONING AS EXPECTED. I PERFORMED MY CLB CHKLIST AND ANOTHER INST XCHK. HOWEVER, THIS XCHK REVEALED THAT THE CYLINDER TEMP AND THE OIL TEMP GAUGE WERE NOW INOP. I CONTACTED DEP AND THEY RESPONDED THAT THEY WERE NOT RECEIVING MY XPONDER. I VERIFIED THAT MY XPONDER WAS SELECTED TO 'ALT.' I THEN RECYCLED THE XPONDER. I INQUIRED WITH ATC IF THEY WERE RECEIVING MY XPONDER. ATC RESPONDED, 'WE ARE RECEIVING YOUR XPONDER BUT WITH NO MODE C.' SUDDENLY, THE AUTOPLT BEGAN AN UNCOMMANDED TURN TO THE L PRIOR TO REACHING HDG 300 DEGS. I REACTED BY

DISENGAGING THE AUTOPLT AND CONTINUED TO FLY THE ACFT MANUALLY. IN ANTICIPATION OF INTERCEPTING THE 320 DEG RADIAL INTO ZZZ VORTAC. I ALSO NOTICED THAT MY NAV #1 RADIO HAD A FLAG INDICATING THAT IT WAS NOT RECEIVING THE ZZZ VORTAC. I VERIFIED THE FREQ, PROGRAMMED THE NAV #2 RADIO TO THE ZZZ VORTAC, AND ATTEMPTED TO IDENT THE AUDIBLE VORTAC CODE. AS THIS WAS TAKING PLACE, DEP HAD ME TURN A HDG FOR A VECTOR OVER ZZZ1 VORTAC. WITHIN THE FIRST 3-4 MINS OF THE FLT, I HAD EXPERIENCED AN AUTOPLT FAILURE, ENG INST FAILURE, XPONDER FAILURE, AND A NAV #1 AND NAV #2 FAILURE. OBVIOUSLY, I SUSPECTED SOME FORM OF ELECTRICAL MALFUNCTION. I BEGAN TO TROUBLESHOOT THE PROBS I WAS EXPERIENCING AND CONTEMPLATED IF IT WOULD BE NECESSARY TO RETURN TO ZZZ. I ELECTED TO CONTINUE TOWARD ZZZ2 WITH THE IDEA THAT IF AN EMER LNDG WAS NECESSARY, ZZZ2 HAS EMER EQUIP LOCATED AT THE ARPT FOR ASSISTANCE. I HAD NOT YET DECLARED AN EMER AS I WAS STILL ATTEMPTING TO DIAGNOSE THE SITUATION. I DID NOT SMELL ANY UNUSUAL ELECTRICAL ODORS IN THE CABIN. I WAS UNABLE TO LOCATE ANY TRIPPED CIRCUIT BREAKERS. I OBSERVED MY AMMETER GAUGE WHICH APPEARED TO BE FUNCTIONING NORMALLY WITH NO OBVIOUS OVER-VOLTAGE PROBS. I WAS APPROX 1-2 MI FROM ZZZ2 ARPT AND I WAS CONSUMED WITH ATTEMPTING TO REMEDY OR DIAGNOSE THE PROBS I HAD EXPERIENCED. AT THIS TIME, I WAS CONTACTED BY ATC. 'BONANZA, SAY YOUR ALT?' I'M NOT SURE OF MY THOUGHT PROCESS, BUT I THOUGHT I HAD BEEN CLRED TO CLB TO 7000 FT INSTEAD OF 5000 FT. I RESPONDED, 'I AM CLBING THROUGH 6300 FT.' THE CTLR NOTED THE DISCREPANCY AND RPTED, 'YOU WERE ONLY CLRED TO 5000 FT. EXPEDITE YOUR DSCNT DOWN TO 5000 FT FOR TFC.' I REPLIED WITH THE MISCONCEPTION THAT I HAD BEEN CLRED TO 7000 FT, AND I PERFORMED AN EMER DSCNT TO 5000 FT. AFTER XING ZZZ2 AND DETERMINING THAT MY NAV #1 AND NAV #2 WERE INOP, I COUPLED THE HSI TO THE GARMIN 430 GPS. I SOON REALIZED YET ANOTHER DISCREPANCY. THE MAP ON THE GARMIN 430 INDICATED THAT I WAS R OFF COURSE. HOWEVER, THE HSI WAS CTRED TO INDICATE THAT I WAS ON THE CORRECT FLT PATH. ATC THEN GAVE ME VECTORS TO INTERCEPT. I MADE THE DETERMINATION THAT MY ONLY RELIABLE NAV WAS THE GARMIN 430. I VERIFIED BY RELAYING TO ATC MY APPARENT PROB AND I RECONFIRMED WITH ATC THAT I WAS ON COURSE. I WAS FLYING ON AN IFR FLT PLAN IN VMC CONDITIONS. THEREFORE, I DETERMINED THAT THE ACFT WAS STILL AIRWORTHY ACCORDING TO FAR 91.700. I HAD NO OTHER PAX ON BOARD, AND I STILL HAD RELIABLE GPS NAV. THEREFORE, I DETERMINED THAT I COULD SAFELY PROCEED UNDER VMC CONDITIONS. I RPTED THE PROBS THAT I HAD EXPERIENCED WITH OTHER CTLRS ALONG MY RTE AND ADVISED THAT I WOULD PREFER TO STAY 'OUT OF THE SOUP,' MEANING THAT I WOULD PREFER TO REMAIN VMC DURING THE FLT. I LANDED AT ZZZ1 UNDER A VISUAL APCH WITHOUT FURTHER INCIDENT. THE LESSONS LEARNED: I LEARNED MORE DURING THIS FLT THAN ANY OTHER FLT TO DATE. FIRST OF ALL, I ACKNOWLEDGE THAT THE ACFT SHALL ALWAYS REMAIN IN POSITIVE CTL OF THE PIC. REGARDLESS OF DISTR, THE PIC IS RESPONSIBLE FOR THE SAFE OP OF THE ACFT AND SHALL COMPLY WITH ATC CLRNCs. I HAVE ALSO LEARNED THAT IF I DETERMINE THAT I AM EXPERIENCING AN IMMINENT EMER, I SHOULD NOT HESITATE TO DECLARE AN EMER WITH ATC AND RETURN FOR LNDG. A DECLARED EMER IS THE ONLY EXCUSE TO EVER DEVIATE FROM AN ATC DIRECTIVE. IN ORDER TO COMPLY WITH FEDERAL AND PERSONAL SAFETY STANDARDS, I SHOULD NEVER HESITATE TO RETURN TO THE ARPT OF DEP TO FURTHER EVAL ANY ACFT DISCREPANCIES. FINALLY, I HAVE SINCE IMPOSED A NEW SOP FOR FERRYING ACFT. I WILL NO LONGER FLY A LONG XCOUNTRY FLT UNDER 'GOOD FAITH' THAT THE ACFT IS IN SOUND FLYING CONDITION. PRIOR TO

ANY XCOUNTRY FLT, I WILL FIRST CONDUCT A THOROUGH TEST FLT TO ASSURE THAT ALL SYS ARE FUNCTIONING NORMALLY AND THE ACFT IS IN AIRWORTHY CONDITION FOR A SAFE FLT.

Synopsis

A PLT FERRYING A BE36 EXPERIENCED ELECTRICAL COMPONENT FAILURES AFTER TKOF AND HAD AN ALT DEV WHILE TROUBLESHOOTING THE CAUSE.

ACN: 802866

Time / Day

Date : 200809

Place

Locale Reference.Airport : HKS.Airport
State Reference : MS

Environment

Flight Conditions : IMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : JAN.TRACON
Operator.General Aviation : Personal
Make Model Name : Sundowner 23
Operating Under FAR Part : Part 91
Navigation In Use.ILS.Localizer & Glide Slope : 6
Flight Phase.Descent : Approach
Route In Use.Approach : Instrument Precision
Route In Use.Arrival : On Vectors

Component : 1

Aircraft Component : ILS/VOR

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Experience.Flight Time.Last 90 Days : 17
Experience.Flight Time.Total : 860
Experience.Flight Time.Type : 860
ASRS Report : 802866

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Resolatory Action.Flight Crew : Became Reoriented
Resolatory Action.Flight Crew : Overcame Equipment Problem
Consequence.Other

Maintenance Factors

Maintenance.Performance Deficiency : Inspection
Maintenance.Performance Deficiency : Installation

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

LAST WK, WHEN I HAD GONE TO BROOKHAVEN, I DID A CURSORY TEST OF BOTH NAVS BY TUNING IN THE VOR AND AN ILS ON AN ARPT I WAS XING ON MY GARMIN 30SL THAT WAS JUST INSTALLED. EVERYTHING CHKED OUT PERFECTLY AND MATCHED UP WHICH I FELT WAS A GOOD TEST FOR DOING AN APCH IN ACTUAL CONDITIONS. ON SEP/XA/08, I WANTED TO DO SOME APCHS IN ACTUAL CONDITIONS. I WAS IN SOLID IMC ON MY FIRST APCH AND WAS GETTING DISCREPANT INFO BTWN NAV #1 AND NAV #2. NEITHER GAUGE HAD FLAGS, SO I COULDN'T TELL WHICH ONE WAS WRONG. APCH CALLS ME AND ASKS ME IF I AM PICKING UP A LOC. I RPTED BACK, YES I AM BUT I AM GETTING DISCREPANT INFO BTWN MY NAV #1 AND NAV #2 AND I AM WORKING ON CORRECTING THE PROB. APCH THEN GAVE ME AN ADVISORY THAT I WAS W OF THE APCH COURSE SO I DECIDED TO DISCARD NAV #2 AND FLY BY NAV #1 ONLY AND I ADVISED APCH THAT I HAVE THE DISCREPANCY RESOLVED AND CORRECTING MY COURSE. NAV #2 HAD ME E OF COURSE. A FEW MINS LATER APCH MUST HAVE SEEN I WAS OK, AND SWITCHED ME OVER TO TWR. UP UNTIL THAT POINT I DIDN'T KNOW WHICH GAUGE TO BELIEVE! GS ON BOTH MATCHED UP PERFECTLY ON THIS APCH. RIGHT AROUND THE FAF BRENZ, I STARTED GETTING A FLAG ON NAV #2 ON THE LOC ONLY (GS STILL WORKED AND NOT FLAGGED), SO I CONTINUED TO USE NAV #1 AS MY PRIMARY GUIDANCE SINCE THE FLAG IN MY MIND INDICATED GAUGE WAS GETTING FAULTY INFO. TO FURTHER CONFIRM NAV #1 I WAS ALSO USING THE CDI ON THE GARMIN 430 THAT IS SUPPOSED TO BE ONLY FOR GUIDANCE AND SINCE BOTH NAV #1 AND THE GPS MATCHED ON THE LOC. STRANGELY ENOUGH, THE LOC WOULD ACT LIKE IT WAS WORKING EVEN THOUGH THE FLAG SYMBOL WAS DISPLAYED. GS PRETTY MUCH WORKED THE ENTIRE TIME IN SPITE OF THE FLAG POPPING UP AS WELL. TALK ABOUT CRAZY DISCREPANCIES. FLEW TODAY SEP/XA/08, AVIONICS GUY CAME OUT TODAY, RESEATED THE RADIO, CHKED THE DPIN JIGGY IN BACK OF THE PANEL BEHIND NAV #2, RESEATED THAT, ALL 'INDICATED OK' ON THE GND WITH A VOR CHK. SO, KNOWING COM #2 IS STILL SUSPECT AND IT WAS IMC CONDITIONS, I PLANNED STRICTLY USING NAV #1 FOR MY NAV AND FIGURED TO MIRROR NAV #1 WITH COM #2. VOR PICKS UP, AND PASSES THE CHK, BUT UNFORTUNATELY TODAY, NO ILS, AND NO GS AND NO FLAGS! CALLED HIM BACK AND HE THINKS IT MAY BE THE RADIO NOT SENDING OUT A GOOD SIGNAL. I DON'T KNOW ABOUT RADIOS, BUT THERE WAS NO FLAG INDICATOR ON THE LOC ON THE RADIOS, IT IDENTED AND SHOWED THE CORRECT IDENTIFIER, SO IN MY MIND, IT MAKES ME THINK IT'S SOMETHING BTWN THE NAV #2 GAUGE AND THE RADIO NOT WIRED RIGHT? TODAY, SOMETHING NEW, NO TO/FROM FLAG ON NAV #2 FOR THE VOR, WHICH WAS WORKING YESTERDAY. I WILL FLY THE PLANE TO THE SHOP ON MONDAY SO THEY CAN BENCH TEST THE GAUGE AND RADIO. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: REPORTER ADVISED THE UNIT HAD BEEN INSTALLED INCORRECTLY. ONE LEAD FROM THE MANAGEMENT UNIT TO THE CDI DISPLAY WAS NOT SECURED PROPERLY. HE REPORTS IT IS NOW WORKING SATISFACTORILY.

Synopsis

BE23 PLT REPORTS GARMIN 30SL FAILED TO SHOW FLAGS WHEN DISPLAYING FAULTY INFORMATION.

ACN: 802531

Time / Day

Date : 200808
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : MFR.Airport
State Reference : OR
Altitude.MSL.Single Value : 8800

Environment

Flight Conditions : Mixed
Light : Night

Aircraft : 1

Controlling Facilities.TRACON : EUG.TRACON
Operator.Common Carrier : Air Carrier
Make Model Name : Commercial Fixed Wing
Operating Under FAR Part : Part 121
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : FMS/FMC

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 350
Experience.Flight Time.Total : 20000
Experience.Flight Time.Type : 11000
ASRS Report : 802531

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Altitude Deviation : Overshoot
Anomaly.Non Adherence : Clearance
Anomaly.Other Spatial Deviation
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Independent Detector.Other.Flight CrewA : 1
Resolutive Action.Controller : Issued Alert

Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Became Reoriented

Assessments

Problem Areas : Aircraft
Problem Areas : Chart Or Publication
Problem Areas : Environmental Factor
Problem Areas : Flight Crew Human Performance

Narrative

WE WERE NAVING DIRECT TO THE OED VOR ON A NIGHT WHERE THERE WAS JUST THE THINNEST OF MAYBE A 9000 FT OVCST. WE WERE GOING TO HAVE TO EITHER GET VECTORED TO THE E FOR LOWER TO ALLOW A VISUAL, OR START OUT ON AN APCH FROM THE S TO LAND STRAIGHT-IN TO THE N. THE S APCH TO MEDFORD, OR, IS ONE OF THE LOUSIEST, BECAUSE IT GOES DIRECTLY OVER THE HIGHEST TERRAIN IN THE AREA, INCLUDING 7532 FT MOUNT ASHLAND. IT MAKES FOR A USUALLY RAUCOUS DSCNT NO MATTER HOW WELL THE PLANNING. MY FO WAS FLYING AND TOLD ME HE'D LIKE TO INITIALLY START ON THE RNAV 'GPS-D' TO GET BELOW THE UNDERCAST. THE OTHER MAIN IFR APCH FROM THE S IS THE LOC DME 'BACK COURSE-B.' I'VE FLOWN THE BACK COURSE MANY TIMES, BUT HAVE NEVER DONE THE RNAV APCH FROM THE S. I DON'T KNOW EXACTLY WHY. IF THE WX IS REALLY YUCKY, YOU NEED TO HEAD N AND SHOOT THE ILS TO THE S. FROM THE S ON ANY APCH, THE MINIMUMS ARE SO HIGH THAT I USUALLY USE RADAR VECTORS TO THE BACK COURSE TO LET DOWN BELOW A MID-LEVEL CLOUD DECK. THERE'S ALSO THIS NAGGING THOUGHT THAT YOU THEN DON'T HAVE TO WORRY ABOUT LOSING GPS SIGNAL OR INTEGRITY, WHICH FORCES YOU TO ABANDON THE APCH. WITH THE BACK COURSE, IT'S PRETTY STRAIGHTFORWARD. I'M OLD SCHOOL IN CERTAIN WAYS, NOT FULLY TRUSTING GPS BECAUSE IT STILL SEEMS AT TIMES TO LACK RELIABILITY. A LOT OF IT CAN PROBABLY BE TRACED TO PLTS NOT PROGRAMMING THE BOX PROPERLY, BUT WHEN YOU'RE MOVING ALONG FAST AND DSNING, YOU SURE LIKE TO THINK THERE ARE SOME NO-BRAINER THINGS YOU CAN RELY ON TO KEEP YOU SAFELY ABOVE TERRAIN. USING LAND-BASED VOR, ILS AND BACK COURSE DOESN'T REQUIRE A WHOLE LOT OF PREPARATION. YOU PULL OUT YOUR APCH PLATE, DIAL IN THE FREQ -- AND YOU'RE IN BUSINESS! SURE, A GPS GLIDE PATH IS NICE, BUT GARBAGE IN, POTENTIALLY GARBAGE APCH SLOPE OUT. THE FO HAD EVERYTHING LOADED INTO HIS FMS, SO I 'CROSSFILLED' TO MINE. AT MFR, DOING THE RNAV APCH ENTAILS NAVING TO THE IAF ROMAE, WHICH IS ALMOST 27 MI S OF THE ARPT. BEING ESTABLISHED THERE NEGATES THE REQUIREMENT FOR A HOLDING PATTERN COURSE REVERSAL AT BRKET, WHICH IS 19.8 MI OUT. TROUBLE IS, ZSE WORKS IFR TFC UP TO CASCADE APCH'S AIRSPACE, WHICH STARTS AROUND 30 MI, SO THAT IF YOU DON'T PROPERLY COORD, YOU'LL BE PAST THE IAF BY THE TIME YOU GET HANDED OFF TO APCH -- WHICH IS EXACTLY WHAT HAPPENED. WHEN WE GOT HANDED OFF, CASCADE APCH OFFERED THE BACK COURSE (ATC STILL SEEMS TO DEFAULT TO ANY LAND-BASED APCH AND NOT RNAV), BUT I INSTEAD ASKED FOR DIRECT TO ROMAE FOR THE GPS. CASCADE APCH APPROVED, AND ALSO CLRED US FOR THE GPS APCH. IT WAS AT THAT POINT IN TIME WE REALIZED ROMAE WAS NOW BEHIND US TO OUR L. SINCE IT SEEMED RIDICULOUS TO TURN AROUND JUST IN ORDER TO BE ON A PROPER COURSE TO DSN BELOW A LAYER MAYBE A COUPLE OF HUNDRED FT THICK, WE INSTINCTIVELY CONCLUDED WE'D CHANGE PLANS AND SHOOT THE BACK COURSE. WE ADVISED APCH, BUT INSTEAD OF OFFERING A VECTOR, THE

CTLR INSTRUCTED US TO PROCEED DIRECT TO ASHIE AT OR ABOVE 9300 FT, AND CLRED US FOR THE APCH. SEVERAL PROBS IMMEDIATELY BEGAN TO CROP UP. FOR STARTERS, THE BACK COURSE AT MFR IS NOT IN OUR GPS DATABASE, WHICH WE FOUND OUT ONLY AFTER WASTING PRECIOUS MOMENTS TYPING INTO THE BOX. SO WE COULD NOT NAV DIRECT TO ASHIE, BECAUSE ALL WE HAD WAS THE RAW BACK COURSE AND DME SIGNALS. WHILE WE WERE GETTING OUT THE PROPER APCH CHART, TUNING NAVS AND FIGURING OUT HOW TO IDENT ASHIE (WHICH CAN BE DONE EITHER BY THE 24 DME ARC FROM THE OED VOR OR AT 16 DME ON THE IMFR LOC), WE DSNDED BELOW 9300 FT BY ABOUT 500 FT. THE CTLR ALERTED OUR ERROR BY SAYING HE SHOWED US S OF ASHIE AND BELOW OUR ASSIGNED XING ALT. I TOLD HIM WE WERE CORRECTING, AND INSTRUCTED MY FO TO IMMEDIATELY CLB BACK TO 9300 FT. THE CTLR THEN ASKED US IF WE HAD THE ARPT IN SIGHT, WHICH WE NOW DID. HE THEN CLRED US FOR THE VISUAL APCH AND WE COMPLETED THE REMAINDER OF THE DSCNT AND LNDG WITHOUT FURTHER INCIDENT. COUPLE OF OBSERVATIONS AND LESSONS THAT MIGHT BE LEARNED: WHY IS IT WHEN WE LOSE OUR GPS MAP THAT MANY PLTS GO BRAIN DEAD? OF COURSE, IN THE OLD DAYS THERE WAS NO NICE GRAPHIC DEPICTION GLOWING IN FRONT OF YOU, AND YOU DREW THE MAP IN YOUR HEAD. I THINK THE FIRST PROPER ACTION FOR ANY PLT WHO REALIZES HE'S LOST SITUATIONAL AWARENESS IS TO LEVEL OFF AND START SLOWING UNTIL CATCHING UP. MY COPLT DID NEITHER, AND I LET HIM DO IT BY NOT MONITORING PROPERLY. IT APPEARS TO ME THAT INSTINCTS OF A LOT OF YOUNGER PLTS TRAINED ON ALL THIS WHIZ-BANGER AVIONICS IS SOMEHOW MUTED WHEN THE GEE-WHIZ STUFF UNEXPECTEDLY DISAPPEARS. WHEN THE BIG PICTURE VANISHES, THE MAP IN THEIR IMAGINATION GOES BLANK, TOO. THERE'S NO 'I'M E OF THE BACK COURSE, SOMEWHERE S, OVER HIGH TERRAIN, APPROX SO MANY MI FROM MY LNDG. I NEED TO TURN W TOWARD THE BACK COURSE, LEVEL OFF AND SLOW DOWN UNTIL I BETTER GATHER MY BEARINGS AND GET BACK ON COURSE.' WHAT I SEE IN OUR RECURRENT/PROFICIENCY TRAINING IS GPS, GPS, AND GPS. INSTEAD, EVERY TRAINING EPISODE SHOULD INCLUDE SOMETIMES TURNING OFF EVERY AUTOMATIC GIZMO WE CAN REACH IN THE COCKPIT, AND FLYING RAW DATA BY THE SEAT OF OUR TROUSERS. I'M SURE MANY OF OUR ALL-IN-A-ROW CHK AIRMEN WOULD SAY THAT'S NUTS! AND WOULD INTERFERE WITH EVERYTHING FLT OPS TRAINING IS DOING PROMOTING THE INDUSTRY'S AUTOMATION PHILOSOPHY. I SAY IT'S GOOD COMMON SENSE AIRMANSHIP. AT SEVERAL TIMES IN A FLYING CAREER (ESPECIALLY WHEN YOUNGER AND LESS EXPERIENCED), YOU'RE GOING TO BE NAKED: THERE'S GOING TO BE YOU, AIR, THE CTL YOKE AND THE DIRT. TO HOLD THESE PHYSICAL REALITIES IN PROPER CONSTELLATION REQUIRES AN INTUITIVE RELATIONSHIP THAT WILL THEN ENSURE AN ARR WHERE EVERYONE IS AGAIN EQUAL -- SAFELY ON THE GND.

Synopsis

INDECISION AS TO WHICH APCH TO FLY OVER MOUNTAINOUS TERRAIN INTO MFR RESULTS IN LOSS OF SITUATIONAL AWARENESS AND A DESCENT BELOW CLRED ALT.

ACN: 802384

Time / Day

Date : 200808

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 27000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Personal
Make Model Name : Eclipse 500
Operating Under FAR Part : Part 91
Flight Phase.Cruise : Level

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Component : 2

Aircraft Component : Autopilot

Person : 1

Function.Instruction : Instructor
Function.Observation : Observer
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 75
Experience.Flight Time.Total : 14100
Experience.Flight Time.Type : 300
ASRS Report : 802384

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Altitude Deviation : Excursion From Assigned Altitude
Anomaly.Non Adherence : Clearance
Resolatory Action.Flight Crew : Returned To Assigned Altitude

Assessments

Problem Areas : Aircraft

Problem Areas : Flight Crew Human Performance

Narrative

IN THE CRUISE PHASE OF FLT AT FL270 DURING MENTORING OF A RATED EA500S PLT, MULTIPLE AVIONICS MALFUNCTIONS OCCURRED CAUSING THE ACFT TO MOMENTARILY PITCH UP AND CLB 300 FT IN PCA. AT XA00Z WE EXPERIENCED A GPS 2 FAIL. AT XA34Z WE OBSERVED AN AIRSPD DISAGREEMENT, AND AT XA43 WE NO LONGER HAD AN AUTOPLT, WHICH RESULTED IN A DEV OF 300 FT IN PCA. WE WERE BUSY SORTING OUT THE AUTOPLT FAILURES AND AS SOON AS WE NOTICED THE DEV WE CORRECTED. THIS AIRPLANE IS AN ALREADY BUSY WORKLOAD WHEN EVERYTHING WORKS, BUT IT IS AN ESPECIALLY DIFFICULT SINGLE PLT AIRPLANE WHEN THINGS GO WRONG. THIS WAS A BRAND NEW AIRPLANE WITH ONLY 10 HRS TOTAL TIME AIRFRAME, WITH A HISTORY OF AVIONICS PROBS EARLIER IN THE DAY. WE WERE CLRED BY ECLIPSE MAINT TO FLY AFTER CLRING THE 'AVIONICS DATA BUS FAIL' MESSAGE BY SHUTTING DOWN AND RESTARTING (KNOWN AS 'CTL-ALT-DEL'). ECLIPSE INDICATED THIS WAS A 'NUISANCE' MESSAGE. HISTORICALLY, ATC WOULD BRING SOMETHING OF THIS NATURE TO THE PLT'S ATTN AND HE WOULD CORRECT WITH NO FURTHER ACTION. THE FAA IS NOW MANDATING CTRLRS ESCALATE EVERY DEV TO THE FAA FOR DISPENSATION. THIS PLACES AN UNDUE ADDITIONAL WORKLOAD ON THE CTRLR, FORCING THEM UNDER DURESS TO BE 'COPS IN THE SKY.' IT ALSO CREATES TENSION BTWN THE PLT, CTRLR, AND FAA WHICH IN MY OBSERVATION IS COUNTERPRODUCTIVE TO SAFETY. IN MY HUMBLE OPINION, EDUCATION IS A FAR BETTER TOOL THAN BEING PUNITIVE.

Synopsis

AN ECLIPSE 500 WITH 10 TOTAL AIRFRAME HRS HAD THE GPS AND AUTOPLT FAIL AT FL270. A PLT DEV WAS FILED WHEN THE DISTRACTED PILOT ALLOWED THE ACFT TO CLB 300 FT.

ACN: 802108

Time / Day

Date : 200808
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Intersection : YZP
State Reference : FO
Altitude.MSL.Single Value : 33000

Environment

Aircraft : 1

Controlling Facilities.ARTCC : CZVR.ARTCC
Operator.Common Carrier : Air Carrier
Make Model Name : B777-200
Operating Under FAR Part : Part 121
Navigation In Use.Other : FMS or FMC
Flight Phase.Cruise : Level
Route In Use.Enroute.Airway : TR19.Airway

Component : 1

Aircraft Component : FMS/FMC

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
Experience.Flight Time.Last 90 Days : 240
Experience.Flight Time.Total : 18000
Experience.Flight Time.Type : 2400
ASRS Report : 802108

Events

Anomaly.Aircraft Equipment Problem : Critical
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Flight Crew : Overcame Equipment Problem
Resolatory Action.Flight Crew : Regained Aircraft Control
Consequence.Other

Assessments

Problem Areas : Aircraft

Narrative

PROBLEM REPORTED: DEFECTIVE NAVIGATION AND FLIGHT MANAGEMENT COMPUTERS. I WAS THE PIC AND CAPTAIN OF FLT DEPARTING FROM SFO TO ZZZZ. I WAS ASSISTED BY A FLYING FO, A B777 PILOT INSTRUCTOR FROM OUR

FLIGHT TRAINING CENTER AND BY TWO ADDITIONAL FO RELIEF PILOTS. OUR AIRCRAFT WAS A BOEING B777-200B. THE ROUTE OF FLIGHT, WHICH WAS ACARS LOADED DIRECTLY FROM DISPATCH TO OUR FMC WAS AS FOLLOWS: SFO DIRECT ENI DIRECT TOU J523 YZP TR19 FRIED DIRECT 57N140W DIRECT 59N150W DIRECT VIDDA J501 BET DIRECT NANZA R220 NIKLL R220 NUZAN R220 NODAN R217 SDE DIRECT GTC L512 WATRY Y14 JEC.... THE FLIGHT WAS CONDUCTED UNDER NORMAL SOP'S WITH SEVERAL PILOTS CHECKING THE PLANNED ROUTE OF FLIGHT AND POSITION CHECK PRIOR TO PUSHBACK. ONCE AIRBORNE, THE FLIGHT WAS CLEARED DIRECT TOU. WHEN THIS CLEARANCE WAS RECEIVED, WE SELECTED ABEAM POINTS AND ALSO ROUTE COPY INTO ROUTE TWO. NO OTHER FLIGHT PLAN CHANGES WERE MADE. APPROXIMATELY FIVE MINUTES PRIOR TO APPROACHING FIX YZP, WE DID A WIND UPDATE THROUGH ACARS. THIS WAS RECEIVED, LOADED AND EXECUTED. UPON PASSING FIX YZP THE AIRCRAFT COMMANDED, THROUGH THE AUTOPILOT AND FLIGHT DIRECTOR SYSTEM, A HARD RIGHT TURN TO WHAT MIGHT HAVE BEEN A REVERSAL OF COURSE. WE INTERRUPTED THIS IMMEDIATELY BY SELECTING HEADING SELECT, DESELECTING LNAV NAVIGATION. AT THIS POINT WE BOTH WONDERED WHAT HAD CAUSED THIS INTERRUPTION OF OUR AIRCRAFT FOLLOWING OUR PLANNED ROUTE. WE OBSERVED THE FOLLOWING: POSITION FRIED THE NEXT WAYPOINT WAS DEPICTED AHEAD OF US BUT WAS NOT THE ACTIVE WAYPOINT. IT DID NOT APPEAR AT THE TOP RIGHT CORNER OF OUR ND AND IT NO LONGER APPEARED ON OUR LEGS PAGE. FRIED WAS DEPICTED IN WHITE LETTERING. POSITION 57N140W APPEARED FURTHER NORTH OF FRIED AND WAS NOW THE ACTIVE WAYPOINT IN MAGENTA LETTERING ALTHOUGH THE AIRCRAFT WAS NOT NAVIGATING TO THAT FIX EITHER. 57N140W WAS FOUND ON THE LEGS PAGE. SINCE THIS IS ALMOST A STRAIGHT COURSE FROM YZP THROUGH FRIED TO 57N140W WE FOUND THIS MOST PUZZLING. NO FIX WAS LISTED AS THE ACTIVE WAYPOINT ON THE ND TOP CORNER. WE IMMEDIATELY CHECKED OUR POSITION AND WE WERE STILL IN RADAR CONTACT WITH VANCOUVER ATC WITHIN THEIR FIR. OUR POSITION WAS CORRECT. WE IMMEDIATELY CHECKED OUR ROUTING AND FOR REFERENCE SAKE, WE WERE ABLE TO REFER BACK TO OUR COPY OF ROUTE TWO TO ADDITIONALLY VERIFY THAT ALL OUR COURSES, HEADINGS, BEARINGS AND AIRWAYS WERE ENTERED CORRECTLY. REFERENCE TO OUR POS REF ALSO VERIFIED OUR CORRECT POSITION BY GPS. THERE WAS NO GROSS NAVIGATION ERROR BECAUSE OF OUR QUICK HANDLING OF THE MATTER, OUR INTERVENTION IN GOING TO HEADING SELECT FOR NAVIGATION ALONG OUR INTENDED FLIGHT PATH AND MAGENTA LINE. WE FOUND THIS CIRCUMSTANCE QUITE REMARKABLE AND INITIATED A CALL TO MAINT AND DISPATCH. MAINT REPORTED THAT THE AIRCRAFT HAD RECEIVED A NAVIGATION DATABASE UPDATE IMMEDIATELY PRIOR TO OUR FLIGHT. THIS DATABASE WAS LOADED BUT WAS NOT IN USE AS THE DATES FOR THE DATABASE WERE IN THE FUTURE. MAINT HAD NO IDEA WHY WE WOULD HAVE THIS DIFFICULTY. OUR PILOT INSTRUCTOR WHO HAS CONSIDERABLE EXPERIENCE IN THE AIRCRAFT WAS ALSO COMPLETELY SURPRISED AND COULD NOT ACCOUNT FOR THE REASON FOR THE NAVIGATION DISRUPTION. WE DISCUSSED THIS MATTER WITH OUR DISPATCHER AND MAINT BY SATCOM AND THEY HAD NO EXPLANATION OR SUGGESTION ABOUT A COURSE OF ACTION, SO THE DISPATCHER CALLED THE MGR ON DUTY. WE RECEIVED THE FOLLOWING ACARS NOTE: 'DUTY MANAGER WANTS TO WATCH HOW REMAINDER OF FLT GOES? SEE IF ANYTHING NEW DEVELOPS? THEY ALSO WANT YOU TO CALL ON GROUND AND TALK WITH HIM I THINK THEY ARE STILL TRYING TO DECIDE WHAT TO DO BEYOND THAT.' THE FLIGHT CONTINUED NORMALLY WITH EXTRA VIGILANCE TO CHECK POSITIONS AND ROUTINGS AND TO WATCH FOR ANY OTHER AIRCRAFT OR NAVIGATION ANOMALIES. BEFORE OUR SATCOM CALL WITH

DISPATCH WAS CLOSED, I SUGGESTED THAT IF A NAVIGATION DATABASE COULD HAVE BEEN CORRUPTED THAT PERHAPS OTHER B777 AIRCRAFT IN OUR FLEET COULD BE SIMILARLY AFFECTED. I SUGGESTED THAT DISPATCH NOTIFY OTHER AIRBORNE AIRCRAFT TO BE EXTRA VIGILANT. SOME TIME LATER WE EXPERIENCED ANOTHER NAVIGATION ANOMALY. MY RELIEF FIRST OFFICERS WERE FLYING THE AIRCRAFT. I HAD BRIEFED THEM TO BE EXTRA VIGILANT ABOUT ANY NAVIGATION OR SYSTEM ANOMALY. THEY OBSERVED THAT AS THE AIRCRAFT APPROACHED 59N150W THAT THE MOVING MAP ND DISPLAY DEPICTED THIS FIX AS 58N150W! A QUICK REFERENCE TO THE POS REF PAGE DID IN FACT SHOW US ON COURSE APPROACHING THE CORRECT LATITUDE AND LONGITUDE FIX OF 59N150W. WHY THE FMC OR DATABASE CHANGED THE DESCRIPTION OF THE FIX FROM 59N TO 58N IS BEYOND BELIEF. ROUTE TWO INFORMATION REMAINS FROZEN IN TIME AND INCLUDED ALL OF OUR ROUTINGS AFTER TOU. WE CONTINUED TO MONITOR THE FMC AND NAVIGATION CLOSELY AND FOUND A THIRD ANOMALY. WE DISCOVERED THAT AFTER EACH WAYPOINT FIX ON THE PROGRESS POS REPORT PAGE THAT THE LETTER 'W' WAS AFFIXED AFTER EACH POSITION SO THAT POSITION NALYD WAS SHOWN AS 'NALYD W.' THIS WAS TRUE OF THE PAST WAYPOINT, FUTURE EST WAYPOINT AND NEXT WAYPOINT. EACH HAD A 'W.' WE HAVE NEVER SEEN THIS BEFORE. WE CONTINUED TO CONDUCT THE FLIGHT WITH GREATER VIGILANCE TO OUR DESTINATION AND AFTER LANDING BRIEFED THE MAINTENANCE CREW. THEY THOUGHT INITIALLY THAT WE HAD BEEN USING THE NEW DATABASE. THIS IS NOT CORRECT. THEY WERE CONFUSED ABOUT WHY OR HOW ENTERING A NEW DATABASE COULD CORRUPT AN OLD DATABASE, IF IN FACT, THIS IS THE PROBLEM WITH THE AIRCRAFT. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: TWO WEEKS AFTER THE INCIDENT THE REPORTER HAD NOT RECEIVED ANY INFORMATION FROM HIS COMPANY AS TO WHAT MAY HAVE OCCURRED. NO NAV ERRORS OCCURRED AS THE PROBLEM WAS QUICKLY DISCOVERED BY THE FLT CREW.

Synopsis

B777 CAPT REPORTS FMC NAVIGATION DATABASE ANOMALIES DURING FLIGHT TO ASIA.

ACN: 801842

Time / Day

Date : 200808
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : SBA.Airport
State Reference : CA
Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.Tower : SBA.Tower
Operator.General Aviation : Personal
Make Model Name : Small Aircraft
Operating Under FAR Part : Part 91
Flight Phase.Ground : Taxi

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 10
Experience.Flight Time.Total : 3296
Experience.Flight Time.Type : 1738
ASRS Report : 801842

Events

Anomaly.Incursion : Runway
Anomaly.Non Adherence : Clearance
Anomaly.Other Spatial Deviation
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Detected After The Fact

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Flight Crew Human Performance

Narrative

I WAS AT FBO IN SBA AND WAS GIVEN TAXI INSTRUCTIONS TO RWY 15L. I TOLD THE CTLR I WAS UNFAMILIAR AND ASKED FOR PROGRESSIVE. HE TOLD ME TO TAXI VIA TXWY B. I SAW TXWY B ON MY GARMIN 'SAFE TAXI' GPS AND PROCEEDED THROUGH THE RAMP. WHEN I GOT TO THE TXWY, THE 'B' HAD

DISAPPEARED FROM THE SCREEN AND NOT THINKING, I TAXIED ON THE SAME RTE, AS I HAD JUST ARRIVED AND CROSSED AN ACTIVE RWY. 1) I DID NOT VERIFY VISUALLY OUTSIDE THE COCKPIT. 2) I ASSUMED THAT A 'PROGRESSIVE' WOULD KEEP ME OUT OF TROUBLE.

Synopsis

A SMA PILOT AT SBA GIVEN INCOMPLETE PROGRESSIVE TAXI INSTRUCTIONS, CROSSED THE ACTIVE RWY USING A GPS WITH AN INCOMPLETE ARPT MAP.

ACN: 801156

Time / Day

Date : 200808

Place

Locale Reference.Airport : BDF.Airport

State Reference : IL

Altitude.MSL.Single Value : 4000

Environment

Flight Conditions : IMC

Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : C90.TRACON

Operator.General Aviation : Personal

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

Operating Under FAR Part : Part 91

Flight Phase.Cruise : Level

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Other : Personal

Function.Flight Crew : Single Pilot

Qualification.Pilot : CFI

Qualification.Pilot : Commercial

Qualification.Pilot : Instrument

Experience.Flight Time.Last 90 Days : 39

Experience.Flight Time.Total : 3100

Experience.Flight Time.Type : 2500

ASRS Report : 801156

Events

Anomaly.Altitude Deviation : Excursion From Assigned Altitude

Anomaly.Inflight Encounter : Turbulence

Anomaly.Inflight Encounter : Weather

Anomaly.Other Anomaly

Anomaly.Other Spatial Deviation

Independent Detector.Other.ControllerA : 2

Independent Detector.Other.Flight CrewB : 1

Resolatory Action.Controller : Issued New Clearance

Resolatory Action.Controller : Provided Flight Assist

Assessments

Problem Areas : Aircraft
Problem Areas : Environmental Factor
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

WORKING WITH ZAU WHILE IN IMC, I WAS PROCEEDING DIRECT TO BRADFORD VOR (BDF) FROM THE MAPPS INTXN WHEN I WAS GIVEN A NEW CLRNC TO PROCEED DIRECT TO MY DEST WASHINGTON MUNICIPAL (AWG). I WAS ATTEMPTING TO ENTER THAT NEW WAYPOINT INTO THE GPS (APOLLO GX50, IFR CERTIFIED) AND WAS HAVING DIFFICULTY GETTING THE GPS TO ACCEPT AWG. BEING DISTR FOR THOSE FEW SECONDS (ESTIMATE ABOUT 8 SECONDS), I ENTERED AN UNUSUAL ATTITUDE OF ABOUT 50 DEGS R BANK. WHILE TRYING TO RECOVER TO LEVEL FLT, I GOT OFF COURSE ABOUT 120 DEGS TO THE R AND LOST ABOUT 500 FT ALT. WHEN I DID ACHIEVE LEVEL FLT, I WAS DISORIENTED ENOUGH SO THAT I DIDN'T IMMEDIATELY CORRECT MY HDG TO THE GENERAL DIRECTION I KNEW MY DEST WAS BEFORE I RECEIVED A CALL FROM CTR ASKING ME TO STATE MY HDG. SINCE I WASN'T CERTAIN WHAT MY HDG WAS YET, I REQUESTED AN INITIAL HDG TO TURN TO AND WAS TOLD TO TURN L TO A HDG OF 240 DEGS WHICH I WAS ABLE TO ACCOMPLISH. NO FURTHER ASSISTANCE WAS REQUESTED NOR WAS IT REQUIRED AS I HAD DETERMINED ABOUT 1/2 MIN LATER MY PROB WAS CAUSED BY TRYING TO ENTER AGW INSTEAD OF AWG. UPON ENTERING THE CORRECT WAYPOINT, I DETERMINED A FURTHER HDG CORRECTION TO 270 DEGS WAS REQUIRED. WITH THE CORRECT HDG, I PROCEEDED TO MY DEST WITH NO FURTHER PROB. I WAS WELL WITHIN THE WT AND BAL REQUIREMENTS BEING AT 2812 LBS (138 LBS UNDER GROSS) AND 118 INCH/LBS (/1000) MOMENT. CONTRIBUTING FACTORS: THE AIRPLANE WAS FLYING WITH THE R WING HVY WITH NEARLY FULL FUEL TANKS AND A HVY PAX IN THE R SEAT AND SOME HVY CARGO LOADED ON THE R SIDE OF THE BAGGAGE COMPARTMENT. AT THE TIME OF UPSET I WAS IN SOLID IMC WITH MODERATE TURB. SINGLE PLT WITH NO AUTOPLT IN IMC MOMENTARILY DISTR BY DIFFICULTY OF ENTERING NEW DATA INTO THE GPS.

Synopsis

C182 PILOT LOSES CONTROL IN IMC WHEN ATTEMPTING TO ENTER WRONG VOR IDENTIFIER IN GPS.

ACN: 800916

Time / Day

Date : 200808
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Navaid : ZZZ.VOR
State Reference : US
Altitude.MSL.Bound Lower : 10000
Altitude.MSL.Bound Upper : 12000

Environment

Flight Conditions : VMC
Light : Night

Aircraft : 1

Make Model Name : PA-31T-1 Cheyenne I
Operating Under FAR Part : Part 135
Flight Phase.Climbout : Intermediate Altitude

Component : 1

Aircraft Component : Pressurization System

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 50
Experience.Flight Time.Total : 13000
Experience.Flight Time.Type : 120
ASRS Report : 800916

Events

Anomaly.Aircraft Equipment Problem : Critical
Independent Detector.Aircraft Equipment.Other Aircraft Equipment : Cabin Alt
Warning Horn
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Other

Assessments

Problem Areas : Aircraft
Problem Areas : Company
Problem Areas : Flight Crew Human Performance
Problem Areas : Passenger Human Performance

Narrative

ON A LIFE GUARD FLT FROM ZZZ TO ZZZ1, I GOT A CABIN ALT WARNING LIGHT PASSING THROUGH 10000 FT. I LEVELED AT 12000 FT AND NOTIFIED THE MEDICAL CREW OF THE SITUATION. BECAUSE THE CRITICAL CONDITION OF THE PATIENT, AND THE FACT THAT IN SPITE OF THE OXYGEN HE WAS RECEIVING, HIS PULSE/OXYGEN READING WAS DROPPING. THE FLT NURSE TOLD ME TO RETURN TO ZZZ. I NOTIFIED ATC OF THE PROB. HE CLRED ME TO RETURN DIRECT AT 12000 FT. I TOLD HIM I NEEDED LOWER AND STARTED A DSNDING TURN, AND TOLD HIM I COULD PROCEED VFR. (FORTUNATELY, THERE WAS GOOD MOONLIGHT TO ILLUMINATE THE HIGH TERRAIN.) DSNDING THROUGH 10500 FT, ATC ASKED ME TO CHK MY ALT, AND I REPEATED MY VFR INTENTIONS. HE THEN CLRED ME DIRECT VFR TO ZZZ. THIS WAS A PARTICULARLY CRAPPY FLT FOR ME. THE ACFT HAD A SUBSTANTIAL FUEL LEAK WHICH MAINT CHOSE TO IGNORE. THE PROP CTLs ARE GROSSLY MISALIGNED, AND THE ANTIQUATED LORAN HAD ALL THE LETTERS AND SYMBOLS WORN OFF THE CTL BUTTONS. WHILE CLBING OUT, I WAS CLRED DIRECT TO ZZZ VOR AT 17000 FT. BECAUSE I WAS STRUGGLING TO FIGURE OUT THE LORAN OP, I DIDN'T NOTICE THE CABIN ALT PROB UNTIL THE WARNING LIGHTS CAME ON. I SHOULD HAVE CAUGHT THE PRESSURIZATION SOONER. I USUALLY CARRY MY OWN GPS WITH TERRAIN AVOIDANCE FUNCTION TO BACK UP THE CRAPPY AVIONICS, BUT IT WOULDN'T WORK BECAUSE THE CIGARETTE LIGHTER WHICH I PLUGGED IT INTO WAS ALSO CRAPPED UP. I TURNED IN MY RESIGNATION TO THIS COMPANY THE FOLLOWING DAY. IN A 24-HR PERIOD, WE NEARLY KILLED 2 DIFFERENT PATIENTS BECAUSE OF OUR CRAPPY EQUIP.

Synopsis

UNFAMILIAR WITH NAV EQUIPMENT ABOARD HIS PA31, AIR AMBULANCE PLT IS LATE IN RECOGNIZING PRESSURIZATION FAILURE AND RETURNS TO DEP ARPT.

ACN: 799307

Time / Day

Date : 200808
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 5000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.General Aviation : Corporate
Make Model Name : PA-46 Malibu
Operating Under FAR Part : Part 91
Flight Phase.Climbout : Intermediate Altitude
Route In Use.Departure : On Vectors

Component : 1

Aircraft Component : Engine

Component : 2

Aircraft Component : Pitot/Static Ice System

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 25
Experience.Flight Time.Total : 1006
Experience.Flight Time.Type : 243
ASRS Report : 799307

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Altitude Deviation : Overshoot
Anomaly.Non Adherence : Clearance
Anomaly.Other Anomaly : Speed Deviation
Independent Detector.ATC Equipment : MSAW
Independent Detector.Other.ControllerA : 2
Resolutive Action.Controller : Issued New Clearance

Resolatory Action.Controller : Provided Flight Assist
Resolatory Action.Flight Crew : Declared Emergency
Resolatory Action.Flight Crew : Diverted To Another Airport
Resolatory Action.Flight Crew : Landed As Precaution
Consequence.Other

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

THE PLANE HAD BEEN INSPECTED BY A MECH AFTER THE LAST PERSON FLYING IT RPTED SMOKE IN THE COCKPIT. A FAULTY CIRCUIT BREAKER WAS FOUND TO BE THE POSSIBLE CAUSE OF THE SMOKE AND WAS REPLACED. THE TKOF WAS UNEVENTFUL AND THE PLANE WAS ESTABLISHED ON A CLB TO 6000 FT AT THE USUAL SPD OF 110 IAS. UPON REACHING 2500 FT, A SLIGHT DECREASE IN AIRSPD WAS NOTICED ACCOMPANIED BY A SLIGHT DECREASE IN THE RATE OF CLB. THIS WAS INITIALLY ATTRIBUTED TO THE HIGH TEMP COMBINED WITH A RECENT MANIFOLD PRESSURE ADJUSTMENT TO A LOWER SETTING AFTER THE NEWLY OVERHAULED ENG FREQUENTLY REACHED REDLINE AT FULL PWR. LATER IN THE CLB, THE DECREASE IN AIRSPD BECAME MORE NOTICEABLE. AN ATTEMPT TO LOWER THE NOSE RESULTED IN THE EXPECTED INCREASE IN AIRSPD AND, SHORTLY AFTER THAT, A CLB ATTITUDE WAS RE-ESTABLISHED. PITOT HEAT WAS APPLIED AS A PRECAUTION BUT, AS EXPECTED CONSIDERING THE HIGH TEMP AND THE ABSENCE OF CLOUDS, IT HAD NO EFFECT. AT THAT TIME, THE CTLR INQUIRED ABOUT THE SLOW RATE OF CLB AND VERIFIED THAT I COULD MAINTAIN TERRAIN CLRNC. A QUICK LOOK OUTSIDE CONFIRMED THAT TERRAIN AVOIDANCE WOULD NOT BE AN ISSUE. THE CTLR SUBSEQUENTLY REQUESTED A L 360 DEGS TO GAIN ALT AND ASKED IF A DIVERSION TO ANOTHER ARPT WAS NEEDED. THE OFFER WAS INITIALLY DECLINED AND A 'BEST RATE-OF-CLB' ATTITUDE WAS ESTABLISHED VISUALLY, ONLY TO ACHIEVE A COUPLE HUNDRED FPM CLB ON THE VERT SPD INDICATOR. SHORTLY THEREAFTER, THE CTLR INFORMED ME THAT HE HAD DECLARED AN EMER AND THAT ZZZ WAS AHEAD TO MY L. AFTER THE POOR CLB PERFORMANCE DURING THE TURN DESPITE THE HIGH PITCH ATTITUDE, I INFORMED THE CTLR THAT I WAS ABOUT TO ASK FOR A DIVERSION TO ZZZ AS WELL. I WAS GIVEN A HDG AND PROVIDED WITH ARPT INFO. AT THAT POINT, THE ALTIMETER INDICATED APPROX 5300 FT AND THE POOR RATE OF CLB WAS STILL ATTRIBUTED TO THE ENG NOT DEVELOPING FULL PWR, A PROB WE HAD ENCOUNTERED BEFORE WITH THIS NEWLY OVERHAULED ENG. WITH ZZZ IN SIGHT AND THE PLANE IN A STRAIGHT AND LEVEL ATTITUDE, THE ALTERNATE STATIC SOURCE WAS SELECTED (BUT I DO NOT RECALL SEEING ANY IMMEDIATE EFFECT) AND THE GEAR WAS LOWERED. AT THAT PRECISE MOMENT, THE VERT SPD INDICATOR SHOWED A 4000 FPM RATE OF CLB, THE ALTIMETER WENT FROM 5300 FT TO OVER 9000 FT, THE AIRSPD SHOWED A RAPID INCREASE BUT ULTIMATELY SETTLED TO ZERO AND, ONLY AT THAT TIME, DID IT BECOME OBVIOUS THAT I HAD EXPERIENCED A PARTIAL STATIC SYS FAILURE, POSSIBLY COMBINED WITH A PARTIALLY BLOCKED PITOT TUBE. THIS PERCEIVED RAPID CHANGE IN ALT IMMEDIATELY TRIGGERED ANOTHER QUERY FROM THE CTLR BEFORE I WAS ASKED TO SWITCH TO ZZZ TWR FREQ. REALIZING THAT I HAD BEEN CLBING AT A NORMAL RATE OF CLB SINCE TKOF AND THAT I WAS AT 9000 FT INSTEAD OF 5000 FT, I REDUCED THE THROTTLE TO IDLE AND WAS SURPRISED TO FEEL NO DECELERATION AT ALL. I DO NOT REMEMBER ALL

THE GAUGE INDICATIONS AS I WAS PREOCCUPIED BY THE APCH AND BY THIS ADDITIONAL ISSUE. HOWEVER, A MUCH HIGHER FUEL FLOW INDICATION THAN THAT EXPECTED FOR A CLOSED THROTTLE CAUGHT MY ATTN. THE COMBINATION OF THE FUEL FLOW INDICATION AND THE SMOKE IN THE COCKPIT EXPERIENCED BY THE OTHER PLT PRIOR TO THIS FLT TRIGGERED THE DECISION TO SHUT DOWN THE ENG, KNOWING THAT I WAS HIGH ENOUGH TO GLIDE TO THE RWY. THE LNDG WAS UNEVENTFUL AND THE PLANE CAME TO AN END ON A TXWY OFF RWY XXR. 3 ATTEMPTS TO RESTART THE ENG WERE UNSUCCESSFUL AND THE PLANE WAS TOWED TO PARKING. A LCL MECH LATER FOUND A BROKEN FUEL LINE LOCATED ON TOP OF THE ENG, WHICH PROMPTED HIM TO COMMENT ON HOW LUCKY I WAS TO HAVE SHUT DOWN THE ENG. A QUICK LOOK AT THE PITOT TUBE DID NOT REVEAL ANY PROB BUT A FULL INSPECTION OF THE ENTIRE PITOT STATIC SYS HAS BEEN SCHEDULED. HOW THE PROB AROSE: FAILURE TO IMMEDIATELY RECOGNIZE A PARTIAL BLOCKAGE OF THE PITOT TUBE AND/OR A PARTIAL FAILURE OF THE STATIC SYS. IN MY OPINION (AND NOW EXPERIENCE), THIS IS ONE OF THE MORE DIFFICULT PROBS TO DIAGNOSE. CONTRIBUTING FACTORS: 1) THE PERCEIVED CONFIRMATION BY THE CTLR THAT I WAS NOT ABLE TO CLB, 2) THE FAILURE TO IMMEDIATELY REALIZE THAT THE ALT DISPLAYED ON A CTLR SCREEN COMES FROM THE PLANE XPONDER WHICH, IF LINKED TO A FAULTY STATIC SYS, WILL DISPLAY THE SAME ERRONEOUS ALT ON THE CTLR SCREEN, 3) THE PAST PROBS ENCOUNTERED WITH THE REBUILT ENG NOT DEVELOPING FULL PWR AND, 4) THE RECENT READJUSTMENT OF THE MANIFOLD PRESSURE ALL POINTED OUT (INITIALLY) TO AN ENG PROB RATHER THAN A PITOT STATIC ISSUE. HOW IT WAS DISCOVERED: THE AIRSPD INDICATION LATER DECREASING TO BELOW STALL SPD AND, ULTIMATELY, TO ZERO WHILE THE GPS INDICATED A 195 KT GND SPD DURING DSCNT TO ZZZ ARPT. THE ALTIMETER'S AND THE VERT SPD INDICATOR'S SUDDEN BURST TO DRASTICALLY DIFFERENT VALUES. THE FUEL LEAK WAS DISCOVERED WHEN THE THROTTLE WAS CLOSED. I DO NOT KNOW WHEN THE LEAK STARTED BUT THERE WAS NO INDICATION OF FUEL FLOW HIGHER THAN NORMAL AND/OR FUEL SMELL DURING THE RUN-UP OR AT ANYTIME BEFORE REDUCING THE THROTTLE. CORRECTIVE ACTIONS: SELECTION OF ALTERNATE STATIC SOURCE AND ESTIMATE OF PROPER LNDG SPD FROM THE GPS GND SPD. THE LACK OF RESPONSE AFTER REDUCING THE THROTTLE AND THE HIGH FUEL FLOW INDICATION TRIGGERED THE ENG SHUT DOWN BEFORE LNDG, AS A PRECAUTION. ACTIONS OR INACTIONS: THE CONTINUOUS CLB BASED ON THE ERRONEOUS ALTIMETER DISPLAY RESULTED IN FLYING THROUGH THE ASSIGNED ALT OF 6000 FT TO ABOUT 9000 FT WHILE BOTH THE CTLR AND MYSELF BELIEVED THE PLANE WAS AT APPROX 5300 FT, A POTENTIALLY VERY DANGEROUS SITUATION. AN INDEPENDENT WAY FOR A RADAR SYS/CTLR TO DETERMINE AN ACFT'S ALT WOULD PROVIDE AN ADDED SAFETY LEVEL. FACTORS AFFECTING THE QUALITY OF HUMAN PERFORMANCE: THE HEIGHTENED LEVEL OF CAUTION AFTER THE SMOKE IN THE COCKPIT INCIDENT AND THE AWARENESS OF PAST ENG PROBS PROBABLY AFFECTED MY ABILITY TO DIAGNOSE THE PITOT STATIC PROB IN A TIMELY MANNER.

Synopsis

PA46 PLT SUFFERS INACCURATE PITOT STATIC INDICATIONS AFTER TKOF. ATC FEARS HE WILL BE UNABLE TO CLEAR HIGH TERRAIN AND DECLARES EMERGENCY. ACFT LANDS AT A NEARBY ARPT NOT FAR FROM DEP ARPT.

ACN: 796943

Time / Day

Date : 200807
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : ONT.Airport
State Reference : CA
Altitude.MSL.Single Value : 4000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : SCT.TRACON
Operator.Common Carrier : Air Taxi
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Operating Under FAR Part : Part 135
Navigation In Use.Other : GPS
Flight Phase.Climbout : Intermediate Altitude
Route In Use.Departure : On Vectors

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Single Pilot
Qualification.Pilot : ATP
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 15
Experience.Flight Time.Total : 4900
Experience.Flight Time.Type : 1900
ASRS Report : 796943

Person : 2

Affiliation.Government : FAA
Function.Controller : Departure

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Conflict : Airborne Less Severe
Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Required Legal Separation
Independent Detector.Other.ControllerA : 2
Resolatory Action.Controller : Issued Advisory

Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Overcame Equipment Problem
Resolatory Action.Other
Consequence.FAA : Reviewed Incident With Flight Crew
Consequence.Other : Emotional Trauma

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance
Problem Areas : Navigational Facility

Narrative

DEPARTED ONT AND PROCEEDED ON ASSIGNED HDG OF 255 DEGS AND 4000 FT. UPON REACHING 4000 FT, I WAS ASSIGNED A HDG OF 210 DEGS FOR TFC. I WAS THEN ASSIGNED A HDG OF 230 DEGS TO JOIN V186 AS PER OUR ORIGINAL CLRNC. ABOUT 30-60 SECONDS LATER, I WAS QUERIED BY ATC AS TO WHY I WAS DEVIATING FROM THE ORIGINAL ASSIGNED HDG OF 210 DEGS. I STATED TO ATC THAT I WAS ASSIGNED HDG 230 DEGS TO INTERCEPT V186 AND THAT I REPEATED THE ASSIGNMENT AND WAS NOT CORRECTED. I WAS THEN TOLD THAT I WAS NOT SUPPOSED TO HAVE DEVIATED FROM THE ORIGINAL 210 DEG HDG. AT THIS POINT I WAS CONFUSED AS TO WHAT WAS HAPPENING SINCE I FULLY BELIEVED I WAS COMPLYING WITH ATC INSTRUCTIONS. I DID TURN BACK TO A HDG OF 210 DEGS AS DIRECTED. THE CTLR ALSO ASKED WHY I WOULD TURN TO THE R WHEN A L TURN WOULD BE REQUIRED TO INTERCEPT V186. I OBSERVED THE 'ACTIVE' LEG ON THE ONBOARD GARMIN 530 GPS WHICH DIRECTED ME TO TURN R TO INTERCEPT THE AIRWAY. THUS, THE CTLR WAS SAYING A L TURN WAS REQUIRED TO JOIN AND ACCORDING TO THE ONBOARD GPS, A R TURN SEEMED APPROPRIATE. BASED ON THIS CONFLICT, I DECIDED TO REVERT TO MY #2 NAV TO ESTABLISH POS ON THE AIRWAY. I THEN ESTABLISHED MYSELF ON V186 AND WAS THEN ISSUED A PHONE NUMBER TO CALL UPON LNDG TO THE ATC AREA MGR. I BELIEVE THAT I MADE EVERY EFFORT TO COMPLY WITH ATC INSTRUCTIONS. I REPEATED VIRTUALLY EVERY ASSIGNMENT GIVEN AND WAS NOT CORRECTED. IF A DEV OCCURRED, IT WAS BY NO MEANS INTENTIONAL. I DID NOT OBSERVE A TFC CONFLICT. HOWEVER, UPON TALKING TO ATC BY PHONE, THEY ADVISED ME THAT THEY HAD LOST SEPARATION WITH ANOTHER ACFT. NO OTHER CONFLICTS OR DEVS OCCURRED FOR THE REMAINDER OF THE FLT. EVERY EFFORT WAS MADE TO COMPLY AND/OR RECTIFY THE SITUATION. HOWEVER, I CANNOT SAY FOR SURE WHAT CAUSED THE INCIDENT. AT THIS POINT, I CAN ONLY BE EVEN MORE CAUTIOUS ABOUT ATC ASSIGNMENTS AND POSITIONAL AWARENESS. CONTRIBUTING FACTORS MIGHT INCLUDE: HIGH PLT WORKLOAD (DEP PROCESS), PLT FAMILIARITY TO AREA, POSSIBLE EQUIP PROGRAMMING ERROR (GNS530), ATC NOT CLARIFYING/CORRECTING READBACK OF ASSIGNMENTS. USE OF SECONDARY NAV SYS COULD BE HELPFUL IN SITUATIONAL AWARENESS AND WILL BE UTILIZED HENCEFORTH. COMPANY WAS NOTIFIED AND AN IRREGULARITY RPT FILED.

Synopsis

AN APPARENTLY MISPROGRAMMED GPS CONTRIBUTES TO AN UNWITTING TRACK DEVIATION FOLLOWED BY A REPRIMAND FROM ATC FOR A SMA PLT.

ACN: 796411

Time / Day

Date : 200807
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : ZZZZ.Airport
State Reference : FO
Altitude.MSL.Single Value : 6000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.General Aviation : Corporate
Make Model Name : Learjet 55
Operating Under FAR Part : Part 91
Flight Phase.Cruise : Level

Component : 1

Aircraft Component : FMS/FMC

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Captain
Qualification.Pilot : ATP
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 100
Experience.Flight Time.Total : 8800
Experience.Flight Time.Type : 1000
ASRS Report : 796411

Person : 2

Affiliation.Company : Corporate
Function.Flight Crew : First Officer

Events

Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Company Policies
Anomaly.Non Adherence : FAR
Anomaly.Other Spatial Deviation
Independent Detector.Other.Flight CrewA : 1
Independent Detector.Other.Flight CrewB : 2

Resolatory Action.Controller : Issued Advisory
Resolatory Action.Controller : Issued New Clearance

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

WE WERE #2 FOR THE GPS APCH. THE CTLR GAVE US A HOLD AT THE IAF. I WAS FLYING TOWARD THE FIX AND SLOWED DOWN TO MINIMIZE THE HOLD. I WAS ABOUT 23 MI FMS DISTANCE FROM THE FIX. THE FO STARTED ENTERING THE HOLD AT THE GPS FIX. ALL OF A SUDDEN THE AIRPLANE STARTED TURNING TO THE R. I THOUGHT AT THE TIME THAT IT WAS TURNING INTO THE HOLD. I QUESTIONED THE FO AS TO WHY THE AIRPLANE WAS TURNING AS I DISCONNECTED THE AUTOPLT AND KEPT THE AIRPLANE FLYING STRAIGHT. WE ARGUED AS TO WHERE THE ACFT WAS. HE SAID IT WAS OVER THE IAF. I SAID WE WERE STILL 20 MI AWAY. HE SAID THE FMS SAID THE ACFT WAS OVER THE FIX. I LOOKED DOWN AND THE FMS SHOWED FROM THE IAF AND TO THE NEXT FIX ON THE APCH. I THOUGHT THAT I MUST HAVE BEEN MISREADING THE EARLIER FMS DISTANCE INTO THE HOLD. THE CTLR THEN ASKED US WHAT WE WERE DOING. WE TOLD HIM WE WERE HOLDING BUT HE SAID WE WERE STILL 20 MI FROM THE FIX. HE THEN GAVE US VECTORS. I RESET THE FMS AND WE VERIFIED MULTIPLE TIMES UP TO THE APCH WITH THE CTLR THE BEARING AND DISTANCE FROM THE IAF AND THEN SHOT THE APCH WITH NO FURTHER INCIDENT. I WAS NOT SURE WHAT HAPPENED BECAUSE IT DIDN'T MAKE SENSE UNTIL I QUESTIONED THE FO AS TO WHAT HE DID AND LATER LOOKED IN THE FMS MANUAL. I ALSO COULD NOT VERIFY THE FIX BECAUSE IT WAS A GPS FIX WITH NO OTHER WAYS TO IDENT. ANYWAYS AFTER INVESTIGATION, I FOUND OUT THAT THE FO DID NOT ENTER A HOLD BUT RESET THE POS OF THE FMS. I FOUND OUT YOU CAN DO THIS BY USING THE HOLD BUTTON WITHOUT SELECTING A SPECIFIC FIX. THE NEXT TIME I GET A SITUATION WHERE THERE IS A DISCREPANCY AS TO OUR LOCATION WITH NO MEANS OF VERIFYING IT BY OTHER NAV, I AM GOING TO VERIFY WITH THE RADAR CTLR. I ALSO RECOMMENDED TO THE COMPANY THAT THEY DO MORE TRAINING IN THE USE OF THE FMS AND MORE SPECIFICALLY HOW TO ENTER A HOLD BECAUSE FOR THIS MODEL OF FMS IT CAN CAUSE YOU REAL PROBS IF YOU DO NOT KNOW HOW.

Synopsis

A LR55 FO SELECTED THE FMS 'HOLD' BUTTON PUTTING THE ACFT INTO HOLDING 20 NM FROM THE ASSIGNED HOLD. THE CONFUSED CREW DID NOT UNDERSTAND THE BUTTON'S FUNCTION.

ACN: 759932

Time / Day

Date : 200711
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : TZT.Airport
State Reference : IA
Altitude.MSL.Single Value : 3500

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : CID.TRACON
Operator.General Aviation : Instructional
Make Model Name : Piper Aircraft Corp Undifferentiated or Other Model
Navigation In Use.Other : GPS
Flight Phase.Descent : Approach
Route In Use.Approach : Instrument Non Precision

Person : 1

Affiliation.Other : Instructional
Function.Instruction : Instructor
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 75
Experience.Flight Time.Total : 7000
Experience.Flight Time.Type : 3000
ASRS Report : 759932

Events

Anomaly.Other Anomaly.Other
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Anomaly Accepted

Assessments

Problem Areas : Chart Or Publication
Problem Areas : FAA

Situations

Chart.Airport : TZT.Airport

Narrative

EXECUTING PRACTICE GPS 18 APCH TO BELLE PLAINE, IA (TZZ). USING FAA INSTRUMENT APCH CHARTS AND NOTICED THE UNICOM FREQUENCY WAS 122.9. I'VE GIVEN INSTRUCTION FOR MANY YEARS IN THIS AREA AND THE UNICOM HAS ALWAYS BEEN 122.8. WE WERE RECEIVING RADAR ADVISORIES FROM CEDAR RAPIDS APCH AND ASKED THEM ABOUT THE UNICOM FREQUENCY. THEY FIRST SAID 122.8 BUT THEN SAID 122.9. DIDN'T SEE ANY NOTAM OR RECEIVE ANY NOTICE THROUGH FAASAFETY.GOV ABOUT ANY FREQUENCY CHANGE. ALSO, THE PLT CONTROLLED LIGHTS ARE STILL ON 122.8. IN MY VIEW THIS MAKES TZZ A 'HOTSPOT' WITH GREAT POTENTIAL FOR CONFLICTS BETWEEN AIRPLANES. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: THE RPTR STATED THE MAIN COMPLAINT IS THAT THE CTAF FREQ HAD CHANGED AT TZZ WITHOUT ANY NOTIFICATION. PLTS WHO FLY FREQUENTLY OFTEN RECALL FREQUENCIES FROM MEMORY WHICH COULD ALLOW TWO ACFT TO BE ANNOUNCING POSITIONS ON DIFFERENT FREQUENCIES. RPTR FEELS THESE CHANGES SHOULD BE WIDELY DISSEMINATED THROUGH LONG TERMED NOTAMS AND AVIATION SAFETY FORUMS.

Synopsis

PIPER PLT RPTS CTAF FREQUENCY ERROR ON COMMERCIAL CHART FOR TZZ.

ACN: 759369

Time / Day

Date : 200710
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : CLE.Airport
State Reference : OH
Altitude.MSL.Single Value : 5000

Environment

Flight Conditions : VMC
Light : Dawn

Aircraft : 1

Controlling Facilities.TRACON : CLE.TRACON
Operator.Common Carrier : Air Carrier
Make Model Name : Medium Large Transport
Operating Under FAR Part : Part 121
Flight Phase.Climbout : Intermediate Altitude

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : First Officer
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 114
Experience.Flight Time.Total : 2750
Experience.Flight Time.Type : 86
ASRS Report : 759369

Person : 2

Affiliation.Government : FAA
Function.Controller : Departure

Events

Anomaly.Non Adherence : Clearance
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Became Reoriented

Assessments

Problem Areas : FAA
Problem Areas : Flight Crew Human Performance

Situations

Narrative

THE ORIGINAL CLEARANCE FOR FLIGHT FROM CLE, RECEIVED FROM CLEARANCE DELIVERY ON THE GROUND WAS: 'CLEARED VIA RADAR VECTORS, BRUNZ, OBRLN, FINDLAY (FDY), RICHMOND (RID), THEN AS FILED, CLIMB AND MAINTAIN 5,000 FT...' DURING PREFLIGHT, THE FO OBTAINED CLEARANCE FROM ATC AND PROGRAMMED THE FMS. AFTER THE FMS WAS PROGRAMMED, THE FLIGHT CREW VERIFIED THE FLIGHT PATH, WITH THE FO READING THE WAYPOINTS IN THE FMS AND THE CAPTAIN CONFIRMING THE WAYPOINTS AS THEY WERE READ, REFERRING TO THE OBRLN ONE DEP PROC AND H-7 HIGH ALTITUDE ENRTE CHART. AS AN ADDITIONAL CHECK, THE FLIGHT PLAN DISTANCE IN THE FMS WAS COMPARED TO THE DISTANCE COMPUTED ON THE DISPATCH RELEASE, WHERE THE DIFFERENCE BETWEEN THE TWO DISTANCES WERE MINIMAL. HOWEVER, THE FO ENTERED BRUNS IN ERROR INSTEAD OF BRUNZ IN THE FMS. SINCE THE TWO FIXES ARE PRONOUNCED THE SAME WAY, AND ARE WITHIN 30 MILES OF EACH OTHER, THE CREW DID NOT DETECT THE ERROR UNTIL THE FLIGHT WAS AIRBORNE. THE FLIGHT DEPARTED CLE RWY 24C AND WAS GIVEN AN INITIAL HEADING OF 265 DEGS. IN THE VICINITY OF DJB VOR, THE FLIGHT WAS GIVEN 'DIRECT BRUNZ.' THE FO/PNF STATED, 'BRUNS IS BEHIND US.' CLEVELAND DEPARTURE'S ANSWER WAS, 'RECHECK NAVIGATION, CLEARED DIRECT BRUNZ.' THE CREW THEN COMPARED THE FMS WITH THE OBRLN ONE DEP AGAIN, AT WHICH POINT THE BRUNS/BRUNZ ERROR WAS DISCOVERED AND CORRECTED. CONTRIBUTING FACTORS: 1) CLE RWY 6R/24L IS CURRENTLY CLOSED FOR CONSTRUCTION AND RWY 6C/24C IS USED INSTEAD. WHEN USING RWY 6C/24C, THE OBRLN ONE DEP IS NOT SELECTABLE WHICH REQUIRES THE MANUAL ENTRY OF THE DEPARTURE WAYPOINTS WHEN USING RWY 6C/24C AND INTRODUCES THE POTENTIAL FOR ERROR. WHEN SELECTING THE OBRLN ONE DEP USING RWYS 6R/24L AND 6L/24R, THE POTENTIAL BRUNS/BRUNZ ERROR IS AVOIDED AS THE WHOLE PROCEDURE IS LOADED INSTEAD OF MANUALLY CONSTRUCTING INDIVIDUAL WAYPOINTS FOR THE DEPARTURE. 2) HAVING THE HOMONYMS BRUNS AND BRUNZ IN THE SAME TERMINAL AIRSPACE. BRUNZ A FIX ON THE OBRLN ONE DEP. BRUNS IS THE MISSED APPROACH FIX FOR CLE RNAV (GPS) RWY 10 APPROACH. THEY ARE LOCATED WITHIN 30 MILES OF EACH OTHER. BRUNZ IS LOCATED 32 MILES SOUTHWEST OF CLE, BRUNS IS LOCATED 11 MILES SOUTH OF CLE. 3) THE FO WAS UNFAMILIAR WITH THE DEP FROM CLE AND PRE DEP CLEARANCE WAS NOT AVAILABLE THROUGH ACARS, WHICH IS THE NORMAL MEANS OF OBTAINING CLEARANCE. THIS REQUIRED THE CREW TO OBTAIN CLEARANCE THROUGH CLE CLEARANCE DELIVERY. HAD THE CLEARANCE BEEN RECEIVED THROUGH ACARS, THE FIX BRUNZ WOULD HAVE BEEN SPELLED OUT. A CREW THAT WAS EXPERIENCED WITH THE DEPARTURE AT CLEVELAND MOST LIKELY WOULD HAVE KNOWN THAT BRUNZ WAS THE CORRECT FIX WHEN HEARD OVER THE RADIO. I BELIEVE THE ROOT CAUSE OF THE PROBLEM WAS HAVING TWO FIXES WITH IDENTICAL SOUNDING NAMES IN CLOSE PROXIMITY LOCATED IN THE SAME TERMINAL AIRSPACE. THE SAFEGUARDS THAT WERE USED -- VERIFYING THE WAYPOINTS USING CHARTS, COMPARING FLIGHT PLAN DISTANCES -- WERE NOT SUFFICIENT TOWARD DETECTING AND PREVENTING THE PROBLEM. THE SAFEGUARDS THAT NORMALLY WOULD HAVE BEEN IN PLACE BUT WERE NOT USED -- OBTAINING CLEARANCE THROUGH ACARS (INSTEAD OF VERBALLY THROUGH CLEARANCE DELIVERY), SELECTING THE OBRLN DEP (INSTEAD OF MANUALLY INPUTTING THE WAYPOINTS) -- WOULD HAVE BEEN SUFFICIENT TO PREVENT THE PROBLEM PRIOR TO DEPARTURE.

Synopsis

FLT CREW MANUALLY ENTERED DEPARTURE FROM CLE. CREW INADVERTENTLY ENTERED SIMILAR FIX RATHER THAN FIX DEPICTED ON DEP.

ACN: 753502

Time / Day

Date : 200709
Day : Fri
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Intersection : FEDIT
State Reference : MD
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Operator.General Aviation : Instructional
Make Model Name : Cessna Aircraft Undifferentiated or Other Model
Operating Under FAR Part : Part 91
Navigation In Use.Other : GPS
Flight Phase.Landing : Missed Approach

Aircraft : 2

Route In Use.Approach : Instrument Non Precision

Person : 1

Affiliation.Other : Instructional
Function.Instruction : Trainee
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Experience.Flight Time.Last 90 Days : 4
Experience.Flight Time.Total : 1087
Experience.Flight Time.Type : 71
ASRS Report : 753502

Person : 2

Affiliation.Other : Instructional
Function.Instruction : Instructor
Qualification.Pilot : CFI
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 106
Experience.Flight Time.Total : 6516
Experience.Flight Time.Type : 630
ASRS Report : 753702

Events

Anomaly.Airspace Violation : Entry
Anomaly.Non Adherence : FAR
Anomaly.Non Adherence : Published Procedure
Independent Detector.Other.Flight CrewA : 1
Independent Detector.Other.Flight CrewB : 2
Resolatory Action.None Taken : Detected After The Fact

Assessments

Problem Areas : Airport
Problem Areas : Airspace Structure
Problem Areas : Chart Or Publication
Problem Areas : Flight Crew Human Performance

Situations

Chart.Approach : FDK RNAV Z Rwy 23

Narrative

I WAS DOING AIR WORK AND INSTRUMENT RECURENCY TRAINING WITH AN INSTRUCTOR IN PREPARATION FOR AN ANNUAL CHK RIDE. THE PURPOSE OF THE FLT WAS TO BECOME MORE FAMILIAR WITH THE APOLLO GX55 GPS IN THE ACFT, SO WE WERE CONCENTRATING ON APPROACHES USING THE GPS. AFTER A VOR RWY 34 APCH TO DMW WE DID AN RNAV (GPS) Z RWY 23 APCH TO FDK. WHILE FLYING THE PUBLISHED MISSED APCH PROC AND REACHING FEDIT WE TURNED THE GPS BACK TO THE MAP MODE AND DISCOVERED THAT WE WERE INSIDE THE ADIZ. WE IMMEDIATELY TURNED FURTHER N AND EXITED THE ADIZ. THE APCH PLATES THAT I WAS USING WERE CURRENT, DOWNLOADED FROM THE PLT GROUP MEMBERS-ONLY WEB SITE THAT MORNING. UNLIKE THE VOR RWY 34 AND RNAV (GPS) RWY 34 APPROACHES TO CARROLL COUNTY (DMW), WHICH CLEARLY SHOW THE ADIZ BOUNDARY, THE RNAV (GPS) Z RWY 23 APPROACH TO FDK DOESN'T SHOW THE ADIZ BOUNDARY. MISTAKENLY AS IT TURNS OUT, I ASSUMED THAT THE ADIZ WASN'T A FACTOR. IT WASN'T UNTIL LATER THAT MY INSTRUCTOR PLOTTED THE LOCATION OF FEDIT AND DISCOVERED THAT THE WAYPOINT IS INSIDE THE ADIZ! IF WE KNEW THAT AHEAD OF TIME WE WOULDN'T HAVE PICKED THIS APCH, OR WOULDN'T HAVE FLOWN THE PUBLISHED MISSED APCH PROC. HOWEVER, THERE IS NO WARNING OR CAUTION NOTE ON THE APCH PLATE AND NO MENTION OF THIS IN THE FDC NOTAMS. IT'S POSSIBLE THAT THE TSA AND/OR CHARTING FOLKS BELIEVE THAT ANYONE FLYING THE APCH WOULD BE ON AN IFR FLT PLAN SO THE ADIZ WOULDN'T BE A FACTOR, BUT THIS DOESN'T TAKE INTO ACCOUNT ALL THE PLTS WHO FLY PRACTICE APPROACHES IN VFR CONDITIONS WITHOUT ATC ASSISTANCE. WE HAD OUR DME SET ON THE DCA VOR FOR ADDITIONAL SITUATIONAL AWARENESS, BUT IT IS LOCATED ON THE FAR RIGHT OF THE COCKPIT AND MY INSTRUCTOR WAS LOOKING TO THE LEFT, EXPLAINING SOME OF THE FUNCTIONS OF THE GPS. OTHER FACTORS ARE: 1) MY INSTRUCTOR DOESN'T USUALLY FLY THIS APCH BECAUSE HE HAS BEEN TEACHING MOSTLY IN ANOTHER AIRPLANE WITH A G-1000 GLASS COCKPIT. ITS GPS HAS MORE MEMORY, SO HE USUALLY FLIES THE RNAV (GPS) Y RWY 23 APCH (WHICH HAS A DIFFERENT MISSED APCH PROC MUCH CLOSER TO THE ARPT) AND NOT AVAILABLE IN THE DATABASE OF THE ACFT WE WERE USING, AND 2) THE LAST TIME HE FLEW THE RNAV (GPS) Z RWY 23 APCH IT WAS BEFORE THE ADIZ CHANGE AND FEDIT WAS OUTSIDE THE ADIZ BOUNDARY. I BELIEVE THE PROBLEM COULD BE CORRECTED BY REVISING THE MISSED APCH PROC AND/OR RECHARTING THE APCH TO INCLUDE THE ADIZ BOUNDARY. SUPPLEMENTAL INFO

FROM ACN 753702: IN SUMMARY, THERE WERE THREE CONTRIBUTING FACTORS TO OUR UNINTENTIONAL INCURSION INTO THE ADIZ AIRSPACE. THERE WERE: 1) HIGH WORKLOAD DUE TO THE STUDENT'S UNFAMILIARITY WITH THE GPS SYSTEM WHICH RESULTED IN LIMITED OPPORTUNITY FOR ME TO OBSERVE THE MAP DISPLAY DURING THE MISSED APCH PROC. 2) MY INCORRECT ASSUMPTION THAT, BASED ON THE DEPICTION OF THE NEARBY ADIZ AIRSPACE ON THE APCH CHARTS FOR THE EARLIER VOR RWY 34 APCH AT DMW, THE SAME DEPICTION OF THIS AIRSPACE WOULD BE PRESENT ON THE GPS APCH AND SUBSEQUENT MISSED APCH INTO FDK, AND 3) BELIEF THAT ABSENCE ANY APPARENT REASON TO DO SO, THAT THE APCH DESIGNERS WOULD NOT UNNECESSARILY PLACE ONE OR MORE OF THE APCH FIXES WITHIN THE RESTR ADIZ AIRSPACE.

Synopsis

A PLT AND INSTRUCTOR ON A FDK RNAV Z RWY 23 PRACTICE FLEW INTO THE ADIZ ON THE MISSED APCH BECAUSE OF A GPS CONFIGURATION AND NO ADIZ PLOTTED ON THE APCH PLATE.

ACN: 748405

Time / Day

Date : 200708
Day : Sat
Local Time Of Day : 1201 To 1800

Place

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

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.Common Carrier : Air Carrier
Make Model Name : EMB ERJ 145 ER&LR
Operating Under FAR Part : Part 121
Navigation In Use.Other : FMS or FMC
Flight Phase.Climbout : Initial

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
ASRS Report : 748405

Person : 2

Affiliation.Company : Air Carrier
Function.Flight Crew : First Officer
Qualification.Pilot : Commercial
ASRS Report : 748407

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Other Spatial Deviation
Independent Detector.Other.Flight CrewA : 1
Independent Detector.Other.Flight CrewB : 2
Resolatory Action.None Taken : Detected After The Fact
Consequence.Other

Assessments

Problem Areas : Aircraft

Narrative

I SET UP MY FMS WITH THE DEP PROC. ALL REQUIRED CHECKS OF THE FMS WERE COMPLETED ACCORDING TO FM1 AND AOM V1. BOTH FMS 1 AND 2 WERE SET CORRECTLY. DURING THE TAXI CHECKLIST BOTH FMS'S WERE CHECKED AND WERE SET CORRECTLY FOR RWY. AFTER A NORMAL TAKEOFF, NAV WAS SELECTED. I NOTICED THAT MY FMS DISPLAY SHOWED US RIGHT OF COURSE AND FO'S FMS DISPLAYED SHOWED US LEFT OF COURSE WITH NO MALFUNCTION INDICATION. THE FO WAS FOLLOWING THE FLIGHT DIRECTOR BARS UNTIL I NOTIFIED HIM OUR FMS INDICATIONS WERE NOT THE SAME. AT THAT TIME HE ROLLED THE WINGS LEVEL. SHORTLY AFTER ATC ASKED FOR OUR HEADING AND ASSIGNED US A NEW HEADING. WE STILL HAD NO MALFUNCTION INDICATIONS. WE WROTE IT UP ENROUTE AND FLIGHT CREW PLACARDED BOTH FMS'S. DISPATCH, MAINT CTL, AND ATC WERE NOTIFIED OF THE FAILURES. WE NOTIFIED ATC THAT WE WERE NEGATIVE RNAV AND THAT GPS'S HAD FAILED. WE CONDUCTED THE REMAINDER OF THE FLIGHT UNDER CONVENTIONAL NAVIGATION. SUPPLEMENTAL INFO FROM ACN 748407: ALL INDICATIONS SHOWED THE UNITS FUNCTIONING PROPERLY ON PREFLIGHT AND TAXI AND THERE WAS NO WARNING WHEN THE GPS'S FAILED. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: THE FO STATED THAT A POWER INTERRUPTION AT THE GATE PRIOR TO PUSHBACK MAY HAVE INITIATED THIS EVENT ALTHOUGH HE SEES NO REASON WHY AN FMC OR EICAS ALERT MESSAGE WAS NOT GENERATED AS IT SHOULD HAVE BEEN. THE EMB145 FMC AUTOMATICALLY ADJUSTS RNP FOR THE PHASE OF FLIGHT AND TYPE OF DEPARTURE/ARRIVAL/APPROACH BEING FLOWN. THE RNP AND GPS STATUS IS AVAILABLE IN THE FMC BUT THE CORRECT PAGE MUST BE SELECTED TO VIEW IT.

Synopsis

AN EMB 145 EXPERIENCED DUAL GPS FAILURES CAUSING AN FMS LNAV DIFFERENCE BETWEEN THE CAPT AND FO. THE EICAS DID NOT ALERT ABOUT THE GPS FAILURES.

ACN: 747186

Time / Day

Date : 200707
Day : Wed
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : SBKP.Airport
State Reference : FO
Altitude.MSL.Bound Lower : 3000
Altitude.MSL.Bound Upper : 5000

Environment

Flight Conditions : Mixed
Weather Elements : Rain
Light : Daylight

Aircraft : 1

Controlling Facilities.Tower : SBKP.Tower
Operator.Common Carrier : Air Carrier
Make Model Name : Boeing Company Undifferentiated or Other Model
Operating Under FAR Part : Part 121
Navigation In Use.Other : FMS or FMC
Navigation In Use.Other : GPS
Flight Phase.Descent : Approach
Route In Use.Approach : Instrument Non Precision

Aircraft : 2

Controlling Facilities.Tower : SBKP.Tower
Make Model Name : Small Transport, Low Wing, 2 Turboprop Eng

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : First Officer
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 300
Experience.Flight Time.Total : 11500
Experience.Flight Time.Type : 5000
ASRS Report : 747186

Person : 2

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 160
Experience.Flight Time.Total : 11500

Experience.Flight Time.Type : 2500
ASRS Report : 747111

Person : 3

Affiliation.Company : Air Carrier
Function.Flight Crew : Relief Pilot
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Qualification.Pilot : Flight Engineer
Experience.Flight Time.Last 90 Days : 150
Experience.Flight Time.Total : 10000
Experience.Flight Time.Type : 4000
ASRS Report : 746934

Events

Anomaly.Conflict : Airborne Less Severe
Anomaly.Inflight Encounter : Weather
Independent Detector.Aircraft Equipment : TCAS
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Executed Missed Approach
Resolatory Action.Flight Crew : Took Precautionary Avoidance Action

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Flight Crew Human Performance

Narrative

ON JULY/WED/2007 WE -- A CREW OF THREE -- WERE INBOUND TO CAMPINAS, BRAZIL. BASED ON FORECAST WINDS AND ATIS, WE BRIEFED THE RNAV (GPS) APCH TO RWY 33, USING VNAV PROCS. WX WAS IFR WITH RAINSHOWERS AND NUMEROUS TSTMS IN THE VICINITY. SAO PAULO APCH (RADAR CTLED) CLRED US DIRECT TO CPN VOR BEFORE HANDOFF TO CAMPINAS APCH, WHICH ADVISED THEY DID NOT HAVE RADAR SURVEILLANCE (EXCEPT, WE REALIZED SHORTLY, THROUGH PHONE ADVISORIES FROM SAO PAULO RADAR). REFERENCE THE RNAV (GPS) APCH TO RWY 33, CAMPINAS, BRAZIL. AS WE APCHED CPN VOR FROM THE N, THERE WAS A VERY LARGE RAINSHOWER LESS THAN A MILE E OF THE FINAL COURSE, FROM ATOX (FAF) TO RWY 33, DOMINATING THE LENGTH OF THE FINAL COURSE SEGMENT AND MOVING NW TOWARD THE FIELD. AREA CLOUDS OUTSIDE SHOWERS WERE ABOUT 2000 FT SCATTERED, 4000 FT BROKEN. THE CAMPINAS CTLR SAID WE COULD EXPECT THE GPS APCH TO RWY 33, THEN CLRED US TO IK BEACON, WHICH IS NOT ON THE RNAV (GPS) RWY 33 APCH. WE THEN CLEARLY ASKED FOR DIRECT CPN VOR AND THE RNAV (GPS) PROC AND WERE CLRED AS REQUESTED. NEAR CPN VOR, THE CTLR CLRED US TO 5000 FT, WHICH IS 500 FT BELOW THE RECOMMENDED PROC ALT OUTBOUND FROM THE IAF, AFAV. WE VERIFIED THE ALT ASSIGNED, WE HAD GOOD VISIBILITY AHEAD LEAVING 5500 FT AND 5000 FT WAS SAFE OF TERRAIN. WE REPORTED OUTBOUND FROM AFAV ON THE PROC. WE HAD TURNED LEFT TO THE MANEUVERING SIDE FOR A 'TEARDROP' OUTBOUND. THE CTLR IMMEDIATELY CLRED US 'DIRECT TO ATOX' (THE FAF) AND 'DESCEND TO 3300 FT.' (THAT ALT IS ALLOWED ON THE PROC ONLY AFTER ESTABLISHED ON COURSE, INBOUND.) WE BEGAN A RIGHT TURN TO ATOX AND BEGAN A SLOW RATE OF DESCENT TO 3300 FT UNTIL ON AN

INTERCEPT TO FINAL COURSE. AS WE BEGAN OUR DESCENT TO 3300 FT IN THE RIGHT TURN TO FINAL AND ATOX, THE CAMPINAS CTLR INFORMED US THAT 'SAO PAULO RADAR ADVISES' WE HAD TFC IN OUR TURN, MOVING ACROSS OUR PATH SOUTH TO NORTH.. WE HAD TFC ON TCAS 600 FT BELOW US, CONVERGING AT 2 O'CLOCK POSITION. WE STOPPED DESCENT AS CAMPINAS APCH DIRECTED 'YOU MUST MAKE A LEFT TURN TO FINAL TO AVOID TFC -- YOU ARE CLRED DIRECT ATOX AND 3300 FT FOR TFC.' WE ADVISED WE HAD TFC ON TCAS AND WOULD DESCEND AFTER CLR. WE CLBED BACK TOWARD 5000 FT TO INCREASE TFC SEPARATION IN THE DIRECTED LEFT TURN. THE LEFT TURN SERVED TO KEEP US IN THE PATH OF THE ACFT LONGER THAN THE COMPLETED TURN TO FINAL WOULD HAVE, WE REMAINED WELL ABOVE THE TFC'S ALT. INBOUND TO ATOX, WE VISUALLY CONFIRMED A LIGHT TWIN-PROPPED ACFT MOVING SLOWLY AWAY FROM OUR 5 TO 3 O'CLOCK POSITION. ON AN INTERCEPT TO FINAL, AND ABLE TO SEE THE GND, WE AGAIN BEGAN DESCENT TO 3300 FT AS CLRED. WE PROGRAMMED 'DIRECT TO ATOX' IN THE LEGS PAGE, THEN EXECUTED THE 'DIRECT.' THIS CAUSED THE LT PROGRAMMED AT ATOX (3300 FT) TO DELETE. RE-ENGAGING THE VNAV PROFILE THAT REMAINED IN THE BOX CAUSED THE AUTOPLT TO ATTEMPT A RAPID DESCENT TO 2600 FT, THE SELECTED FINAL MDA ON THE MCP, EVEN BEFORE REACHING ATOX, THE FAF. (PUBLISHED APCH MDA IS 2580 FT.) THE HIGH DESCENT RATE CAUSED A MOMENTARY ACTIVATION OF THE GPWS. WE AGGRESSIVELY ENSURED CORRECT FAF ALT AT ATOX. TAKING TIME TO CONFIRM POSITION, ALT AND CORRECT PROGRAMMING, CAUSED A SLIGHTLY LATE DESCENT AFTER THE FAF. APCH SPD WAS 158. HVY RAINSHOWERS WERE NOW MOVING ACROSS THE FINAL COURSE AND THE FIELD. CAMPINAS APCH ADVISED CEILING AT 1200 FT AND VISIBILITY AT 2000 METERS IN HVY RAIN (COMPATIBLE WITH THE APCH). OUR DESCENT PUT US OVER THE VDP, BUT ABOVE MDA, IN A DENSE RAIN SHAFT, AT THE SAME TIME WE SAW THE FIELD. WE EXECUTED A MISSED APCH AS PUBLISHED. CAMPINAS APCH CLRED US TO 5000 FT, DIRECT AFAV. AGAIN AT AFAV, WE REPORTED OUTBOUND ON THE MANEUVERING SIDE OF THE PROC AND THE CTLR CLRED US FOR 'LEFT TURN, DIRECT ATOX, DESCEND TO 3300 FT.' THIS SEEMS CONTRARY TO THE INTENT OF THE PROC, FOLLOWING THESE DIRECTIONS AT THE POINT GIVEN WOULD PUT AN ACFT 2200 FT BELOW THE RECOMMENDED ALT FOR THE PUBLISHED TURN PROC. NOTABLY, THIS INSTRUCTION WAS GIVEN WITHOUT RADAR SURVEILLANCE TO CONFIRM IF WE WERE AT ALL THE NEAR THE FINAL COURSE, OR EVEN INBOUND. BY NOW, THE RAINSHOWERS HAD MOVED ON AND THE WX WAS RAPIDLY CLEARING. NOW IN VMC, AND ON AN INTERCEPT TO FINAL AND ATOX, WE DESCENDED TO 3300 FT AND COMPLETED THE APCH AND NORMAL LNDG. A SAFETY CONCERN, ESPECIALLY IN A GLASS COCKPIT, WHEN CLRED FOR A PROC THEN TOLD TO 'PROCEED DIRECT' TO THE FINAL APCH FIX IN THE MIDST OF THE PROC: IF THE LEGS PAGE ONE WERE TO PROGRAM 'DIRECT' TO THE FAF: 1) THE ACFT WILL PROCEED DIRECT IN THE SHORTEST TURN DIRECTION, NOT NECESSARILY IN THE DIRECTION OF TURN PROCS AND THE ALT PROGRAMMED AT THE FIX MAY DELETE. 2) THE VNAV ALT PROTECTION PROGRAMMED AT THE FIX PRIOR TO THE FAF IS REMOVED WHEN THAT FIX IS DELETED AS A DE-FACTO OF THE 'DIRECT.' IN VNAV AUTOPLT MODE, THE ACFT WILL TRY TO DESCEND AS REPROGRAMMED, EXACTLY AS IT DID IN OUR CASE NEAR THE FAF, AND THE CHANGED PROFILE MAY NO LONGER INCLUDE SAFE ALT CONSTRAINTS. CAMPINAS APCH IS ISSUING DIRECTIONS WHICH CAN COMPLICATE PROFILE MANAGEMENT, PARTICULARLY IN GLASS COCKPITS. CAMPINAS APCH DIRECTED NUMEROUS TURNS AND ALTS WITHOUT KNOWING EXACTLY WHERE WE WERE LOCATED. SAO PAULO RADAR WAS NOT ABLE TO PROTECT THE AIRSPACE IN THE CAMPINAS APCH CORRIDOR.

Synopsis

FLT CREW REPORTS QUESTIONABLE ALTITUDE CLEARANCES BY SKBP TRACON DURING RNAV GPS RWY 33 APPROACH TO SBKP AND TRAFFIC CONFLICT DURING THE PROCEDURE TURN INBOUND.

ACN: 745159

Time / Day

Date : 200707
Day : Wed
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Navaid : LGC.VORTAC
State Reference : GA
Altitude.MSL.Bound Lower : 11000
Altitude.MSL.Bound Upper : 23000

Environment

Flight Conditions : Mixed
Light : Daylight

Aircraft : 1

Controlling Facilities.ARTCC : ZTL.ARTCC
Controlling Facilities.TRACON : A80.TRACON
Operator.Common Carrier : Charter
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Operating Under FAR Part : Part 91
Navigation In Use.Other : FMS or FMC
Flight Phase.Descent : Approach
Route In Use.Arrival.STAR : MIKEE 4

Person : 1

Affiliation.Company : Charter
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Experience.Flight Time.Last 90 Days : 223
Experience.Flight Time.Total : 7400
Experience.Flight Time.Type : 3004
ASRS Report : 745159

Events

Anomaly.Non Adherence : FAR
Anomaly.Non Adherence : Published Procedure
Anomaly.Other Spatial Deviation
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Unable
Consequence.FAA : Reviewed Incident With Flight Crew

Assessments

Problem Areas : Airspace Structure
Problem Areas : Chart Or Publication
Problem Areas : FAA

Narrative

AS HAS HAPPENED ON NUMEROUS OCCASIONS, ATLANTA CENTER, AT THE REQUEST OF ATLANTA APCH, ASSIGNED THE MIKEE 4 STAR TO THE CARTERSVILLE, GA, ARPT (VPC). THIS PROC DOES NOT EXIST, AS VPC IS NOT SHOWN ON THE ARR. ATLANTA APCH CTLRS WITH WHOM I HAVE DISCUSSED THIS ISSUE HAVE INDICATED THAT THEIR COMPUTERIZED ARR PROFILES INCLUDE THIS NONCOMPLIANT PROC AND MANDATE ITS ASSIGNMENT. CERTAIN FMS AND GPS SYSTEMS DO NOT ALLOW MODIFICATION OF STARS TO INCLUDE DESTS NOT SHOWN IN THE PROCS, FORCING CREWS TO INVENT SOLUTIONS DURING A CRITICAL PHASE OF FLT. THE USE OF STANDARDIZED ARR CORRIDORS LIKE THE MIKEE ARR IS IMPORTANT IN MANAGING THE HIGH VOLUME OF TFC TO SATELLITE ARPTS IN THE VICINITY OF ATLANTA HARTSFIELD/JACKSON ARPT (ATL). THE EASIEST SOLUTION TO THIS PROBLEM WOULD BE ADDING VPC TO THIS ARR PROC, AS CTLRS HAVE SUGGESTED IN THEIR OWN RPTING CHANNELS. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: RPTR STATED THAT HE HAS BEEN TRYING FOR SOME TIME TO HAVE VPC ADDED TO THE MIKEE FOUR ARR BUT NO ONE HAS LISTENED TO HIM. CURRENTLY PLTS ARE VECTORED TO THE ARPT TO RPT IT IN SIGHT. DURING IMC, PLTS PROGRAM THE FMS TO AN FMS AVAILABLE ARPT AND FROM THAT ARPT TO A VPC APCH. THE ATC CTLRS UNDERSTAND THIS DILEMMA BUT ARE UNABLE TO EFFECT A CHART CHANGE THEMSELVES. THE RPTR BELIEVES THAT THE SIMPLEST CHANGE ALLOWING CREWS TO PROGRAM APCHES DIRECTLY TO VPC AFTER MIKEE IS TO LIST VPC AS A POSSIBLE DEST ON THIS ARR, THEREBY ALLOWING CHARTING PROCS COMPANIES AN AVENUE IN THE FMS PROGRAMMING TO PROCEED FROM MIKEE TO A VPC IAF. BUNNI INTXN TO ATL IS NEARLY DIRECTLY OVER THE EVZ FAF TO VPC RWY 19 BUT NORMAL PROFILING ON THE ATL ARR CROSSES BUNNI AT 8,000 FT.

Synopsis

PILOT REPORTS ATC ASSIGNS THE MIKEE FOUR ARR TO VPC WHEN VPC IS NOT AN APPLICABLE ARPT. PLTS ARE UNABLE TO PROGRAM APCHS FROM THE MIKEE STAR TO VPC.

ACN: 745153

Time / Day

Date : 200707
Day : Thu
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : HWD.Airport
State Reference : CA
Altitude.MSL.Single Value : 5000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : NCT.TRACON
Operator.General Aviation : Personal
Make Model Name : Skylane 182/RG Turbo Skylane/RG
Operating Under FAR Part : Part 91
Navigation In Use.Other : GPS
Flight Phase.Descent : Approach
Route In Use.Arrival : On Vectors

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 50
Experience.Flight Time.Total : 1400
Experience.Flight Time.Type : 600
ASRS Report : 745153

Events

Anomaly.Other Anomaly.Other
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Anomaly Accepted

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Chart Or Publication

Narrative

I HAD A SLIGHTLY UNUSUAL EXPERIENCE THE OTHER DAY, MOSTLY SO, BECAUSE I DIDN'T THINK IT WAS POSSIBLE. I WAS ENRTE TO HWD, AN ARPT THAT I LAND

AT, AT LEAST ONCE OR TWICE A WK. THE WX WAS OVC010/10SM, WITH THE MARINE LAYER MINS FROM DISSIPATING FOR THE DAY. WHAT WAS INTERESTING ABOUT THIS VERY ROUTINE RIDE WAS THAT IT WAS MY FIRST SHOT AT THE NEW RNAV (GPS) Z RWY 28L. THE OLD APCH WAS THE GPS RWY 28L, A VNAV+V. WHEN I FIRST BRIEFED THE NEW PLATE, I NOTICED THAT BOTH THE FAF (SUDGE) AND THE INTERMEDIATE FIX IMMEDIATELY PRECEDING (JOCPI) HAD BEEN MOVED ABOUT 5 MI FARTHER OUT FROM THE MAP THAN ON THE OLD APCH. SO, FROM SOMEWHERE N OF LVK, I GET 'DIRECT JOCPI.' I WAS PLEASED TO SEE THAT THIS NORMAL PROC WAS STILL IN PLACE, AS I WOULD HAVE BEEN BUMMED TO FIND OUT THAT I'D BE SENT TO THE NEW IAF WITH A 5 NM HILPT, 20 MI OUT OF MY WAY. AS I APCHED WITHIN ABOUT 2 NM OF JOCPI, THE CTLR ASKED: 'ACFT X CONFIRM YOU'RE DIRECT JOCPI, I SHOW IT YOU'RE 2 O'CLOCK, 2 MI.' 'NEGATIVE, I SHOW JOCPI MY 12 O'CLOCK, 2 MI.' 'ACFT X, NEGATIVE, TURN R HDG 240!' (THINGS TEND TO GET A LITTLE HECTIC AROUND HERE, AS THE HWD AND OAK FINALS RUN SO CLOSE TOGETHER, THEY WEAVE TFC AND TREAT THEM LIKE ONE FINAL.) I ASKED THE CTLR, 'SIR, ARE YOU AWARE THAT BOTH JOCPI AND SUDGE HAVE BEEN MOVED SIGNIFICANTLY AS OF 2 DAYS AGO, WITH THE COMMISSIONING OF THIS NEW GPS ZULU APCH?' 'UM, NEGATIVE!' 'I NOW SHOW JOCPI MY 1 O'CLOCK, 3 MI, DO YOU CONCUR?' 'NEGATIVE, BUT I'LL TAKE YOUR WORD FOR IT, MAINTAIN 3500 UNTIL ESTABLISHED.' NEEDLESS TO SAY, I WAS PRETTY SURPRISED THAT THE CTLRS COULD NOT POSSIBLY HAVE BEEN BRIEFED ON THESE CHANGES PRIOR TO THEIR TAKING EFFECT. FURTHER, WITH ALL THE BIZJET TFC GOING INTO HWD DAILY, THAT THIS WASN'T STUMBLER UPON IN THE PRECEDING 2 DAYS. YEAH, KINDA BORING, BUT NOTHING ELSE TO RPT. I DIDN'T FILE AN ASRS, AS I ALWAYS THINK THAT SOMEONE ELSE ALREADY CALLED THE FIRE DEPT. OF COURSE, NOW I HAVE FILED THE ASRS RPT. THE BIG QUESTIONS ARE: SHOULD FIXES BE MOVED WITHOUT RENAMING THEM? AND, HOW COULD ATC BE BEHIND THE CURVE ON SUCH A SUBSTANTIAL CHANGE? THAT ALL SAID, THE GENERAL LEVEL OF PROFESSIONALISM AND EXCELLENCE OF NORCAL APCH IS REMARKABLY WONDERFUL. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: THE REPORTER STATED THAT HE BELIEVES THE CONTROLLER WORKING HIS FLT DISCOVERED VERY QUICKLY THAT THE CHANGES HE POINTED OUT WERE ACCURATE AND THAT OTHER CONTROLLERS WERE QUICKLY NOTIFIED ABOUT THE CHANGES ALSO.

Synopsis

A CESSNA PILOT REPORTS NCT WAS NOT AWARE OF DME CHANGES AT INTXNS SUDGE AND JOCPI UNTIL HE BEGAN THE HWD RNAV (GPS) Z RWY 28L APCH.

ACN: 741081

Time / Day

Date : 200706
Day : Sun
Local Time Of Day : 1201 To 1800

Place

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

Environment

Flight Conditions : IMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.General Aviation : Personal
Make Model Name : Cessna 340/340A
Operating Under FAR Part : Part 91
Navigation In Use.ILS.Localizer Only : 10L
Navigation In Use.Other : GPS
Flight Phase.Descent : Approach
Flight Phase.Landing : Go Around
Flight Phase.Landing : Missed Approach

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 30
Experience.Flight Time.Total : 560
Experience.Flight Time.Type : 65
ASRS Report : 741081

Events

Anomaly.Non Adherence : Clearance
Anomaly.Other Anomaly.Other
Anomaly.Other Spatial Deviation
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Became Reoriented
Resolatory Action.Flight Crew : Executed Go Around

Assessments

Problem Areas : Flight Crew Human Performance

Narrative

WHILE ON APCH TO RWY 10L IN IMC, I WAS VECTORED TO 4 MI WITHIN THE ILS TO RWY 10L AND INSTRUCTED TO CONTACT TWR WHEN ESTABLISHED. I HAD 2 CDI'S SET, AND A MOVING MAP ON AN MX20. AS THE SECONDARY CDI BEGAN TO MOVE SHOWING I WAS BECOMING ESTABLISHED, I PUNCHED UP THE TWR FREQ. THEN I NOTICED THE PRINCIPAL CDI WAS NOT ACTING PROPERLY. I DOUBLE-CHKED AND TRIPLE-CHKED FREQS AND OTHER SETTINGS TO SEE WHY THIS WAS OCCURRING. AS I DID SO, I MUST HAVE DRIFTED BACK N OFF THE APCH COURSE, BUT DID NOT NOTICE THIS. TWR CALLED ASKING IF I WAS ON FREQ AND WHEN I RESPONDED IN THE AFFIRMATIVE, TWR SAID THEY WERE SHOWING ME N OF COURSE. ONE CDI SHOWED THIS, BUT I REALIZED I COULD NOT TRUST MY PRINCIPAL CDI, THOUGH I DID NOT KNOW WHY. THE MOVING MAP CONFIRMED I WAS N, BUT I WAS CONFUSED AND CONCERNED BY THE CONFLICT IN THE PRINCIPAL CDI WHICH I REALIZED WAS NOT WORKING. I REALIZED I WAS BEING CONFUSED BY THE CDI THAT WAS NOT CONFIRMING MY POS, SO I TOLD TWR I'D LIKE TO GAR. TWR INSTRUCTED ME TO CLB TO 2000 FT (AS I RECALL AND FLY RWY HDG) AND THEN TO GO BACK TO MY PREVIOUS ASSIGNED FREQ. UPON PUNCHING UP APCH, I HEARD MY GAR WAS CAUSING TROUBLE AND THEY'D BEEN TRYING TO CONTACT ME WHEN I WAS ON TWR FREQ. WHEN I ESTABLISHED RADIO COM, APCH BEGAN TO VECTOR ME FOR A GAR. HOWEVER, I BEGAN TO HAVE TROUBLE CTLING MY ACFT. I COULD NOT GET IT TO CLB UNDER AUTOPLT, AND I BEGAN TO BECOME DISORIENTED AND HAD TROUBLE HOLDING A STEADY CLB OR HDG WHEN HAND-FLYING. TO GAIN CTL I WOULD LEVEL THE WINGS, WHICH PUT ME OUT OF COMPLIANCE WITH ATC INSTRUCTIONS. ATC ISSUED NEW INSTRUCTIONS, AND WHEN I TRIED TO COMPLY WITH THOSE, THE ACFT BECAME DIFFICULT TO CTL. I THOUGHT AUTOPLT WAS STILL ON, AND WHEN I WOULD PUNCH IT OFF, I STILL HAD A HARD TIME CTLING CLBS. THE YOKE WAS HVY, AND IF I BACKED OFF ON PRESSURE, IT WOULD DIVE, THEN I'D HAVE TO PULL BACK IT, IT WOULD CLB TOO FAST. THE TRIM WHEEL SEEMED UNRESPONSIVE AND I REALIZED I WAS BECOMING INCREASINGLY DISORIENTED AND CAUSING TROUBLE FOR ATC. FINALLY I MANAGED TO CALM MYSELF AND FLY THE AIRPLANE ON AN ALT AND HDG AND TO COMPLY WITH INSTRUCTIONS TO REJOIN THE ILS. DURING THE GAR, AFTER I HAD REGAINED CTL OF MYSELF AND THE ACFT, I REALIZED MY ERROR IN SETTING UP THE PRINCIPAL CDI (BUTTON ON GPS NOT SET TO VLOC BUT TO GPS INSTEAD) AND FLEW A SUCCESSFUL ILS. MY FAILURE TO CORRECTLY SELECT THIS ON THE FIRST APCH WAS THE BEGINNING OF SEVERAL ERRORS. PUNCHING UP THE TWR BEFORE I WAS FULLY ESTABLISHED IS ANOTHER. I LET MYSELF BECOME DISTR BY THE FIRST TWO, WHICH SHOOK MY CONFIDENCE AND THEN MY SKILLS AND PARALYZED MY ABILITY TO PROPERLY FOLLOW ATC INSTRUCTIONS AND FLY THE PROPER HDG AND ALT. WHILE I KNEW THIS WAS HAPPENING, I SEEMED UNABLE TO CTL THE ACFT PROPERLY, BUT WAS INTENT ON NOT LOSING CTL IN IMC AND CONTINUED TO FOCUS ON TRYING TO REGAIN MY COMPOSURE AND APPLY MY TRAINING TO DOING THE TASK. FINALLY, WHEN I REALIZED THE ERROR ON THE VLOC/GPS BUTTON, I REGAINED MY CONFIDENCE AND CONTINUED TO FLY THE ACFT. ALTHOUGH IFR CURRENT, I HAVE NOT FLOWN IMC FOR SOME TIME, AND THIS I THINK CONTRIBUTED TO MY INABILITY TO PROPERLY FOLLOW ATC INSTRUCTION. I REALIZE HOW EASY IT IS TO BECOME DISORIENTED IN IMC, EVEN AFTER FLYING IFR FOR PRACTICE AND DURING IMC WITH MUCH HIGHER CEILINGS.

Synopsis

C340 PLT EXECUTED GO-AROUND AFTER FAILING TO TRACK LOC. DURING THE MANEUVER, THE PLT BECAME DISORIENTED, BUT WAS ABLE TO REGAIN COMPOSURE, PROPERLY TUNE LOC, AND COMPLETE THE APCH.

ACN: 736691

Time / Day

Date : 200704
Day : Tue
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2500

Environment

Flight Conditions : Mixed

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.General Aviation : Personal
Make Model Name : PA-28 Cherokee Arrow IV
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach
Route In Use.Arrival : On Vectors

Component : 1

Aircraft Component : Engine

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 22.9
Experience.Flight Time.Total : 737.5
Experience.Flight Time.Type : 201
ASRS Report : 236691

Events

Anomaly.Aircraft Equipment Problem : Critical
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Unable
Consequence.Other : Aircraft Damaged

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

I WAS RETURNING FROM A BUSINESS TRIP TO ZZZ1. I RECEIVED A WX BRIEFING FROM FSS. A DIRECT FLT TO MY DEST (ZZZ) WAS NOT ADVISED DUE TO TORNADO WARNINGS ALONG THE RTE. AFTER A DISCUSSION WITH THE BRIEFER, AN ALTERNATE RTE TO CIRCUMNAV THE HOSTILE WX WAS CHOSEN. THE IFR RTE THAT WAS FILED WAS A TOTAL OF 729 NM. THE SPD THAT I ESTIMATED TO FLY WAS 130 KTS. AT APPROX XA00, I FUELED THE AIRPLANE AT THE ZZZ1 SELF-SERVE PUMP WITH 40 GALLONS OF FUEL, TO TOP OFF BOTH FUEL TANKS. I PERFORMED MY PREFLT INSPECTION AND SUMPED THE TANKS, NOTICING AN UNUSUAL AMOUNT OF SEDIMENTS FLOATING IN THE AVGAS SAMPLE. I WAS CONCERNED, BUT DID NOT THINK THE SEDIMENTS WOULD ADVERSELY AFFECT THE SAFETY OF MY FLT. WITH FULL FUEL ON BOARD AT TKOF, I ESTIMATED 6 HRS 33 MINS OF FUEL AVAILABLE TO MAKE THE FLT. THE FLT PROCEEDED UNEVENTFULLY WITH THE EXCEPTION THAT MY GPS WAS ESTIMATING THAT I WAS ONLY TRAVELING AT A RATE OF 120 KTS DUE TO STRONG HEADWINDS. I WAS ALSO ADVISED ON 2 OCCASIONS TO CIRCUMNAV AREAS OF HVY TSTMS. BTWN THE STRONG HEADWINDS AND THE NEED TO GO AROUND BAD WX CELLS, THE DISTANCE THAT I ULTIMATELY FLEW INCREASED AND THE SPD DECREASED, RESULTING IN A CHANGE IN THE TOTAL HRS OF FUEL NECESSARY FOR THE FLT. AFTER BEING CLRED FOR THE APCH TO RWY AT ZZZ, I BEGAN MY PRE-LNDG CHKLIST. I THROTTLED BACK TO LOSE ALT AND ENCOUNTERED A COMPLETE LOSS OF ENG PWR APPROX 18 NM FROM THE ARPT. I TRIED UNSUCCESSFULLY TO RESTART THE ACFT, AND MADE SURE THAT I WAS USING THE R TANK WHICH WAS VISUALLY INDICATING APPROX 1/6 (6 GALLONS) OF AVAILABLE FUEL REMAINING ON THE PANEL GAS GAUGE. THE ENG SPATTERED BUT WOULD NOT RESTART SO I DECLARED AN EMER TO ZZZ APCH AND SOUGHT A SUITABLE OFF-ARPT SITE TO LAND. I LANDED AT APPROX ON THE GRASS MEDIAN BTWN THE EBOUND AND WBOUND LANES OF HWY. THE LNDG GEAR WAS UP (BY CHOICE) RESULTING IN THE PROP STRIKING THE GND. ALL PAX (2 PLUS THE PLT) DEPARTED THE AIRPLANE WITHOUT INJURY. AT THIS POINT, I AM NOT EXACTLY SURE OF THE PROX CAUSE OF THE ENG FAILURE OTHER THAN TO DESCRIBE IT AS ENG STARVATION. THERE WAS 6 GALLONS OF FUEL REMAINING IN THE R TANK AFTER THE LNDG TOOK PLACE. THIS WAS NOT A LOT, BUT IT WAS SURELY ENOUGH TO COMPLETE THE FLT SUCCESSFULLY. CONCERNING THE CHAIN OF EVENTS, THE NEED TO RERTE AROUND ADVERSE WX STARTED A NEW CYCLE OF EVENTS THAT WAS DIFFERENT FROM THAT WHICH WAS PLANNED. STRONGER HEADWINDS AND THE RESULTING SLOWER GND SPDS ALSO PLAYED AN IMPORTANT FACTOR. I WILL BE MORE AWARE IN THE FUTURE TO RECALCULATE FUEL REQUIREMENTS AND POSSIBLY INCLUDE A REFUELING STOP. FORTUNATELY, THERE WERE NO INJURIES TO THE PAX ON BOARD AND ONLY MINOR DAMAGE TO THE ACFT.

Synopsis

FOLLOWING MAX FUEL RANGE CROSS COUNTRY, PA28R LOSES POWER AND LANDS SHORT OF RWY AT DESTINATION.

ACN: 736412

Time / Day

Date : 200704
Day : Tue
Local Time Of Day : 0001 To 0600

Place

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

Environment

Flight Conditions : IMC
Light : Night

Aircraft : 1

Controlling Facilities.ARTCC : ZZZ.ARTCC
Operator.Common Carrier : Air Carrier
Make Model Name : Caravan 1 208A
Operating Under FAR Part : Part 135
Navigation In Use.Other : FMS or FMC
Flight Phase.Cruise : Level

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Component : 2

Aircraft Component : Fuel System

Component : 3

Aircraft Component : Attitude Indicator(Gyro/Horizon/ADI)

Person : 1

Affiliation.Company : Air Taxi
Function.Flight Crew : Single Pilot

Person : 2

Function.Controller : Radar
Qualification.Controller : Radar
Qualification.Pilot : Commercial
Experience.Flight Time.Last 90 Days : 75
Experience.Flight Time.Total : 7000
Experience.Flight Time.Type : 5000
ASRS Report : 736412

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Encounter : Weather
Anomaly.Non Adherence : Clearance
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 2
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Aircraft : Equipment Problem Dissipated
Resolatory Action.Controller : Issued Advisory
Resolatory Action.Flight Crew : Overcame Equipment Problem
Resolatory Action.Flight Crew : Returned To Intended or Assigned Course
Consequence.Other : Emotional Trauma

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

I HAD AN ACFT FOR MY FLT TONIGHT WHICH HAD A NEW FMS SYS (GARMIN 530'S AND MFD'S). I HAD OUR TRAINING ON THIS SYS WHICH WAS EXTENSIVE (8 HRS CLASS, 2 HRS INFLT). MY FIRST FLT WITH THIS ACFT WAS HAMPERED BY THE FACT THAT THE GPS PART OF THE GARMIN'S WAS DOWN, MAKING THEM MUCH LESS HELPFUL (IE, VIRTUALLY USELESS). I WAS HAVING TO NAV VIA VORS AND I DID A FINE JOB THROUGH THE FIRST 1/2 OF MY FLT. AS THE FLT DEVELOPED, A FUEL IMBAL WENT UNDETECTED. THE FUEL IMBAL WAS NOT TOO BIG (ACTUAL VALUE 300 LBS -- CARAVAN MAX 200) BUT IT APPARENTLY CAUSED ENOUGH OF AN ACFT OUT OF TRIM SITUATION TO WHERE THE ACFT AUTOPLT STOPPED VOR NAV TRACKING WHILE REMAINING ROUGHLY ON HDG. I WAS SLOW TO RECOGNIZE BOTH THE FUEL IMBAL/OUT OF TRIM AND NAV ERRORS. WHEN ATC QUERIED ME AS TO WHY I WAS APPROX 40 DEGS OR SO OFF COURSE, I ASKED FOR A VECTOR WHILE I SORTED OUT GETTING BACK ON MY FLT PATH. HAVING NEW EQUIP THAT WAS ONLY PARTIALLY FUNCTIONAL AND BEING NIGHT IFR MADE THIS CHALLENGING. UNFORTUNATELY THIS WAS NOT THE END OF MY PROBS ON THIS FLT. WHILE I WAS ATTEMPTING TO COPE WITH THE FUEL IMBAL AND TRIM PROBS (AND NAV PROBS), I NOTICED MY PRIMARY AND SECONDARY (PLT/COPLT) ATTITUDE INDICATION SYS HAD MAJOR DISAGREEMENTS. THE PRIMARY ATTITUDE INDICATOR WAS APPROX 20 DEGS OFF IN PITCH. THIS BECAME MY TRUE PRIMARY PROB AT THIS POINT. ALL MY ATTN HAD TO BECOME FOCUSED ON RECTIFYING THE TRIM PROB AND THEREBY SOLVING THE ATTITUDE INDICATION PROBS. BEING 5 MINS OR SO INTO THIS PROB, ATC HAD MADE ADDITIONAL INQUIRIES INTO MY STATUS. I HAD TO PUT OFF THEIR INQUIRIES WHILE I GOT THE ACFT BACK ON LEVEL/CONSTANT HDG FLT. THEY WERE SOMEWHAT MIFFED. GIVEN THE ATTITUDE INDICATION PROBS, I WAS CLOSE TO DECLARING AN EMER. I DIDN'T BECAUSE AS I STARTED TO RESOLVE THE FUEL IMBAL/TRIM MY ATTITUDE INDICATORS CAME BACK INTO AGREEMENT. AS I WAS GETTING CLOSER TO MY DEST, I ALSO FINALLY GOT RELIABLE NAV RESTORED OFF THE VOR OF MY HOME FIELD. MY PRIMARY PROBS ON THIS FLT WERE NAV DEFICIENCIES AND FAILURE TO PROMPTLY RESPOND TO ATC QUERIES. THE ROOT CAUSE WAS MY ALLOWING NORMALLY BENIGN PROBS (FUEL IMBAL) TO DEVELOP ON A NIGHT DURING WHICH I ALREADY HAD MAJOR SYS LIMITATIONS AND REALLY COULDN'T COPE WITH MUCH ELSE.

Synopsis

C208 PLT, UNFAMILIAR WITH NEW FMS SYSTEM -- FOR WHICH THE GPS FUNCTION WAS INOPERATIVE -- ENCOUNTERS NUMEROUS PROBLEMS WITH NAVIGATION AND ACFT ATTITUDE CONTROL.

ACN: 735290

Time / Day

Date : 200704
Day : Tue
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 1200

Environment

Flight Conditions : Marginal
Light : Daylight

Aircraft : 1

Operator.General Aviation : Personal
Make Model Name : Cessna 210 Centurion / Turbo Centurion 210C, 210D
Operating Under FAR Part : Part 91
Flight Phase.Cruise : Level

Component : 1

Aircraft Component : AC Generator/Alternator

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 40
Experience.Flight Time.Total : 800
Experience.Flight Time.Type : 650
ASRS Report : 735290

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Inflight Encounter : VFR In IMC
Anomaly.Inflight Encounter : Weather
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Anomaly Accepted

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

BEFORE DEP I MADE A LAST CHK OF THE WX, WHICH SHOWED LEGAL CEILINGS AND VISIBILITY, TOOK A GOOD LOOK AT THE SKY IN MY DEP DIRECTION, WHICH LOOKED FLYABLE AND DEPARTED. RPTED CEILING WAS 1700 FT BROKEN WHEN I LEFT, WITH THE LOWEST RPTED CEILING OF 1300 FT BROKEN, 2700 FT OVCST ON MY RTE. ON DEP CLBOUT, I BECAME DISTRACTED WHEN I NOTICED MY GENERATOR WAS NOT CHARGING. I ENGAGED THE AUTOPLT AND TOOK A FEW MINS TO TROUBLESHOOT THE GENERATOR, WHEN IT SUDDENLY STARTED WORKING. WHILE I WAS ENGAGED IN THIS, THE ACFT HAD CLBED A BIT AND I LOOKED UP TO SEE SOLID IMC AND MY ALT HAD INCREASED TO 1800 FT. AFTER A SLIGHT MOMENT OF INTENSE PANIC I REGAINED COMPOSURE AND DSNDDED BACK INTO VFR. IF I HAD BEEN SMART, I WOULD HAVE TURNED BACK IMMEDIATELY. AFTER A FEW MORE MINS, CEILINGS LOWERED TO AROUND 1200 FT MSL. I KNEW I HAD GOOD WX IN AT MOST 50 MORE MI SO I FOOLISHLY ELECTED TO CONTINUE. THE CEILINGS LOWERED TO ABOUT 1000 FT MSL AND I FINALLY DECIDED TO TURN BACK TO HOUSTON. WHEN I MADE THE TURN I SAW THAT THE WX HAD WORSENERED BEHIND ME. NOT WANTING TO RE-ENTER THE BUSY HOUSTON AIRSPACE AT BELOW 1000 FT, WITH NO GUARANTEE OF FINDING MY ARPT, I TURNED MY ACFT TOWARD HOME AND ENTERED IMC. IF I HAD NOT HAD A CONFIRMATION OF CLR WX AT THE HOME ARPT, I WOULD HAVE CALLED ZHU AND DECLARED AN EMER. IN RETROSPECT, I SHOULD HAVE CALLED THEM AND REQUESTED AN IFR POPUP. AT LEAST I WOULD HAVE BEEN IN THE SYS. I KEPT THE AUTOPLT ENGAGED, NAVING BY GPS AND PROCEEDED TO SLOWLY CLB TO 2500 FT MSL. I REASONED THAT 2500 FT WOULD KEEP ME SEPARATED FROM ANY IFR TFC AND NO OTHER VFR PLT WOULD BE FOOLISH ENOUGH TO FLY AT 2500 FT. AFTER WHAT SEEMED AN ETERNITY, BUT WAS IN REALITY ONLY 20 MINS OR SO, THE GND BEGAN APPEARING AGAIN AND I WAS ABLE TO DSND TO A LEGAL ALT AND REMAIN CLR OF CLOUDS. THE REST OF THE FLT WAS UNEVENTFUL AND I MADE A STANDARD APCH AND LNDG AT MY HOME ARPT. I AM RESOLVED TO NEVER, EVER LET THIS HAPPEN TO ME AGAIN. IT WAS FOOLISH. TO HELP MAKE MYSELF A SAFER PLT, I AM GOING TO PURSUE FINISHING MY IFR RATING AND IN THE MEANTIME I AM RAISING MY PERSONAL MINIMUMS TO AT LEAST 2000 FT AGL AND 5 MI VISIBILITY ON THE ENTIRE RTE, I OR WILL NOT GO.

Synopsis

FOLLOWING A DEP INTO MARGINAL VFR CONDITIONS AND DISTRACTED BY A MALFUNCTIONING GENERATOR, A LOW TIME PRIVATE PLT FINDS HIMSELF IN SOLID IMC.

ACN: 733122

Time / Day

Date : 200703
Day : Thu
Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : AIK.Airport
State Reference : GA
Altitude.MSL.Bound Lower : 3000
Altitude.MSL.Bound Upper : 4000

Environment

Flight Conditions : IMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : AGS.TRACON
Operator.General Aviation : Personal
Make Model Name : Bonanza 33
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach
Route In Use.Approach : Instrument Non Precision

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Commercial
Experience.Flight Time.Last 90 Days : 30
Experience.Flight Time.Total : 6000
Experience.Flight Time.Type : 1000
ASRS Report : 733122

Events

Anomaly.Altitude Deviation : Crossing Restriction Not Met
Anomaly.Altitude Deviation : Excursion From Assigned Altitude
Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Published Procedure
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Flight Crew : Executed Go Around

Assessments

Problem Areas : Flight Crew Human Performance

Narrative

AT 7000 FT I WAS ADVISED BY APCH TO EXPECT A VISUAL APCH INTO AIK. AFTER GETTING ATIS, AIK WAS RPTING 1700 FT. I ADVISED AGS I WOULD DO THE GPS

7 APCH. I WAS CLRED TO DSND TO AND MAINTAIN 4000 FT, WHILE WAITING ON A KING AIR TO COMPLETE THEIR APCH. I WAS VECTORED WITH SEVERAL TURNS. AFTER THE KING AIR RPTED CANCELING IFR, AGS CTLR CLRED ME TO 3000 FT AND MAINTAIN THIS TO THE IAF (VIXLY) AND ESTABLISHED ON THE FINAL APCH COURSE. THOUGH HE SAID PEPCI, VIXLY AND PEPCI ARE CLOSE INBOUND. WHEN I PUT THE APCH INTO MY GPS (GARMIN 530) I MISTAKENLY ACCEPTED THE FAF (PEPCI). I DSNDDED TO 3000 FT AND HEADED FOR PEPCI (I SHOULD HAVE BEEN GOING TO VIXLY). THE CTLR QUESTIONED WHAT I WAS DOING. I DECIDED TO GO MISSED APCH SINCE I WAS NOT FOLLOWING HIS CLRNC AND ADDING PWR AND THINKING I SHOULD RETURN TO 4000 FT I CLBED TO 3300 FT OR 3400 FT THEN REALIZED I SHOULD BE AT 3000 FT. WENT TO VIXLY -- DID THE PROC TURN AND COMPLETED THE APCH TO RWY 7 CORRECTLY.

Synopsis

A B33 EXECUTED A GO AROUND ON THE AIK RWY 7 GPS AFTER DESCENDING TOWARD THE FAF PRIOR TO THE IAF.

ACN: 732454

Time / Day

Date : 200703
Day : Thu
Local Time Of Day : 0001 To 0600

Place

Locale Reference.Navaid : SEA.VORTAC
State Reference : WA
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : IMC
Weather Elements : Turbulence
Light : Night

Aircraft : 1

Controlling Facilities.TRACON : S46.TRACON
Operator.Other : Government
Make Model Name : Cessna Aircraft Undifferentiated or Other Model
Operating Under FAR Part : Part 91
Navigation In Use.Other : GPS
Flight Phase.Cruise : Level
Route In Use.Enroute : On Vectors

Person : 1

Function.Flight Crew : First Officer
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 25
Experience.Flight Time.Total : 2700
Experience.Flight Time.Type : 650

Events

Anomaly.Inflight Encounter : Weather
Anomaly.Other Anomaly.Other
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Anomaly Accepted

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Weather

Narrative

LAST WEEK AT THE CONCLUSION OF A NIGHT MISSION WHILE ON A VFR FLT PLAN, WE HAD TO 'POP-UP' FOR AN INST CLRNC WITH NAVY WHIDBEY ATC TO REACH OUR DEST. THE CLRNC WAS GRANTED AND WE WERE VECTORED TO A HDG OF 130 DEGS AND A CLB TO 3000 FT. WE COMPLIED AND ENTERED IMC. AFTER BEING HANDED OFF TO SEATTLE APCH, STILL IMC, WE CHKED IN AND THE CTLR CONFIRMED HAVING US WITH HIM. AFTER A WHILE AT 3000 FT ON A HDG OF 130 DEGS WE BEGAN TO PASS IN AND OUT OF THE BASES OF THE CLOUD LAYER, BUT STILL MOSTLY IMC. I CONFIRMED VIA GPS AND GND DEAD RECOGNITION THAT WE WERE E OF BELLEVUE, STILL HDG 130 DEGS, I THEN NOTICED WE WERE PASSING I-90 STILL ON A HDG OF 130 DEGS AND ENTERED SOLID IMC AGAIN. I KNEW THAT THIS HDG WAS TAKING US TOWARDS HIGH TERRAIN. THIS MADE ME VERY NERVOUS AS THE CTLR HAD NOT TURNED US TO A MORE SOUTHERLY HDG AS I EXPECTED, AND I KNEW THAT THE TERRAIN WAS GOING TO START RAISING ABOVE OUR ALT VERY QUICKLY. I TOLD THE PIC TO CONTACT THE CTLR TO INQUIRE ABOUT THIS SITUATION. HE DID, AND THE CTLR WAS APPARENTLY NOT AWARE THAT WE WERE IMC ON AN IFR CLRNC. HE IMMEDIATELY GAVE US NEW VECTOR OF 180 DEGS AND A DSCNT TO 2000 FT. WE COMPLIED, AND EVENTUALLY POPPED OUT OF THE CLOUD LAYER AT ABOUT 2000 FT INTO VMC, I LOOKED TO THE E AND SAW THAT WE WERE A BIT TOO CLOSE TO THE HIGH TERRAIN TO THE E FOR MY COMFORT. WE WERE VMC AT THIS POINT, HAD A VISUAL OF OUR DEST AND CANCELED OUR IFR CLRNC -- THE REST OF THE FLT WAS UNEVENTFUL. THE PIC AND I DISCUSSED THIS AND COULD ONLY FIGURE THAT SINCE WE WERE ON A VFR FLT PLAN INITIALLY, AND HAD TO 'POP-UP' FOR AN INST CLRNC THAT THIS IS WHAT CAUSED THE CONFUSION. IN MY NEARLY 20 YRS OF FLYING IFR AROUND THESE PARTS THIS IS THE FIRST TIME I HAVE EXPERIENCED SUCH AN EVENT, AND IT MADE ME THINK -- UMMMMMM -- WHAT IF? LOOKING BACK, THE SITUATION QUICKLY WAS TURNING INTO A FORMULA FOR DISASTER -- HAD WE JUST FLEW ALONG FAT AND HAPPY WAITING FOR THE CTLR TO VECTOR US, I BELIEVE THAT THE FLT WOULD HAVE MET WITH A MUCH LESS THAN DESIRABLE OUTCOME AND WE'D BECOME A STATISTIC, WHICH IS NOT MY IDEA OF FUN. OUR DECISION AS PLTS TO AVOID THIS SAME SITUATION AGAIN, BASED ON THE CHAIN OF EVENTS LEADING UP TO WHAT MAY HAVE BEEN AN ACCIDENT IS, THAT WHILE IMC WHEN WE GET A HDGF TO A DIFFERENT CTLR, OUR INITIAL CONTACT WILL BE SOMETHING LIKE: 'APCH, THIS IS FLT XXXXX WITH YOU AT XXXXX (ALT) IFR TO XXXXX.' EMPHASIZE ON THE IFR FOR CLARIFICATION. THAT WAY EVERYONE IS ON THE SAME PAGE. I THINK THE BOTTOM-LINE IS THAT EVERYONE IS HUMAN, EVERYONE MAKES MISTAKES AND AS PLTS WE NEED TO BE AWARE OF OUR POS AT ALL TIMES AND QUESTION THE SITUATION IF THERE IS ANY AMOUNT OF DOUBT -- COMPLACENCY KILLS. REMEMBER FAR PART 91.3 -- YOU HAVE AUTH IN THE COCKPIT.

Synopsis

A CESSNA'S IFR FLT STATUS WAS CONFUSED WHEN TRANSFERRING FROM ONE ATC FAC (NUW) TO ANOTHER (S46 TRACON) WITH TERRAIN BECOMING A FACTOR.

ACN: 732180

Time / Day

Date : 200703
Day : Wed
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : MDPP.Airport
State Reference : FO
Altitude.AGL.Single Value : 1800
Altitude.MSL.Single Value : 2900

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : MDPP.TRACON
Operator.Common Carrier : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Operating Under FAR Part : Part 121
Navigation In Use.Other : FMS or FMC
Navigation In Use.Other : GPS
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : GPWS

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
ASRS Report : 732180

Person : 2

Affiliation.Company : Air Carrier
Function.Flight Crew : First Officer
ASRS Report : 732181

Person : 3

Affiliation.Government : Foreign
Function.Controller : Approach

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Independent Detector.Aircraft Equipment : GPWS
Independent Detector.Other.Flight CrewA : 1

Resolatory Action.Flight Crew : Executed Missed Approach
Resolatory Action.Flight Crew : Took Precautionary Avoidance Action

Assessments

Problem Areas : Aircraft
Problem Areas : Chart Or Publication
Problem Areas : Flight Crew Human Performance

Narrative

DURING RNAV/GPS APCH TO RWY 8 AT POP/MDPP IN VISUAL MET CONDITIONS A PARTIAL TERRAIN AUDIO WAS HEARD WITH PULL UP DISPLAYED ON BOTH PFDS. EVENT OCCURRED IN VICINITY OF KELSO AT APPROX 1800 RA AND 2900 BARO WITH LOCAL ALTIMETER 30.01. PRIOR TO WARNING ALL PARAMETERS APPEARED NORMAL, TRACKING LNAV, RNP.3, ON VNAV PATH, AUTOPLT ENGAGED, ACFT CONFIGURED WITH NO OTHER ALERTS OR WARNINGS. APCH ABANDONED AND CONTINUED AS VISUAL APCH TO LNDG. AT THIS POINT I BELIEVE THE APCH WAS BEING CONDUCTED PROPERLY AND THERE MAY BE AN ANOMALY IN THE DATABASE OR APCH DESIGN WHICH CAUSED THE WARNING. PRECIPITOUS TERRAIN UNDERLYING THE APCH DID NOT APPEAR TO BE A THREAT. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: RPTR STATES THAT THE GPWS WARNING WAS VERY BRIEF, LASTING LESS THAN A SECOND WITH NO PULL UP COMMANDS. THE ACFT WAS IN A STEADY DESCENT AS IT PASSED OVER KELSO AND THE RIDGE THAT PROBABLY CAUSED THE WARNING WAS CLEARLY VISIBLE. THE RPTR SENT IN THE RPT TO CAUTION OTHERS THAT THEY MAY RECEIVE AN UNWARRANTED GPWS WARNING PASSING KELSO.

Synopsis

B737 CREW RPTS GPWS WARNING DURING RNAV APCH TO RWY 8 AT MDPP.

ACN: 731001

Time / Day

Date : 200701
Day : Mon
Local Time Of Day : 0001 To 0600

Place

Locale Reference.Airport : RNH.Airport
State Reference : WI

Person : 1

Affiliation.Company : Corporate
Function.Flight Crew : Captain
Function.Oversight : PIC
Qualification.Pilot : ATP
Qualification.Pilot : CFI
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 50
Experience.Flight Time.Total : 7000
Experience.Flight Time.Type : 250
ASRS Report : 731001

Events

Anomaly.Other Anomaly.Other
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.None Taken : Anomaly Accepted

Assessments

Problem Areas : ATC Human Performance
Problem Areas : FAA

Situations

ATC Facility.Procedure Or Policy : ZMP.ARTCC

Narrative

THIS REPORT REFERS TO AN ON-GOING SITUATION WITH STARS IN THE MINNEAPOLIS-ST PAUL AREA. SINCE THE OPENING OF RUNWAY 17-35 AT MINNEAPOLIS/ST PAUL, A SERIES OF NEW SIDS AND STARS WERE ADDED FOR AIRPORTS IN THE AREA. RNH HAS ONE PUBLISHED STAR, THE AGUDE1, BUT WE ARE OFTEN ASSIGNED OTHER STARS. THE PROBLEM ARISES IN THE FACT THAT AIRCRAFT ARRIVING AT RNH FROM THE SOUTH THROUGH THE NORTHWEST ARE ROUTINELY ASSIGNED THE ENCEE ONE AND TWOLF ONE, EVEN THOUGH THEY ARE NOT LISTED AS STARS FOR RNH. A LOCALLY BASED BUSINESS JET FLIES FROM SLC TO RNH ON A REGULAR BASIS. THE FLIGHT CREW IS OFTEN ASSIGNED THE ENCEE ONE ARRIVAL. THE FLIGHT CREW MUST ENTER EITHER MSP OR ST PAUL AS THE NEW DESTINATION SINCE THAT STAR IS NOT LISTED IN THE FLIGHT

MANAGEMENT SYSTEM (FMS) DATABASE FOR RNH. SOME OUT-OF-TOWN PILOTS FLYING TO RNH HAVE COMPLAINED ABOUT THE HIGH WORKLOAD AND THE SCRAMBLE FACTOR INVOLVED IN TRYING TO FIND AND CROSS TRGET INTERSECTION AT 8000 FEET ON THE TWOLF ONE ARRIVAL TO A MINNESOTA AIRPORT, NOT THE AIRPORT HE/SHE MAY BE FLYING TO, ESPECIALLY WHEN IT IS TOTALLY UNEXPECTED. PLEASE ADD RNH TO THE ABOVE LISTED STARS. THE REQUIRED WAYPOINTS WILL THEN BE AVAILABLE IN GPS AND FMS DATABASES UNDER RNH FOR PILOTS TO USE, THUS MAKING THE ARRIVALS SAFER AND EASIER.

Synopsis

PLT VOICED CONCERN REGARDING ATC ASSIGNED STAR PROCS THAT DO NOT TERMINATE AT RNH, REQUIRING FIX INPUTS FOR FMS.

ACN: 729632

Time / Day

Date : 200702
Day : Sat
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 4500

Environment

Flight Conditions : IMC
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.General Aviation : Personal
Make Model Name : Cessna Stationair/Turbo Stationair 6
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : Attitude Indicator(Gyro/Horizon/ADI)

Component : 2

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 6
Experience.Flight Time.Total : 635
Experience.Flight Time.Type : 6
ASRS Report : 729632

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Altitude Deviation : Excursion From Assigned Altitude
Anomaly.Cabin Event : Passenger Illness
Anomaly.Non Adherence : Clearance

Anomaly.Other Anomaly
Anomaly.Other Anomaly : Speed Deviation
Anomaly.Other Spatial Deviation
Resolatory Action.Controller : Provided Flight Assist
Resolatory Action.Flight Crew : Overcame Equipment Problem
Resolatory Action.Flight Crew : Regained Aircraft Control

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance
Problem Areas : Weather

Narrative

I FILED AN IFR FLT PLAN WITH FLT SVC FOR A FLT FROM ZZZ1 TO ZZZ2. THE RTE REQUESTED WAS GPS DIRECT. ON THE GND IN THE AIRPLANE, I CALLED APCH AND WAS GIVEN A CLRNC AND VOID TIME. THE CLRNC WAS DIRECT ABC THEN DIRECT ZZZ2, EXPECTING THE GPS RWY 31 APCH. I PROGRAMMED ZZZ2 INTO THE GPS UNIT BUT DID NOT ENTER THE APCH AT THAT TIME, THINKING IT WAS EASY TO DO IN THE AIR. SOMETIMES THE ROUTING IS CHANGED BY APCH IN THE AIR ANYWAY. I TOOK OFF AND AFTER CALLING APCH ON THE RADIO, CLBED TO THE ASSIGNED ALT OF 6000 FT. PART OF THE CLB WAS THROUGH IMC, BUT THE CLOUD TOPS WERE ABOUT 5700-6300 FT, SO I WAS ON TOP PART OF THE TIME. MEANWHILE, I TRIED TO ENTER THE APCH INTO THE GPS BUT WAS NOT SUCCESSFUL. I AM MUCH MORE FAMILIAR WITH THE GARMIN SERIES 400 AND 500 GPS UNITS. THIS AIRPLANE (CESSNA STATIONAIR T206) HAS A HONEYWELL BENDIX/KING KLN94 INSTALLED. THE OP IS SIMILAR TO THE GARMIN, BUT THERE WAS ENOUGH DIFFERENCE TO CONFUSE MY ABILITY TO PROGRAM IT DURING THE STRESS OF THIS FLT. DURING THIS FLT, I WAS HAVING CONSIDERABLE DIFFICULTY MAINTAINING THE CTLR ASSIGNED DIRECTIONS AND ALTS. AT FIRST, I THOUGHT THAT IT WAS THE ACTIVITY OF PROGRAMMING THE GPS THAT WAS TAKING MY ATTN FROM THE FLT INSTS. THIS WAS PROBABLY PARTLY THE PROB. HOWEVER, AFTER HAVING BEEN CLRED AND DSNDING TO A LOWER ALT (COMPLETELY IN IMC), I STARTED TO HAVE A SERIOUS CTL PROB. FORTUNATELY THIS AIRPLANE HAS A BACKUP ATTITUDE INDICATOR (AI) (ARTIFICIAL HORIZON) ON THE COPLT'S SIDE (BUT FAIRLY LOW ON THE FAR SIDE OF THE COPLT'S YOKE). AT SOME POINT I LOOKED AT THE BACK UP AND I AND NOTICED IT WAS SHOWING A STEEP TURN WHILE THE ONE IN FRONT OF ME (ON THE PLT'S SIDE) WAS SHOWING LEVEL. I THEN REALIZED THAT MY AI WAS FAILING AND STARTED TO USE THE BACKUP AI. HOWEVER, BECAUSE OF MY INST TRAINING, IT WAS VERY HARD TO GET USED TO REFERRING TO THE BACKUP AI CONSTANTLY AND IGNORING THE PRIMARY AI IN FRONT OF ME. DURING ALL OF THIS TIME, THE DIRECTION CTL AND ALT CTL WAS VERY DIFFICULT, DEVIATING MAYBE 30 DEGS FROM THE ASSIGNED HDG AND MAYBE +/-400 FT FROM THE ASSIGNED ALT. PERHAPS BECAUSE I HAD SLOWED THE AIRPLANE DOWN CONSIDERABLY DURING ALL OF THIS, APCH CTL LET AT LEAST ONE FASTER AIRPLANE (MALIBU) GO PAST ME. TO DO THIS, I WAS CONSTANTLY ASSIGNED NEW HDGS TO PUT ME IN A KIND OF HOLDING PATTERN. THIS WENT ON FOR SEVERAL MINS WHILE I STRUGGLED WITH THE AIRPLANE. (I DID RPT THE FAULTY INST TO APCH BUT I ALSO MENTIONED MY BACK-UP AI.) 1 PAX GOT SICK FROM THE MOTION. FINALLY I WAS ASSIGNED 3000 FT AND UPON REACHING THAT ALT COULD SEE GND BELOW ME. I CONTINUED DOWN AND CANCELED IFR AFTER REACHING ABOUT 2600 FT MSL. AFTER THAT, THERE WERE NO PROBS WITH AIRPLANE CTL AND I

PROCEEDED TO PAO TO LAND SMOOTHLY. I HAD NOTICED WHEN I WAS AT ZZZ2 EARLIER IN THE DAY THAT THE AI TOOK A LONG TIME TO ORIENT ITSELF. ONCE IN THE AIR I DID NOT NOTICE A PROB WITH THIS INST, BUT I WAS VFR FROM ZZZ2 TO ZZZ3 AND LATER FROM ZZZ3 TO ZZZ1. IN RETROSPECT, THERE WERE MANY THINGS I COULD HAVE DONE TO MAKE THE PROB LESS SERIOUS: FIRST, I SHOULD HAVE PROGRAMMED THE KLN94 GPS COMPLETELY ON THE GND AT ZZZ1 PRIOR TO TKOF. ALTHOUGH I WAS CONFUSED IN THE AIR, I WOULD HAVE FIGURED IT OUT ON THE GND (OR CANCELED THE CLRNC). ONCE RECOGNIZING THE KEY DIFFERENCE FROM THE GARMIN PROGRAMMING PROC, I MAY NOT HAVE HAD A PROB REPROGRAMMING THIS GPS IF LATER REQUIRED IN THE AIR. SECOND, ONCE RECOGNIZING A BAD AI, I SHOULD HAVE COVERED IT SO I WOULD NOT BE ABLE TO INADVERTENTLY USE IT. I HAVE KEPT A SUCTION CUP TYPE COVER IN MY FLT BAG FOR MAYBE 18 YRS FOR THIS PURPOSE BUT NEVER NEEDED IT BEFORE, AND FORGOT ABOUT IT THIS TIME WHEN I DID NEED IT. THIRD, I SHOULD HAVE HAD MORE TRAINING ON THIS SPECIFIC GPS. THE PARTICULAR PROGRAMMING SEQUENCE TO DO WHAT WAS NEEDED FOR THIS FLT CONTAINS AT LEAST 1 STEP THAT IS MUCH MORE CONFUSING THAN THE STEPS FOR PROGRAMMING APCHS INTO THE GARMIN 530. ON THIS NOTE, I WOULD LIKE TO ADD THAT THERE NEEDS TO BE MORE STANDARDIZATION AMONG THE DIFFERENT GPS BRANDS AND MODELS. I FEEL THAT THE GARMIN IS MORE INTUITIVE COMPARED TO THE KLN94. BUT THE KLN94 HAS SOME STEPS THAT COULD BE IMPORTANT IN FLT PROGRAMMING THAT WOULD BE MORE DIFFICULT TO IMPLEMENT IN THE GARMIN 530 DURING FLT IN INST CONDITIONS. ESPECIALLY FOR A RENTER OF AIRPLANES, IT IS NECESSARY TO BE PROFICIENT IN DIFFERENT MODELS OF GPS UNITS WHEN RENTING AIRPLANES WITH DIFFERENT EQUIP.

Synopsis

A IFR/IMC C206 PILOT REPORTS CONFUSION AND ATTITUDE CTL PROBLEMS USING AN UNFAMILIAR ADVANCED NAV SYSTEM IN FLT FOLLOWING AN ADI FAILURE.

ACN: 728453

Time / Day

Date : 200702
Day : Tue
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 4500

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Operator.General Aviation : Instructional
Make Model Name : Skyhawk 172/Cutlass 172
Operating Under FAR Part : Part 91
Flight Phase.Descent : Intermediate Altitude

Aircraft : 2

Make Model Name : PA-46 Malibu

Person : 1

Affiliation.Other : Instructional
Function.Instruction : Instructor
Qualification.Pilot : CFI
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 72
Experience.Flight Time.Total : 1700
Experience.Flight Time.Type : 900
ASRS Report : 728453

Person : 2

Affiliation.Other : Instructional
Function.Instruction : Trainee

Person : 3

Function.Flight Crew : Single Pilot

Events

Anomaly.Conflict : NMAC
Independent Detector.Other.Flight CrewA : 1
Independent Detector.Other.Flight CrewB : 2

Resolatory Action.Flight Crew : Took Evasive Action
Miss Distance.Horizontal : 10
Miss Distance.Vertical : 15

Assessments

Problem Areas : Flight Crew Human Performance

Narrative

DURING A FLT TRAINING ACTIVITY, WE WERE IN A C172R G1000 EQUIPPED, TIS (TFC INFO SYS) INOP, HDG E (090 DEGS). THE STUDENT WAS FLYING A CONSTANT AIRSPD DSCNT FROM 5500 FT TO 3500 FT MSL. AT EXACTLY 4500 FT THE STUDENT YELLED AND JERKED THE CTL WHEEL L, WE HAD A VERY NEAR MISS WITH A PIPER MERIDIAN. IT WAS A DIRECT NEAR MIDAIR, BOTH ACFT WERE ON A DIRECT COLLISION COURSE. I (THE CFI) HAD MY HEAD DOWN PROGRAMMING THE GPS, WHEN THE STUDENT YELLED AND TURNED L. I LOOKED UP. THE OTHER ACFT WENT 10 FT TO THE R OF THE R MAIN WHEEL AND 15 FT BELOW IT. THE OTHER ACFT MADE NO EVASIVE MANEUVER TO AVOID THE COLLISION, I BELIEVE THE PLT OF THAT ACFT NEVER SAW OURS. IF MY STUDENT HAD NOT TURNED L OUT OF REACTION AND INSTEAD TURNED R AS THE AIM SAYS, I WOULD NOT BE ALIVE TO WRITE ABOUT THIS EVENT.

Synopsis

A C172 PLT RPTS NMAC WITH PA46 WHILE TRAINING AT 4500 FT.

ACN: 727789

Time / Day

Date : 200702
Day : Tue
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 1900

Environment

Flight Conditions : VMC
Light : Night

Aircraft : 1

Controlling Facilities.Tower : ZZZ.Tower
Operator.General Aviation : Instructional
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach

Component : 1

Aircraft Component : GPS & Other Satellite Navigation

Person : 1

Affiliation.Other : Instructional
Function.Instruction : Instructor
Qualification.Pilot : CFI
Qualification.Pilot : Commercial
Qualification.Pilot : Instrument
Qualification.Pilot : Multi Engine
Experience.Flight Time.Last 90 Days : 60
Experience.Flight Time.Total : 790
Experience.Flight Time.Type : 75
ASRS Report : 727789

Person : 2

Affiliation.Other : Instructional
Function.Instruction : Trainee

Person : 3

Affiliation.Government : FAA
Function.Controller : Local

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Non Adherence : FAR
Anomaly.Other Spatial Deviation
Independent Detector.ATC Equipment : MSAW
Independent Detector.Aircraft Equipment : TCAS
Resolatory Action.Controller : Issued Alert
Resolatory Action.Flight Crew : Exited Adverse Environment

Assessments

Problem Areas : ATC Human Performance
Problem Areas : Environmental Factor
Problem Areas : Flight Crew Human Performance

Narrative

IN CRUISE 40 MI FROM ZZZ AT 6500 FT MSL, I ASKED MY STUDENT (PVT, FIRST NIGHT XCOUNTRY, AND UNFAMILIAR WITH G1000 EFIS), TO CHK FIELD ELEVATION AND TPA AT ZZZ. I CANNOT REMEMBER HIS RESPONSE ON FIELD ELEVATION, PERHAPS INDICATING THAT I WASN'T REALLY LISTENING, AS THE NUMBER I WANTED WAS TPA. HE RESPONDED THAT PATTERN ALT WAS 1300 FT, WHICH HE LATER INFORMED ME WAS BASED ON AN INCORRECT ADDITION OF 200 FT INSTEAD OF 1000 FT TO THE FIELD ELEVATION, RATHER THAN REFERRING TO THE PUBLISHED TPA). DESIRING TO DEMONSTRATE THE VERT NAV DSCNT PLANNING TOOLS OF THE G1000 AVIONICS, I WAS ALREADY ON THE APPROPRIATE VNAV PAGE, AND FAILED TO CHK FIELD ELEVATION MYSELF EITHER WITH THE USE OF THE G1000 OR THE PAPER SECTIONAL CHART. THE VNAV PROFILE WAS PROGRAMMED FOR A DSCNT AT 600 FPM, TO ARRIVE 6 MI FROM THE ARPT AT 1600 FT (I INTENDED TO DSND TO TPA CLOSER TO THE ARPT, TO ENSURE THAT OUR ALT WAS 'PADDED' AND TO WAIT FOR THE FIELD IN SIGHT). WE FLEW THE PROFILE EXACTLY, AND I SELECTED TAWS ON THE MFD MAIN MAP SCREEN. ON INITIAL CONTACT WITH TWR, THE CTLR INSTRUCTED US TO SQUAWK A UNIQUE CODE, AND TO RPT 5 MI FINAL STRAIGHT-IN FOR RWY XX. HE ALSO ADVISED OF TFC IN THE PATTERN. WE COMPLETED OUR DSCNT AND LNDG CHKLISTS, AND I BEGAN TO SEARCH FOR THE RWY (WE HAD THE BEACON IN SIGHT) AND THE OTHER TFC. AT ABOUT 1900 FT MSL, I BECAME CONCERNED THAT WE WERE LOW BECAUSE I FELT THAT I SHOULD BE ABLE TO SEE THE RWY, THAT THE TFC IN THE PATTERN APPEARED TO BE ABOVE US, THAT THE MAP WAS 90% YELLOW (THE COLOR FOR LESS THAN 1000 FT BUT MORE THAN 100 FT AGL) AND THAT THE LIGHTS ON THE GND APPEARED TO INDICATE THAT WE WERE BELOW 1000 FT. I INSTRUCTED THE STUDENT TO CLB SEVERAL HUNDRED FT AND ASKED AGAIN WHAT TFC PATTERN WAS, WHILE MOVING TO THE WAYPOINT -- ARPT INFO PAGE. ALMOST IMMEDIATELY AFTER THE QUESTION, THE TWR CTLR ISSUED A LOW ALT ALERT, AND PROVIDED CURRENT ALTIMETER SETTING. I INSTRUCTED THE STUDENT TO CLB AGAIN, AND ASKED THE CTLR WHAT TFC PATTERN ALT WAS. I'M UNSURE IF THE CTLR HEARD OR RESPONDED, BECAUSE MY STUDENT (STILL UNCONCERNED) INFORMED ME AT ABOUT THE SAME TIME I VERIFIED THE CORRECT ALTIMETER SETTING AND THE FIELD ELEVATION ACCORDING TO THE GARMIN THAT FIELD ELEVATION WAS 1100 FT. I COMMANDED A CLB TO 2100 FT UNTIL THE ARPT AND APCH LIGHTING WERE IN SIGHT. I FELT THE PRIMARY CAUSE WAS THAT I FAILED TO DOUBLECHK FIELD ELEVATION (MUCH LESS CHK THE PAPER CHART). CONTRIBUTING FACTORS WERE THE PREOCCUPATION WITH THE VNAV FUNCTION, FAILURE TO REF THE PUBLISHED AFD AND SECTIONAL CHART, AND THE STUDENT'S FAILURE TO

PROPERLY DEFINE AND IDENT TPA, AND THE FAILURE TO PROGRAM AND SELF-BRIEF THE NDB 35 (GPS OVERLAY) APCH PROC FOR SITUATIONAL AWARENESS (I HAD REJECTED ITS USE BECAUSE THE FINAL APCH COURSE WAS NOT EXACTLY STRAIGHT-IN). EFIS WAS A FACTOR IN THAT, ON MOST OF MY FLTS TO THAT ARPT, I HAVE ONLY AN ALTIMETER AND PAPER CHART, SIMPLIFYING ALT AWARENESS. EFIS WAS A POSITIVE FACTOR IN TERRAIN WARNING AND EASE OF DISCOVERING ACTUAL FIELD ELEVATION WHEN THE PROB WAS DEFINED. I RECOMMEND THAT THE PIC FIRST POSITIVELY IDENT ALT AND TERRAIN INFO PRIOR TO DSCNT WITH THE ACTUAL PAPER CHARTS PRIOR TO DSCNT AND/OR VNAV PROGRAMMING. SECOND, THAT THE VNAV'S ALT ABOVE WAYPOINT (THEREFORE AGL) FEATURE BE USED INSTEAD OF, OR TO XCHK, MSL ALTS FOR DSCNTS TO LNDG. SAFE COMPLETION OF THE FLT WAS POSSIBLE BECAUSE OF PRIOR EDUCATION ON HUMAN FACTORS, SPECIFICALLY CFIT IN BOTH MOUNTAINOUS AND FLAT TERRAIN, PROMPTING MY IMMEDIATE CLB COMMAND AT THE FIRST DOUBT. ALSO, THE CTLR'S PROMPT LOW ALT WARNING WAS OBSERVANT AND HELPFUL, AND CAME AS SOON AS HE POSSIBLY COULD HAVE REALIZED WE HAD GONE (EVEN SLIGHTLY) LOWER THAN WAS NORMAL ON APCH.

Synopsis

INSTRUCTOR AND STUDENT PLTS EXPERIENCE CFTT ON NIGHT VFR CROSS COUNTRY.

ACN: 727728

Time / Day

Date : 200702
Day : Fri
Local Time Of Day : 1801 To 2400

Place

Locale Reference.Airport : LAX.Airport
State Reference : CA
Altitude.MSL.Single Value : 400

Environment

Flight Conditions : VMC
Light : Night

Aircraft : 1

Controlling Facilities.TRACON : SCT.TRACON
Operator.Common Carrier : Air Carrier
Make Model Name : B737-300
Operating Under FAR Part : Part 121
Navigation In Use.Other : FMS or FMC
Flight Phase.Climbout : Takeoff
Route In Use.Departure.SID : HOLTZ

Person : 1

Affiliation.Company : Air Carrier
Function.Flight Crew : Captain
Function.Oversight : PIC
Experience.Flight Time.Last 90 Days : 73
Experience.Flight Time.Type : 4500
ASRS Report : 727728

Person : 2

Affiliation.Company : Air Carrier
Function.Flight Crew : First Officer

Person : 3

Affiliation.Government : FAA
Function.Controller : Departure

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Non Adherence : Clearance
Anomaly.Non Adherence : Published Procedure
Anomaly.Non Adherence : Required Legal Separation
Anomaly.Other Spatial Deviation
Independent Detector.Other.ControllerA : 3

Resolatory Action.Controller : Issued Alert
Resolatory Action.Controller : Issued New Clearance
Resolatory Action.Flight Crew : Returned To Intended or Assigned Course
Consequence.FAA : Reviewed Incident With Flight Crew

Assessments

Problem Areas : Aircraft
Problem Areas : Flight Crew Human Performance

Narrative

CAPT TKOF USING HUD WITH TOGA ARMED LNAV SWITCHES DOWN FOR THE HOLTZ 7 RNAV DEP. AT 400 FT LNAV MODE ENGAGED (PER FOM) ACFT GUIDANCE SHOWING A L TURN TO COURSE. INITIALLY FOLLOWING GUIDANCE KNOWING THIS IS INCORRECT, I TURNED BACK TO A 250 DEG HDG AND AT THE SAME TIME ATC INQUIRED AND INSTRUCTED AN IMMEDIATE R TURN TO 250 DEGS TO AVOID CONFLICT. LOOKED AT THE XXX PAGE AND IT SHOWED THE ACTUAL RNP AT 3.52 WELL ABOVE THE 2.0 THRESHOLD REQUIRED FOR NAV PERFORMANCE. TOLD ATC WE NEED VECTORS RNAV UNRELIABLE. UPON FURTHER CLBOUT RNP, WENT BACK DOWN TO NORMAL READING OF ABOUT .5. ACCEPTED DIRECT TO NEXT FIX AND RESUMED THE DEP. FMC WAS VERIFIED PRIOR TO PUSH WITH THE CORRECT HOLTZ 7 DEP AND RWY 24L. RNAV DEP PROCS WERE REVIEWED IN THE TKOF BRIEFING. IN THE B-300 ACFT IF RNAV DEPS ARE REQUIRED, A SECOND FMC MUST BE INSTALLED TO MONITOR THE LEGS PAGE AND RNP. OUR FOM DIRECTS US TO DISPLAY THE TKOF REF PAGE DURING TKOF. MAKE THE SYS RELIABLE -- DUAL GPS SHOULD ALSO BE INSTALLED.

Synopsis

B737-300 CREW DEVIATES FROM TRACK DURING INITIAL PHASE OF HOLTZ RNAV DEPARTURE FROM LAX.

ACN: 726815

Time / Day

Date : 200702
Day : Fri
Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : IMC
Weather Elements : Ice
Light : Daylight

Aircraft : 1

Controlling Facilities.TRACON : ZZZ.TRACON
Operator.General Aviation : Personal
Make Model Name : Bonanza 35
Operating Under FAR Part : Part 91
Flight Phase.Descent : Approach
Route In Use.Arrival : On Vectors

Component : 1

Aircraft Component : Oil Pump

Component : 2

Aircraft Component : Navigational Equipment and Processing

Person : 1

Affiliation.Other : Personal
Function.Flight Crew : Single Pilot
Qualification.Pilot : Instrument
Qualification.Pilot : Private
Experience.Flight Time.Last 90 Days : 21
Experience.Flight Time.Total : 1377
Experience.Flight Time.Type : 801
ASRS Report : 726815

Person : 2

Affiliation.Government : FAA
Function.Controller : Approach

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Altitude Deviation : Excursion From Assigned Altitude

Anomaly.Inflight Encounter : Weather
Anomaly.Maintenance Problem : Improper Maintenance
Anomaly.Non Adherence : FAR
Anomaly.Non Adherence : Published Procedure
Anomaly.Other Spatial Deviation
Independent Detector.Aircraft Equipment.Other Aircraft Equipment : Oil Press Ind.
Heading Deviation
Independent Detector.Other.Flight CrewA : 1
Resolatory Action.Flight Crew : Diverted To Another Airport
Resolatory Action.Flight Crew : Overcame Equipment Problem
Consequence.Other

Maintenance Factors

Maintenance.Performance Deficiency : Inspection
Maintenance.Performance Deficiency : Repair

Assessments

Problem Areas : Aircraft
Problem Areas : Chart Or Publication
Problem Areas : Maintenance Human Performance
Problem Areas : Weather

Narrative

IN THE MORNING I RECEIVED AN FSS BRIEFING AND ALSO LOOKED AT NOAA WX ON-LINE. THE TRIP ORIGINATED AT ZZZ, US, WITH A STOP AT ZZZ1, US, ON AN IFR FLT PLAN. ON THIS LEG I QUICKLY PICKED UP ICE WHEN BRIEFLY ENTERING THE CLOUDS. AFTER DEPARTING ZZZ1 I ELECTED NOT TO PICK UP MY IFR FLT PLAN AND STAY UNDER THE CLOUD CEILING OF 3500 FT. FORECAST CEILINGS IN THE ZZZ2 AREA WERE 1300-2500 FT. I COULD NOT PICK UP ZZZ2 ATIS OR ZZZ2 AWOS UNTIL ABOUT 20 MI FROM ZZZ VOR. AT THIS TIME I HEARD OF CEILINGS OF 500-600 FT. I CLBED TO 3500 FT AND CALLED ZZZ2 APCH AND REQUESTED THE ILS. AT THIS TIME I BECAME AWARE OF A DROP IN OIL PRESSURE. ZZZ APCH GAVE ME AN INITIAL HDG OF 170 DEGS AND DSND TO 2000 FT. ON ENTERING THE CLOUDS THE DIRECTIONAL GYRO SEEM TO FIRST SWING OFF HDG AND MY AUTOPLT WOULD NOT HOLD THE HDG. I RECYCLED MY AUTOPLT, BUT IT WOULD STILL NOT HOLD THE HDG. WHILE TRYING TO SET MY DIRECTIONAL GYRO TO THE COMPASS I FELL BELOW 2000 FT. AFTER THE CTLR RADIOED THAT I HAD A POSSIBLE DIRECTIONAL GYRO PROB I STARTED TO RELY ON MY COMPASS AND GPS TO NAV. ATC INSTRUCTED ME TO GET LOWER TILL I BROKE OUT OF THE CLOUDS. I THEN WAS INSTRUCTED TO PROCEED TO ZZZ4 ARPT. THE NEXT MORNING I WENT BACK TO ZZZ4 ARPT TO POSSIBLY BRING MY PLANE TO ITS HOME ARPT. UPON CRANKING THE ENG I HAD NO OIL PRESSURE INDICATED AND NO DROP WHEN FEATHERING THE PROP. MY ACFT REMAINS AT ZZZ4. I HAVE ALREADY TOLD MY MECH THAT I'LL WANT ANOTHER DIRECTIONAL GYRO. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: THE AIRPLANE HAD MAJOR ENG WORK AND WAS OPERATED FOR 11 HRS UNTIL THE DROP AND LOSS OF OIL PRESSURE INCIDENT. HAD A TECHNICIAN CHK THE ENG OVER AND IT WAS DISCOVERED THE OIL PRESSURE RELIEF VALVE WAS JAMMED OPEN BY BITS OF BRASS SAFETY WIRE. CLEANED EVERYTHING AND THE ENG OPERATED NORMALLY. A NEW DIRECTIONAL GYRO CORRECTED THE INSTRUMENTATION AND AUTOPLT PROB.

Synopsis

A BE35 AT 3500 FT NOTED DROP IN OIL PRESSURE. ADVISED ATC AND ADVISED TO DSND TO 2000 FT. ON DSCNT LOST DIRECTIONAL GYRO AND AUTOPLT. ADVISED TO DSND TO 600 FT AND BROKE OUT OF CLOUDS AND PROCEEDED TO ARPT.