

**ASRS Database Report Set**

**Commuter and Corporate Flight Crew Fatigue Reports**

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Report Set Description.....A sampling of reports referencing Commuter and Corporate flight crew fatigue issues and duty periods.

Update Number.....33.0

Date of Update .....May 31, 2018

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

Number of New Records in Report Set .....7

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.

National Aeronautics and  
Space Administration

**Ames Research Center**  
Moffett Field, CA 94035-1000



TH: 262-7

**MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data**

**SUBJECT: Data Derived from ASRS Reports**

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

ASRS reports are submitted voluntarily. The existence in the ASRS database of reports concerning a specific topic cannot, therefore, be used to infer the prevalence of that problem within the National Airspace System.

Information contained in reports submitted to ASRS may be 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 perspective of the specific individual who is describing their experience and perception of a safety related event.

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

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

*Linda J. Connell*

Linda J. Connell, Director  
NASA Aviation Safety Reporting System

## CAVEAT REGARDING USE OF ASRS DATA

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

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

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

# Report Synopses

ACN: 1517679 *(1 of 50)*

#### Synopsis

CE-560 flight crew reported that declining a ferry flight due to fatigue.

ACN: 1515436 *(2 of 50)*

#### Synopsis

G650 First Officer reported confusion regarding altitude assignment related to OFE/QNH procedures departing UUWW.

ACN: 1515432 *(3 of 50)*

#### Synopsis

BE-55 pilot reported taking off without clearance after misunderstanding Tower phraseology.

ACN: 1509224 *(4 of 50)*

#### Synopsis

Citation Excel (CE560XL) Captain reported multiple duty period changes resulting in extreme fatigue conditions.

ACN: 1507832 *(5 of 50)*

#### Synopsis

A Captain reported taking the wrong aircraft from the ramp on a dark morning; consequently, their dispatch release was invalid.

ACN: 1507358 *(6 of 50)*

#### Synopsis

DA-2000 pilot reported low altitude alert while on visual approach, by both the aircraft systems and control tower.

ACN: 1506794 *(7 of 50)*

#### Synopsis

Corporate Jet Captain reported "fatigued" when assigned flight at the end of 8 hour aircraft standby duty.

ACN: 1483064 *(8 of 50)*

#### Synopsis

Light Transport flight crew reported a track deviation on the Cathedral 1 departure from KPSP attributed to fatigue and FMS departure confusion.

ACN: 1474785 *(9 of 50)*

### Synopsis

Corporate jet Captain reported a Terrain Warning on visual approach to Runway 15 at ASE, but continued the approach to a landing.

ACN: 1472320 *(10 of 50)*

### Synopsis

Fractional jet flight crew reported a departure from SFO without a takeoff clearance.

ACN: 1471184 *(11 of 50)*

### Synopsis

Corporate Jet Captain reported setting up for the wrong runway at SBD, executed a missed approach and completed a normal landing on the runway in use.

ACN: 1454504 *(12 of 50)*

### Synopsis

Cessna Citation Captain reported that some assignment schedules are not considerate or take into account a flight crew fatigue elements.

ACN: 1447163 *(13 of 50)*

### Synopsis

PC-12 Captain reported an altitude deviation and recovery from an usual attitude when distracted from monitoring the flying First Officer.

ACN: 1441355 *(14 of 50)*

### Synopsis

CE750 flight crew reported that the autopilot was disconnected while the speedbrakes were engaged resulting in an excessive nose up trim.

ACN: 1437983 *(15 of 50)*

### Synopsis

Global 5000 Captain reported continuing an approach after receiving a windshear alert. Fatigue following a long duty day of international operations affected his judgment.

ACN: 1432830 *(16 of 50)*

### Synopsis

Air taxi Captain reported departing IAD during an unexpectedly late snow and ice event which resulted in damage to both engines discovered at their destination.

ACN: 1432130 *(17 of 50)*

### Synopsis

B190 pilot reported an airborne conflict after turning the wrong direction in response to an ATC clearance. Fatigue was cited as a contributing factor.

ACN: 1427643 *(18 of 50)*

### Synopsis

G450 flight crew reported lateral and vertical deviations occurred when approach mode was selected too early in the approach. Crew cited fatigue as a factor.

ACN: 1424209 *(19 of 50)*

### Synopsis

A PC-12 First Officer reported that they overshot an altitude crossing clearance during descent. Autopilot failure and increased workload were mentioned as key contributors.

ACN: 1423914 *(20 of 50)*

### Synopsis

Air taxi flight crew reported they landed on a runway that was closed by NOTAM.

ACN: 1418186 *(21 of 50)*

### Synopsis

C550 pilots reported incorrectly setting their altitude during a descent to RNO resulting in overshooting their assigned altitude.

ACN: 1414761 *(22 of 50)*

### Synopsis

Pilot reported a taxiway excursion during night operations in degraded weather conditions. Single pilot operations, poor taxiway signage, and fatigue all reportedly contributed to the event. The aircraft was towed from the unprepared surface with no damage noted.

ACN: 1412163 *(23 of 50)*

### Synopsis

Aero Commander 690 pilot reported an altitude deviation occurred when the autopilot was inadvertently disconnected.

ACN: 1409246 *(24 of 50)*

### Synopsis

Corporate pilot reported a course and airspeed deviation on the RUUDY5 Departure from TEB due to fatigue, workload and time pressure.

ACN: 1404137 *(25 of 50)*

### Synopsis

A CE-560 Captain taxied the left and nose gear off a ramp onto the adjacent grass at night with moderate snow in limited visibility while the First Officer copied a new taxi clearance. The ramp and snow covered grass blended together.

ACN: 1392360 *(26 of 50)*

### Synopsis

Cessna 402C pilot reported the right main tire failed after a hard landing. Fatigue was cited as contributing.

ACN: 1389015 *(27 of 50)*

### Synopsis

G550 Captain reported he was unable to clear the runway in LAX at the ATC cleared exit because the clearance came too late to comply with.

ACN: 1388602 *(28 of 50)*

### Synopsis

A Fractional flight crew flying the VNY Runway 16R ILS reported taking evasive action from VFR traffic as they began their descent at 5,000 feet. The crew cited fatigue as a factor.

ACN: 1381841 *(29 of 50)*

### Synopsis

CE-750 Captain reported descending without a clearance to maintain airspeed while trying to go over the top of a line of thunderstorms.

ACN: 1375426 *(30 of 50)*

### Synopsis

C90 Captain reported being awakened from sleep to fly a medevac flight but not comprehending the assignment due to fatigue. When informed that the flight is ready to depart he quickly jumped in the aircraft without checking NOTAMs. After landing he learned that the airport was closed for runway resurfacing.

ACN: 1366999 *(31 of 50)*

### Synopsis



Air taxi Captain reported an altitude deviation resulted after responding to a descent clearance that was intended for an aircraft with a similar call sign.

ACN: 1352434 *(32 of 50)*

### Synopsis

HS-125 Captain reported experiencing an extended period of no communications with ATC. Reporter cited chronic fatigue as a contributing factor.

ACN: 1345779 *(33 of 50)*

### Synopsis

Light transport flight crew reported landing at the wrong airport following an FMS programming error.

ACN: 1339547 *(34 of 50)*

### Synopsis

Light transport flight crew taxied onto Taxiway A3 towards Runway 13-31 at AGC after mistaking the runway for Taxiway A.

ACN: 1330496 *(35 of 50)*

### Synopsis

A fatigued air taxi crew transitioning from the LAS GRNPA 1 RNAV Arrival to a night visual mistook HND for LAS and descended below the MSA before ATC alerted.

ACN: 1326879 *(36 of 50)*

### Synopsis

The pilot of a C208 reported lining up for a parallel runway during a visual approach due to fatigue and distraction.

ACN: 1324254 *(37 of 50)*

### Synopsis

Pilot drifted above cleared altitude conflicting with opposite direction traffic. The pilot reporter corrected the error after Controller advised him of the situation. Pilot commented fatigue was a contributing factor.

ACN: 1318344 *(38 of 50)*

### Synopsis

A corporate flight crew on an international arrival started a turn to the initial approach fix before asking for further clearance.

ACN: 1316577 *(39 of 50)*

### Synopsis

Air taxi pilot reported his confusion during an SEA ILS Runway 16R Approach.

ACN: 1309226 *(40 of 50)*

### Synopsis

CE750 Captain experienced a CAS message "HYD VOLUME LOW A" at FL430 a few minutes after level off. The applicable checklist directed that the system be unloaded by turning off the engine driven pump and ends with "land as soon as practical." The reporter elected to continue to an alternate that was two hours ahead and closer to destination.

ACN: 1308314 *(41 of 50)*

### Synopsis

Air taxi Captain reported missed Taxiway Uniform while crossing LAX Runway 25L at Uniform and was cleared to continue and exit at Taxiway Tango. An aircraft on final for Runway 25L was sent around.

ACN: 1308123 *(42 of 50)*

### Synopsis

G650 flight crew starts up and attempts to taxi to the FBO. A bump is felt and a nose wheel steering fail CAS message appears. Nose chocks had been installed and caused the nose wheel steering to disconnect. Maintenance is called to reconnect the steering. Fatigue was cited as a factor in the incident.

ACN: 1307577 *(43 of 50)*

### Synopsis

Pilot became disoriented during an instrument approach in IMC conditions. Pilot discovered the track error by noticing his previous error while programming his iPad for the approach. Pilot reprogrammed the approach and landed safely in VMC.

ACN: 1303033 *(44 of 50)*

### Synopsis

CE-750 flight crew reported they were off ATC frequency for about 260 miles when they copied an incorrect frequency.

ACN: 1296397 *(45 of 50)*

### Synopsis

CL605 Captain reported lining up on the right side of the runway, then drifting further right on the takeoff roll and eventually going off the runway onto grass. Takeoff was

rejected and the aircraft returned to the centerline without damage. Reporter attributed the incident to fatigue and pilot pushing by the Company.

ACN: 1286947 *(46 of 50)*

### Synopsis

A possible CFTT event departing RDM was avoided by the crew through good situational awareness and an expeditious climb.

ACN: 1281938 *(47 of 50)*

### Synopsis

A small transport crew acknowledged a descent clearance and began a descent that was intended for another aircraft with a nearly identical "N" number. No warning of a similar call sign had been given.

ACN: 1281797 *(48 of 50)*

### Synopsis

Small transport pilot inadvertently loaded FRA instead of FRAME into their GPS for the FAT FRESNO.8 Departure and turned the wrong way when cleared direct.

ACN: 1278005 *(49 of 50)*

### Synopsis

The charter pilot did not fly the complete missed approach procedure at OTH and was corrected by ATC, even though it was a non-radar environment.

ACN: 1277973 *(50 of 50)*

### Synopsis

The pilot overshoot an assigned altitude due to fatigue and automation dependency.

# Report Narratives

## Time / Day

Date : 201802  
Local Time Of Day : 1801-2400

## Place

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

## Environment

Flight Conditions : IMC  
Light : Night

## Aircraft

Reference : X  
Aircraft Operator : Air Taxi  
Make Model Name : Citation Excel (C560XL)  
Crew Size.Number Of Crew : 2  
Operating Under FAR Part : Part 91  
Flight Plan : IFR  
Mission : Passenger  
Flight Phase : Parked

## Person : 1

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Captain  
Function.Flight Crew : Pilot Flying  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1517679  
Human Factors : Fatigue

## Person : 2

Reference : 2  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Captain  
Function.Flight Crew : Pilot Not Flying  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1518214  
Human Factors : Fatigue

## Events

Anomaly.Deviation - Procedural : Other / Unknown  
Detector.Person : Flight Crew  
When Detected : Aircraft In Service At Gate  
Result.General : Flight Cancelled / Delayed

## Assessments

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

## Narrative: 1

During a very long duty day (and week) on a flight that blocked 4.5 hours we became aware of how fatigued we were. We completed the flight safely but when we landed the company asked us if we'd be willing to ferry the plane from to ZZZ. Ferrying that plane would have been dangerous due to our fatigue level. So I called in fatigued. Without doing that ferry flight...I worked [60+] hours in 7 days. Supposedly [the Company] has a fatigue software that they are running. If it showed we were able to do that ferry flight without being fatigued then I suggest they scrap or tweak the fatigue software program because we were both exhausted.

If a Part 121 pilot can't work 7 days in a row without a 24 hour break, why can we? The regulations need to change!

## Narrative: 2

[Report narative contained no additional information.]

## Synopsis

CE-560 flight crew reported that declining a ferry flight due to fatigue.

## Time / Day

Date : 201801

Local Time Of Day : 0001-0600

## Place

Locale Reference.Airport : UUWW.Airport

State Reference : FO

Altitude.MSL.Single Value : 3600

## Environment

Weather Elements / Visibility : Fog

Weather Elements / Visibility : Icing

Weather Elements / Visibility : Snow

Weather Elements / Visibility.Visibility : 1

Light : Night

Ceiling.Single Value : 300

RVR.Single Value : 6000

## Aircraft

Reference : X

Aircraft Operator : Corporate

Make Model Name : Medium Large Transport

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Initial Climb

Route In Use.SID : UM 1D

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 11800

Experience.Flight Crew.Last 90 Days : 80

Experience.Flight Crew.Type : 50

ASRS Report Number.Accession Number : 1515436

Human Factors : Situational Awareness

Human Factors : Fatigue

Human Factors : Confusion

## Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude  
Anomaly.Deviation - Procedural : Published Material / Policy  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

The departure clearance included "climb via the Ivanovskoye 1D (UM 1D) SID except maintain 900 Meters". Crew briefed the use of QNH for departure and noted that 900 Meters was 3640 ft QNH. 3600 ft was set in the altitude window along with LNAV. After takeoff, the FP (Flying Pilot) climbed to 3600 ft but noted that the Metric Altitude altimeter function was also selected and displayed on the left PFD. The PM (Pilot Monitoring) noted the 1100 meter indication and set the Altitude preselect to 3000 ft and I, the flying pilot, was momentarily confused and started a descent using vertical speed of approximately 200 ft/min. Before we could descend to the incorrect altitude of 3000 ft (which would have been about correct for 900 meters QFE, we received normal, further climb instructions.

This was an interesting human factors event because the last time I flew into Moscow, QFE was the standard altimetry in use so all of my previous experience was in QFE in this location. Since Russia is switching to QNH ops, issuing climb altitudes in meters can cause pilots that usually fly with feet to second guess the clearance, even though the "ALT/HEIGHT CONVERSION" table is readily displayed on Jeppesen charts. This subtle communications issue, coupled with fatigue and other operations such as dealing with tight slot times, de-icing/anti-icing, and flight planning due to destination weather below forecast minimums (as was the case in this operation) all contributed to this momentary altitude deviation.

ATC did not note the deviation and no separation issues occurred as a result of this event.

## Summary

Pilots operating in QFE/QNH environments should not use the metric altitude feature of advanced cockpit avionics if conducting QNH operations due to the conflicting data displayed, in this case QFE meters is 1100 which corresponded to 900 Meters QFE (field elevation at UUWW is 686 ft MSL). Contributing factors in this event included fatigue, recency of operations in QFE/QNH airspace, and the departure altitude clearance limit being conveyed in QFE Meters when Moscow and other large cities in Russia have reportedly switched to QNH ops.

## Synopsis

G650 First Officer reported confusion regarding altitude assignment related to QFE/QNH procedures departing UUWW.



## Time / Day

Date : 201801

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : PHX.Airport

State Reference : AZ

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Ceiling.Single Value : 25000

## Aircraft

Reference : X

ATC / Advisory.Tower : PHX

Aircraft Operator : Corporate

Make Model Name : Baron 55/Cochise

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Personal

Flight Phase : Takeoff

Route In Use : Vectors

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Single Pilot

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Private

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 11000

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 300

ASRS Report Number.Accession Number : 1515432

Human Factors : Fatigue

Human Factors : Situational Awareness

Human Factors : Communication Breakdown

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

## Events

Anomaly.Airspace Violation : All Types

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : FAR  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Air Traffic Control  
Miss Distance.Horizontal : 4000  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented  
Result.Flight Crew : Took Evasive Action  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

Tower cleared me to "line up and wait, traffic crossing runway, caution wake turbulence" at which time I requested a 2-minute delay for wake turbulence. The Controller repeated the lineup and wait clearance, and added delay at your discretion. I waited 2 minutes, and then began my take off roll at the end of two-minute period. At about 2000 feet into take off roll, I noticed an airliner exiting the left side of the runway toward the end of the runway. I reduced power for 2 seconds, about the time I reduced power the plane had exited the runway and I reapplied power and lifted off. Upon reaching 200 feet AGL, the Tower called and told me I had not been cleared for takeoff. I continued on to my destination of after the Tower requested I call a number after I reached my destination.

I must have been concentrating so much about the wake turbulence of the 737 that had taken off in front of me that I took the phrase "delay at your discretion" as a takeoff clearance when in fact one had not been issued. Other contributing factors: I had just completed a two-day refresher course in the Baron simulator, which had been very rigorous and I must have been more fatigued than I realized. That, combined with anxiety over wake turbulence from the busy airline traffic, caused me not to concentrate on the clearance given interpreting the phrase "at my discretion" as a release clearance for takeoff. It might be better phraseology to say, "Line up and wait for takeoff clearance" to reinforce in the pilots mind the exact instruction given. Fixation on wake turbulence seems to have caused the lack of attention to the actual instruction. It wasn't until the Controller reminded me I had not been cleared for takeoff that the fact registered with me that I had for whatever reason taken off without being cleared to do so. I had focused on the time to hold for wake turbulence over the actual clearance.

Light aircraft holding in position on the runway with airliners waiting is not a comfortable position. It might be safer for the Controller to hold the lighter aircraft on the taxiway until they can issue a takeoff clearance instead of a line up and wait. This would alleviate the potential of inadvertent takeoffs. Definitely a brain lapse. For older pilots the new wording versus the old "Hold in Position" may have some psychological disconnect versus the more ingrained terminology used for many years.

## Synopsis

BE-55 pilot reported taking off without clearance after misunderstanding Tower phraseology.

## Time / Day

Date : 201801

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : IAH.Airport

State Reference : TX

## Environment

Light : Night

## Aircraft

Reference : X

Aircraft Operator : Air Taxi

Make Model Name : Citation Excel (C560XL)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Flight Phase : Parked

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Crew Rest Area

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1509224

Human Factors : Workload

Human Factors : Other / Unknown

Human Factors : Fatigue

Human Factors : Human-Machine Interface

## Events

Anomaly.Deviation - Procedural : Other / Unknown

Detector.Person : Flight Crew

Result.Flight Crew : Became Reoriented

## Assessments

Contributing Factors / Situations : Company Policy

Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Staffing

Primary Problem : Company Policy

## Narrative: 1

We had a late night flight, which was preceded by a day of 14 plus hours of Duty getting shut down late at night. Two days prior to this, we were both in a fog and lack of focus because of early morning fatigue. Our show was a VERY early morning, which was also preceded by a late night at home. At this point, when we finished our day we noticed the same lack of focus and poor communications. All due to fatigue from night shift, to morning shift, followed by late night shift.

It should be noted that the night before the first day of duty, I was FULLY rested and had a late morning show, which provided me with a great night's sleep. I'm not sure how the chart illustrating circadian rhythms can be applied to our 3 days of fluctuation from late, to early, to very late. The circadian rhythms chart also shows that although there is legal time for rest, rest does not necessarily happen after getting up early morning it is not necessarily going to happen that someone would be able to shift to a late night. Although we had plenty of time on day number three, with a late morning show, I could not stay up late after a very early morning show in order to sleep in. So my day started when I woke up early in the morning, and my day ended as soon as we got shut down and to the hotel past midnight.

This practice is becoming more and more common and more frequently. Because I was awakened a few hours after midnight on the 2nd day, there was no way I was able to stay awake long enough that night to be able to sleep in on 3rd day. Although I tried, I still woke up 2 hours prior to a normal wake time - and the time I woke up only 2 days earlier.

Our shows have shifted from one day to the next 8 hours earlier. Then within 2 days to 10 hours later, [which is] unhealthy physiologically, and extremely unsafe. Fortunately, on this night for which I am reporting, we had the engine shutdown and we were performing our post-flight duties when we noticed that we were exhausted and losing focus. There was no incident or accident due to this and fortunately, we did not have any further duty assignment.

I am not sure what more we could have done to mitigate our fatigue, as the company encourages the crews to do. Maybe the company could do more on their part of mitigation other than a greater emphasis on scheduling to stop abusing circadian rhythms. A look at our schedule for the day prior to this shows very little that the crew can do. A few hours before midnight, on the second before going to bed the plan was to sit at the airport for eight hours. When we checked in the morning on the 3rd day, the plan had changed and we were now going to be done around noon and off to the hotel. One hour twenty minutes after, the brief had changed we were now going to a different route [and] arriving early in the evening. After eighteen minutes the brief had changed, we were going on a different route and arriving around midnight. Later in the evening, the planned destination changed once more arriving around midnight.

Not only does fatigue play a factor in the short term with alertness, response time, task fixation, etc., there is also a longer-term consequence in compromising the immune system. The last three "tours" I have gone home with a cold due to exhaustion. In the middle of the cold and flu season, it is even more imperative that fatigue does not compromise immunity, in turn impacting the company with more sick calls from crew members. The company self imposes the increased number of sick calls and fatigue calls.

Recommended narrative is that the company consider the risks that they are taking with the lives and safety of their passengers because not every pilot is going to stand up and resist the temptation to continue on when he shouldn't. The company should stop this practice of early morning to late night back to early morning shifts. It is a fact that most

crews talk around the "water cooler" and are in agreement about the appearance that the company is apathetic to contributing to an accident and the possible loss of life.

## Synopsis

Citation Excel (CE560XL) Captain reported multiple duty period changes resulting in extreme fatigue conditions.

## Time / Day

Date : 201712

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : DAL.Airport

State Reference : TX

Altitude.AGL.Single Value : 0

## Environment

Light : Night

## Aircraft : 1

Reference : X

Aircraft Operator : Fractional

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Flight Phase : Parked

## Aircraft : 2

Reference : Y

Aircraft Operator : Fractional

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

Crew Size.Number Of Crew : 2

Flight Plan : None

Flight Phase : Parked

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

ASRS Report Number.Accession Number : 1507832

Human Factors : Situational Awareness

Human Factors : Confusion

Human Factors : Fatigue

Human Factors : Time Pressure

## Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : FAR

Detector.Person : Flight Crew

## Assessments

Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Procedure

Primary Problem : Human Factors

## Narrative: 1

[We] took wrong aircraft in the dark at DAL. [We were] assigned Aircraft Y, [I] noted a different aircraft [parked] where Aircraft Y [was] left the night before. [I] asked where Aircraft Y was, and ground crew pointed to an airplane on the dark west ramp. We [did our] preflight and loaded without noticing it was not Aircraft Y. We left inadvertently in Aircraft X, [and] therefore we had an invalid dispatch, since we were in [the] wrong tail number. We did not notice any other light transport aircraft in the dark ramp area.

Approached aircraft from nose and did not notice wrong tail number. Suggestions: Better awareness on preflight. Even looked at oil with my flashlight and but did not see the wrong side number.

## Synopsis

A Captain reported taking the wrong aircraft from the ramp on a dark morning; consequently, their dispatch release was invalid.

## Time / Day

Date : 201712

Local Time Of Day : 0001-0600

## Place

Locale Reference.ATC Facility : BTV.Tower

State Reference : VT

## Environment

Flight Conditions : VMC

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.Tower : BTV

Aircraft Operator : Corporate

Make Model Name : Falcon 2000

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Nav In Use : FMS Or FMC

Flight Phase : Initial Approach

Route In Use : Visual Approach

Airspace.Class C : BTV

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1507358

Human Factors : Distraction

Human Factors : Fatigue

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1507689

Human Factors : Distraction

Human Factors : Situational Awareness

## Events



Anomaly.Inflight Event / Encounter : CFTT / CFIT  
Detector.Automation : Aircraft Terrain Warning  
Detector.Automation : Air Traffic Control  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : FLC complied w / Automation / Advisory  
Result.Flight Crew : Became Reoriented  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

Cleared for the Visual Approach to Runway 33 at KBTV. Weather was 10+ visibility and clear skies. Approximately 3-4 miles on a straight in final we got the "terrain pull up" warning. I was the flying pilot in the left seat and was visual. I immediately climbed until the warning subsided. At approximately the same time, the Tower advised they were getting a low altitude warning. I was hand flying the plane due to a rapid descent and a later than normal decent from altitude from ATC. At all, times I was in visual conditions and felt I was in a proper position to land, we had the ILS loaded and displayed but I obviously was below the ILS Glideslope. Distracted for a moment by the last minute steep descent from ATC and the resulting visual approach. We landed normally and without incident.

I was tired after several long days and was considering using the Fatigue call but failed to do so. Also, I should have paid more attention to the ILS but I was visual and felt the terrain was well below us. Obviously it wasn't. This was my first time in 17 years that the Terrain warning activated. It was an eye opening experience on many levels.

## Narrative: 2

While descending out of altitude in we received an extremely late descent out of the flight levels even after we ask multiple times for lower. Pilot Flying had to put the airplane in a descent with the air brakes out in a high rate of descent. This put us behind the approach segment of the visual approach. Despite this the Pilot Flying was able to establish a normal rate of decent several miles out but with the mountains in Burlington and the unusual visual clues in the hills it put us in a lower than normal approach position. Just as I was about to warn him his air brakes were still out and we were getting low the GPWS went off and the tower gave us a warning of an upcoming mountain. We immediately corrected and told the tower we were correcting. Climbed up, established a normal stabilized approach, and landed with no incident.

Should have not been so distracted and [should have] warned Pilot Flying earlier in the approach phase. We also could have taken vectors in order to make a more normal descent. Air brakes usage could have been monitored better. Following the glide path would have helped as well. Taking the visual approach for granted in the mountains also contributed to this unusual situation. ATC could have been much more helpful as well.

## Synopsis

DA-2000 pilot reported low altitude alert while on visual approach, by both the aircraft systems and control tower.

## Time / Day

Date : 201712

Local Time Of Day : 0001-0600

## Place

Altitude.AGL.Single Value : 0

## Aircraft

Reference : X

## Person

Reference : 1

Location Of Person : Company

Reporter Organization : Corporate

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1506794

Human Factors : Fatigue

## Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : FAR

Detector.Person : Flight Crew

When Detected : Aircraft In Service At Gate

Result.General : Work Refused

Result.General : Flight Cancelled / Delayed

## Assessments

Contributing Factors / Situations : Procedure

Primary Problem : Procedure

## Narrative: 1

I am writing over the fatigue inducing schedule I had and for the fatigue call I made.

The previous day, we had an [early] show for [standby]. This was the 2nd day of before [a later] show [from a different time zone], so it wasn't too early but was still before my normal time I plan for work. Then at the end of [standby show], we were shut down and given a XA00 local show for [standby] until XG45 [on day 3]. Due to the early show and no planning my previous nights sleep to adjust to this, I was unable to get to bed until XS00 and sleep 5 hours waking up at XX00 [day 4]. As the [standby] was only until XG45, I was comfortable I could make it this long on 5 hours sleep. However, at XG30, my brief changed with a XI00 ferry to ZZZ which would have been a 2+48 flight landing at XJ48. This would have been a 10+48 duty day. There was no way I could complete this, so I fatigued. I can't believe the Fatigue Mitigation Software would even allow for this. This wouldn't have even been legal under part 117 that regulates 121 passenger flights. As this duty uses the most modern science, I tend to use this as a guide for fatiguing as it closely represents how I fatigued I have been in the past when I would exceed the duty times for part 117. For part 117, if I was acclimated to my home time, a XA00 show would be XX00

and good for 9 hours. Even if I acclimated to [local] time, a XA00 show is good for 10 hours. Therefore, this 10+48 wouldn't even work for this.

The Fatigue Mitigation Software at a minimum needs to reflect the part 117 duty times as these have been done taking into account modern science in determining fatigue.

## Synopsis

Corporate Jet Captain reported "fatigued" when assigned flight at the end of 8 hour aircraft standby duty.

## Time / Day

Date : 201709

Local Time Of Day : 1201-1800

## Place

Locale Reference.ATC Facility : SCT.TRACON

State Reference : CA

Altitude.MSL.Single Value : 7000

## Environment

Flight Conditions : VMC

Weather Elements / Visibility : Turbulence

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory. TRACON : SCT

Aircraft Operator : Fractional

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Nav In Use : FMS Or FMC

Flight Phase : Climb

Route In Use.SID : Cathedral 1

Airspace.Class E : SCT

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1483064

Human Factors : Confusion

Human Factors : Fatigue

Human Factors : Workload

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1484089  
Human Factors : Confusion

## Events

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Air Traffic Control  
Were Passengers Involved In Event : N  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

I was the pilot flying and had minimal rest the night before due to sleep disruption from a neighboring hotel room. We had just completed a long, international flight. The inbound landing was challenging with high winds, shears and temps. Ramp temperatures were also high, and the post flight cabin duties were extensive and laborious. The clearance received assigned us the CATHEDRAL 1 departure to DEWAY then direct to POM. This departure is not in the coded FMS database. Upon reading the chart I noticed that DEWAY was the next fix directly after crossing PSP VOR being that it is also on V388 it was already programmed in the FMS flight plan. So the programmed sequence was RW31L, PSP, DEWAY. This all looked good. The crossing requirement to continue enroute from PSP to DEWAY was 6,300 ft as annotated by a ball flag. This seemed pretty simple. Take off, continue runway heading until the turn (raw data) then turn back to PSP cross it above 6,300 ft and continue out to DEWAY using the most expedient right turn. Wrong. We missed the routing instructions that include continuing SE past the VOR to the EMRUD fix (an additional 10 NM east) before making a right turn to come back to the PSP VOR and THEN on V388 to DEWAY. The initial climb was very turbulent and ATC was giving us additional speed restrictions, level offs, and traffic advisories. I made the decision to hand-fly as the multiple changes, paired with environmental conditions made automation more complicated than the situation allowed. So when we reached PSP VOR at approx 7,000 ft I made the right turn as programmed in the flight plan. The 104deg, 10NM fix, EMRUD was not programmed. In the right turn ATC asked us to make a left turn back to a northerly heading. He did not say if we had created a traffic or terrain conflict, nor did TCAS or EGPWS provide any advisories. We were in VMC and apart from the deviation the safety of flight did not appear to be at risk.

Multiple contributing factors are worth mentioning in this instance. The most significant issue with this flight was mounting fatigue. Despite only feeling somewhat tired, the math simply would show I was fatigued. I had been awake more than 14 hours on the heels of 4-hours sleep when the mistake occurred. This paired with a lengthy flight into PSP with high winds and turbulent conditions ensured I was much more tired than I felt. My mind was more focused on mitigation strategies for wind shear avoidance than on navigation. Having previously had a serious wind shear encounter at this airport, I was focused on energy management and trying to manage speed in the climb. Despite that fact, the error

had been made on the ground. I simply followed the path precisely how I programmed it: in error. The final factor was simply not taking the time to double check the SID against what was in the FMS flight plan. The SID does indeed call for PSP VOR direct to DEWAY, and that's what I had programmed. But the SID also requires a tear-drop maneuver out to EMRUD. I saw only what I was expecting. I failed to look for what I was not expecting and this made all the difference. Being that this procedure is not a coded procedure, I had to rely on my interpretation on the chart and my ability to reconcile the procedure to the FMS flight plan. This confirmation bias caught me and my crew out.

## Narrative: 2

I should have been present during the copying of the clearance. This would have possibly caught the extra routing in the clearance vs. what had been filed for our route. Complicating this was the lack of the departure procedure in the FMS and confusing layout of the departure plate. The textual part of the route is more clear than the visual representation and I failed to fully read it.

## Synopsis

Light Transport flight crew reported a track deviation on the Cathedral 1 departure from KPSP attributed to fatigue and FMS departure confusion.

## Time / Day

Date : 201708

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ASE.Airport

State Reference : CO

Altitude.MSL.Single Value : 9100

## Environment

Flight Conditions : VMC

Light : Dusk

## Aircraft

Reference : X

ATC / Advisory.Tower : ASE

Aircraft Operator : Fractional

Make Model Name : Medium Large Transport

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Approach

Airspace.Class D : ASE

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1474785

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Distraction

Human Factors : Fatigue

## Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Anomaly.Inflight Event / Encounter : CFTT / CFIT

Detector.Automation : Aircraft Terrain Warning

When Detected : In-flight

Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

It seemed like a long day, but by simply looking at it, nothing would indicate the issues/challenges we had faced. Lots of little things during the day such as a reposition in ZZZ, a 10 passenger leg with lots of luggage, non-towered operations, having to do a last minute MEL on the database and Jeppesen charts, a delayed receipt of Flight Release out of ZZZ1, early passengers with a last minute passenger count change resulting in another release to be generated (I called dispatch 5 times in ZZZ1 alone). No item was out of the normal or unusual alone but the combination of all factors had the entire crew a little worn out even before the ZZZ1-ASE leg started. The flight to ASE was uneventful, the weather was good and winds were calm at ASE enroute. I was the PM in the left seat and the SIC was flying from the right seat. We briefed the Roaring Fork Visual and at the SIC's request we loaded the LOC DME-E in the box although I mentioned that it would be of minimal value as we would not be on the lateral or vertical portion of the approach.

The SIC indicated that he had not been to ASE in some time. I, on the other hand, was familiar and comfortable going in there especially under the conditions of the given day. The ASE ATIS was calling the sky clear but there were surrounding high clouds that we descended through on the arrival. We were direct DBL, when we exited the clouds at around FL180 descending to 17,000 ft approximately 15 miles southeast of the VOR and I saw the airport (we were on a 9,000 ft AGL high downwind leg). We were handed over to Aspen Approach, I called the airport insight and was planning for the Roaring Fork Visual. We were then cleared to 15,000 ft and were informed that the winds had shifted and now exceeded the 10 knot limitation for landing (the winds were out of the north gusting to 18). We requested a hold and were given a hold on DBL 343 radial with 7 mile legs and instructed to climb back to 16,000 feet. Suddenly, things were getting busy as I entered the hold in the FMS only miles from the VOR. The airspeed at this point was approximately 200 knots planning for the hold. My mind was also going through our options and preparing for what was going to happen next. How long to hold before diverting? Where would the passengers want to go? How much fuel did we have? Will the winds die down as the sun sets? When is sunset? Etc. As we approached the hold, the controller asked if we could accept "instantaneous winds." I responded in the affirmative, but based on my past experiences I remained a little weary of this sudden change when winds became 330 at 9 knots. Based on this new information, the controller gave us a base turn and descent to 14,000 ft. He again queried if we still had the field and cleared us for the visual to Runway 15. The SIC could not see the airport from the right seat as it was behind us and off the left wing. I was talking him through the turn and instructed him that we were high and fast and needed to get down both in terms of altitude and airspeed and configuration (we were still doing around 200 knots at 15,000 ft).

In the base turn we contacted the tower and were given the winds again and cleared to land (the airport was not busy and the frequency was quiet). As we continued the base turn toward the airport, the SIC instructed me to "clean up the box" as the holding pattern and LOC-E were still displaying on the MFD/PFD. I was hesitant to do so and was more concerned about him getting the airport in sight and flying the visual. There was some confusion initially as to if/when he had the field in sight. Finally, he called the airport in sight and again implored me to "clean up the FMS". Again, to me, this was of no value as it provided no additional situational awareness nor vertical guidance. At some point I did tell him "we are high, keep coming down." I assumed he had the airport in sight and would adjust accordingly. The tower continued to keep us updated on the "instantaneous



winds" as we continued to descend, configure and slow. It had suddenly become very busy. My attention was also drawn to our 9 knot tailwind and I became focused on attempting to update the FMS and obtain a new a landing distance, as well performing a Landing Performance Assessment. I was heads down programming the FMS and trying to "clean up the box" when I heard "Caution Terrain." When I looked up we were now low. I told him to level off, which he was in the process of doing when the first of several "Terrain Pull-Up" calls started.

Despite being familiar with both the FOM (Flight Operations Manual) and AOM (Aircraft Operations Manual), rather than call for a go-around and initiating an escape procedure, I told the SIC to "climb" and was focused on getting back on a normal glide path in an attempt to "salvage" the approach. It may seem odd to those reading this in hindsight, but I was actually surprised we got the warning, as the airplane didn't seem that close to the hills. The air was smooth, the visibility good, and to me the flight path was stable. We were over the highway, in the valley. If I had to guess, we were approximately 9,100 ft and were 4-5 miles from the runway. I was never nervous, and never felt that the safety of the flight was in jeopardy. If anything, I was frustrated and bewildered that on a visual approach the airplane was allowed to descend to such a low altitude. We continued down the valley and joined the final of Runway 15, intercepted the PAPI and continued to configure and ran the Before Landing checklist. To add to the excitement, the auto-throttles either quit or got turned off, so we endured the continuous "auto-throttle" call for the remaining 3 miles. The SIC was focused on flying and never cancelled the warning (the cancel button is on top of the thrust levers and I could not cancel them with his hands now covering them). The approach at this point was normal. At one time the airspeed dipped slightly below reference, but was corrected in a timely matter. As we approached short final, the "auto-throttle" call was replaced by a "Not a Runway" call, as somehow the new Revision 5 software determined that we were not aligned with the runway. Per the Revision 5 guidance material, we determined that we were and landed uneventfully but it was quite a hectic few minutes.

In the time that has passed since this event I have been reflecting a great deal on how I allowed this to happen and how to prevent similar situations going forward. As I painfully replay the events described above, several things come to mind. The most striking one is [the] obvious response (or lack thereof) to the terrain warning. I know what the answer is, however, on this given day, I as the PIC elected to continue the approach because the power of getting the "mission accomplished" and "making it work" overrode the SOPs and AOM. There were threats, the threats were real, the mountains were rock...but the crew at the time didn't perceive the threats as such and "made it work." However bad that decision was, the reality is I should have never have let the situation get to that point. At the first sign of confusion or ambiguity as to the location of the airport by the SIC, I should have bailed on the approach while at altitude. Also in hindsight, because I had a much better view and was more familiar, I should have taken the controls at least until a point where a normal landing could be made. In the end, I let my familiarity and confidence with the Roaring Forks Visual into ASE turn into a sense of complacency which led the airplane, crew and passengers into an undesired aircraft state.

## Synopsis

Corporate jet Captain reported a Terrain Warning on visual approach to Runway 15 at ASE, but continued the approach to a landing.

## Time / Day

Date : 201708

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : SFO.Airport

State Reference : CA

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : IMC

Weather Elements / Visibility : Windshear

Weather Elements / Visibility.Visibility : 10

Light : Dawn

Ceiling.Single Value : 900

## Aircraft

Reference : X

ATC / Advisory.Tower : SFO

Aircraft Operator : Fractional

Make Model Name : Medium Large Transport, Low Wing, 2 Turbojet Eng

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Flight Phase : Takeoff

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1472320

Human Factors : Fatigue

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1472325

Human Factors : Fatigue

## Events

Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Anomaly.Ground Incursion : Runway  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

Flight from SFO to ZZZ departing from Runway 01L intersection M. Received and acknowledged position and hold instructions from the tower, taxiing on the runway requested takeoff checklist which was completed and acknowledged, confirmed the correct runway and stated clear for takeoff which was triggered by the landing lights being on. Began and completed the takeoff. During climb out tower indicated the need for us to call them and provided a number. After arriving in ZZZ we placed a call and spoke with someone who asked us to call back and speak with a Quality Control Specialist. We made that call, left a message and he returned our call later and informed us we had departed without takeoff clearance. He confirmed this by allowing us to hear the tapes. He also told us that no conflict with other aircraft had occurred.

Fatigue may have had some influence. Rest periods between duty have been ok. The time zones and the early morning get up may have had an effect. As a crew we placed a great focus on using and becoming comfortable with new triggers, flows, checklists and responses that have been recently introduced. I believe trying to comply and respond properly along with an old trigger may also have contributed to our error. The more familiar these new procedures become the less direct focus will be necessary and they will become the tool they were meant to be.

## Narrative: 2

[Report narrative contained no additional information.]

## Synopsis

Fractional jet flight crew reported a departure from SFO without a takeoff clearance.

## Time / Day

Date : 201708  
Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : SBD.Airport  
State Reference : CA  
Relative Position.Distance.Nautical Miles : 2  
Altitude.AGL.Single Value : 1000

## Environment

Flight Conditions : VMC  
Weather Elements / Visibility.Visibility : 10  
Light : Daylight  
Ceiling.Single Value : 25000

## Aircraft

Reference : X  
ATC / Advisory.Tower : SBD  
Aircraft Operator : Air Taxi  
Make Model Name : Light Transport  
Crew Size.Number Of Crew : 2  
Operating Under FAR Part : Part 135  
Flight Plan : IFR  
Mission : Passenger  
Flight Phase : Final Approach  
Route In Use : Visual Approach  
Airspace.Class D : SBD

## Person

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Captain  
Function.Flight Crew : Pilot Flying  
Qualification.Flight Crew : Flight Engineer  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
Qualification.Flight Crew : Flight Instructor  
Qualification.Flight Crew : Multiengine  
Experience.Flight Crew.Total : 28400  
Experience.Flight Crew.Last 90 Days : 52  
Experience.Flight Crew.Type : 400  
ASRS Report Number.Accession Number : 1471184  
Human Factors : Fatigue

## Events

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

Anomaly.Deviation - Procedural : Published Material / Policy  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Executed Go Around / Missed Approach

## Assessments

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

## Narrative: 1

Approaching SBD from the north, we were cleared for the visual approach to runway 24 at an altitude of greater than 10000 feet. Our position was on a high upwind for runway 24, but since we arrived on runway 6 that morning, I heard "cleared for visual approach" and did not pay attention to the "runway 24" part of the transmission.

Upon seeing the runway far below and to my left, I set up a left pattern with a steep approach to runway 6. When we were on final, approximately 2 miles out, the co-pilot questioned the runway, and I realized I had set up for the wrong runway. I executed a go-around, entered downwind for runway 24, and completed a normal landing.

I believe among the causes for this error were: Fatigue, complacency due to familiarity with the area and our earlier experience at the airport, and our relative position and altitude when cleared for the visual approach. Our prime concern on the descent was to make a smooth and rapid descent while ensuring the comfort of our passengers.

The fatigue factor can be attributed to our [early] duty time start, the co-pilot's busier schedule (he had flown several times in the past few days, and though he had legal rest, was very tired from the start), and my poor sleep in the hours before the flight.

This could have been avoided by a more thorough briefing as we approached the airport. This would have given my co-pilot a heads-up that I was about to set up on the wrong runway. We discussed the event after our passengers had been picked up, and plan to be even more vigilant when we know ourselves to be fatigued.

## Synopsis

Corporate Jet Captain reported setting up for the wrong runway at SBD, executed a missed approach and completed a normal landing on the runway in use.

## Time / Day

Date : 201706

Local Time Of Day : 0601-1200

## Place

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Light : Dusk

## Aircraft

Reference : X

Aircraft Operator : Fractional

Make Model Name : Cessna Citation Undifferentiated or Other Model

Operating Under FAR Part : Part 135

Mission : Ferry

Flight Phase : Parked

## Person

Reference : 1

Location Of Person : Company

Reporter Organization : Fractional

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1454504

Human Factors : Fatigue

## Events

Anomaly.Deviation - Procedural : Published Material / Policy

Detector.Person : Flight Crew

Result.General : None Reported / Taken

## Assessments

Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Company Policy

Primary Problem : Human Factors

## Narrative: 1

This was Day 1. I required a late show due to having an "after-midnight" on my last tour. The brief I received the night before was a XA40 show with an airline to ZZZ then nothing else on the line. When I checked in the next day at XA40 there was a ferry added from ZZZ to ZZZ1 and then passengers to ZZZ2. The flight was scheduled to land in ZZZ2 XM18. That would mean a shut-down of XM48 if things went off as planned. My Second in Command (SIC), had a XB25 show. While I tend to stay up late on my days off, I know [my SIC] and spouse do not. They are often awake at sunrise. When I saw the late trip I was curious how I would handle it and was certainly curious how [my SIC] would do. At some point during the morning we both received an email from [the company] notifying us

we were going to be on the "late shift" and if either of us would find that problematic to please advise them. I didn't feel it was issue for me (at that point) so I didn't reply to the email. Neither did [my SIC].

When I arrived at the FBO the plane we were assigned had a maintenance issue and was grounded. The company found another [aircraft] to ferry into ZZZ so we could still do the trip. While waiting for the new plane to arrive we went inside and ate dinner. We could see the night pushing later and later and at that point [my SIC] was starting to feel like he would be too tired to do the ZZZ1 to ZZZ2 leg. I advised him to call fatigued now instead of doing the ferry to ZZZ1 and then calling fatigued so that the company would have time to come up with a recovery plan for the trip. [My SIC] immediately called fatigued and we were released to go to a hotel.

[Day 2] The next morning we showed at XD00. Almost immediately, [my SIC] received a voicemail from the Chief Pilot. [My SIC] called him back and I was in the FBO listening to the conversation over speaker phone. [The Chief Pilot] started by saying, "Well, I guess you know why I'm calling." The tone of the conversation was one of intimidation and discipline over [my SIC]'s fatigue call. [The Chief Pilot] would go on to explain that a Day 1 fatigue after only 4 or 5 hours of duty raises red flags and the expectation is for pilots to come to work rested and ready for a full day of duty. [My SIC] agreed and explained that he was awake at XA00 even though he hadn't set an alarm and couldn't take a nap or otherwise get any "rest" once he was awake. He didn't do any strenuous activity during the day prior to work. He explained to [The Chief Pilot] that the fatigue call was made in ZZZ to avoid a wasted ferry leg on the company's dime. [The Chief Pilot] never backed down from his claim that [my SIC] should have been rested and then proceeded to ask if there were any suggestions [my SIC] had on how to make this not happen again. I was shocked and disappointed that the company was harassing [my SIC] over this since our fatigue policy is meant to be for safety purposes and at [the company] we are "Safety First."

Day 3 of our tour we were assigned a XA15 show. So now, in less than 72 hours, my start times for duty have shifted from XG40 to XD00 to XA15. I am tired during Day 3 but because of seeing how [my SIC] was treated, I'm nervous to call in fatigued. Sure, I have a little break today where I can probably catch a nap in the FBO but is that truly rest? The safety culture has been compromised thanks to pressure from my boss to perform a task that I may be too tired to do. Is that really "Safety First"?

The so-called "Safety Culture" is smoke-and-mirrors. The fatigue policy, as I understand it, was implemented to give pilots a no-questions-asked way of letting the company know we didn't feel it was safe for us to perform our duties in the cockpit. However, when my SIC calls in fatigued and is immediately questioned and intimidated by our superior the following morning it certainly doesn't seem in line with the intent of the fatigue policy. If we look at the number of aircraft versus the number of crewmembers with active flying status and then match that with the number of passenger trips plus ferry legs, it's a system that's going to break. There is too much pressure of crews to do too many legs and there is no system to monitor sliding start/end times. How on earth is my body supposed to handle my start time being slid 7 hours and 25 minutes in less than 72 hours? How was [my SIC] supposed to come to work prepared to fly until almost 3am when all week long prior to his trip he'd been waking up between [early morning] each day? If safety truly is what we are about, then why is my boss calling my co-pilot and harassing him before he's supposed to go fly into weather that's at minimums in the next day after doing a fatigue call? Why is it that when the Chief Pilot called he didn't even know what our original brief or any of the following briefings were? Could it be because someone above

him is pressuring him to harass the pilots?

If this block is for me to give suggestions then I will use it to say we need more planes, more pilots, less owners or all the above. We need a scheduling department that either starts taking bigger picture looks at our schedules or comes up with more reasonable schedules. If that's not possible, how about we have Mr. or Ms. Scheduler come in and work for 12 hours, then come in the next day and work for 8 hours, then come in at XA00am the next day and work for 11 hours, then come in [early morning] and work for 14 hours and see how they feel. Lastly, we need to stop advertising to our customers that we are Safety First.

## Synopsis

Cessna Citation Captain reported that some assignment schedules are not considerate or take into account a flight crew fatigue elements.



## Time / Day

Date : 201705  
Local Time Of Day : 1201-1800

## Place

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

## Environment

Flight Conditions : IMC  
Weather Elements / Visibility : Turbulence  
Weather Elements / Visibility.Visibility : 1  
Light : Daylight

## Aircraft

Reference : X  
ATC / Advisory.Tower : ZZZ  
Aircraft Operator : Air Taxi  
Make Model Name : PC-12  
Crew Size.Number Of Crew : 2  
Operating Under FAR Part : Part 91  
Flight Plan : IFR  
Mission : Ferry  
Nav In Use : GPS  
Flight Phase : Initial Approach  
Route In Use : Vectors  
Airspace.Class D : ZZZ

## Person

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Captain  
Function.Flight Crew : Pilot Not Flying  
Qualification.Flight Crew : Commercial  
Qualification.Flight Crew : Instrument  
Experience.Flight Crew.Total : 5950  
Experience.Flight Crew.Last 90 Days : 160  
Experience.Flight Crew.Type : 1800  
ASRS Report Number.Accession Number : 1447163  
Human Factors : Fatigue  
Human Factors : Situational Awareness  
Human Factors : Distraction

## Events

Anomaly.Aircraft Equipment Problem : Less Severe  
Anomaly.Flight Deck / Cabin / Aircraft Event : Other / Unknown

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Inflight Event / Encounter : Weather / Turbulence  
Detector.Automation : Aircraft Terrain Warning  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Regained Aircraft Control

## Assessments

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

## Narrative: 1

We missed the intercept to the final approach course possibly due to late arming of the autopilot. I requested a vector to re-intercept. ATC said no. He would have to box us back around. He assigned a heading and altitude. The first officer was the pilot flying in the left seat. The autopilot was disconnected. In the turn we entered an unusual attitude and were descending. It took several hundred feet to recover. As captain and pilot monitoring, I should have recognized the unusual attitude sooner. It's a busy phase of flight. I constantly monitor altitude and heading. In this incident I was not monitoring for that brief moment. The weather besides being IMC had also been quite turbulent which may have played a part. Also, [we had been on duty for 8 hours, and] the turbulence may have added to normal fatigue levels. As captain I fly with First Officers with varied levels of experience. My expectation that a turn to a heading and climb are common pilot tasks. I was caught off guard for that brief moment.

## Synopsis

PC-12 Captain reported an altitude deviation and recovery from an unusual attitude when distracted from monitoring the flying First Officer.

## Time / Day

Date : 201704

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

## Environment

Flight Conditions : VMC

Light : Dusk

## Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Citation X (C750)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Initial Approach

Airspace.Class C : ZZZ

## Component

Aircraft Component : Autopilot

Aircraft Reference : X

Problem : Improperly Operated

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Pilot Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1441355

Human Factors : Confusion

Human Factors : Fatigue

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1441655  
Human Factors : Confusion

## Events

Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
Were Passengers Involved In Event : N  
When Detected : In-flight  
Result.Flight Crew : Overcame Equipment Problem

## Assessments

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

## Narrative: 1

During the last leg of a very long day, we ran into an issue where status of the autopilot caused us to climb when we should have been descending. It also led a situation where the airplane was greatly out of trim for the phase of flight which we should have been in, descending. We were on downwind for an expected visual approach. Controllers had left us high, during the downwind. The autopilot was on during the downwind with Flaps 5. We were cleared for the visual approach. On the wide base leg turn, probably a 4 mile base, I extended speed brakes to get us to final configuration speed. On the base leg, I believed I had pressed the autopilot disconnect button. I retracted speed brakes and pushed down on the control wheel. This is the point the autopilot was truly disconnected and it was discovered that the trim was not neutral but was greatly pitched for nose up to hold altitude with the decaying speed from having the speed brakes out. In the confusion of it all, I thought the control wheel was jammed as it was very difficult to get the nose down and asked the other pilot to check his. That is when he discovered that it was not jammed but greatly out of trim. During the course of the re-trimming for nose down, the airplane did climb temporarily when we should have been descending. The airplane was re-trimmed and hand flown from the base leg to the final leg and subsequently a stable approach and landing.

I should have done a better job ensuring the autopilot was off by checking the MCP and getting a better feel for the control wheel, in this case it was left on and then truly shut off in an out-of-trim condition. Normally I would have caught this issue sooner but I believe fatigue at the end of the day led to the brief confusion. The pilot monitoring did a great job quickly catching my mistake and pointing out the out of trim condition.

## Narrative: 2

As I was looking outside on my side I heard the PF say something that caught my attention. When I looked over I saw the PF pushing with both arms against the controls with a desperate look on the face and saying something to the extend of "I can't go down; it won't work." The speed was dropping quickly towards about 190 kts, the speed brakes were now retracted again, the thrust was still set at idle, the controls were pushed full forward, and the trim indicated full Nose Up. I immediately took control of the thrust and started to add when I noticed I was able to control the speed (now steady at 170 kts) and arrest the pitching up moment. I stated a few times that 'I have the controls' and we did

have a positive transfer when I took the control column, pressed and held the AP disconnect, and pushed forward. I re-trimmed the aircraft, arrested the now climb (about +300ft), and returned to a gradual descent on base.

## Synopsis

CE750 flight crew reported that the autopilot was disconnected while the speedbrakes were engaged resulting in an excessive nose up trim.

## Time / Day

Date : 201704

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 1500

## Environment

Flight Conditions : VMC

Weather Elements / Visibility : Windshear

Weather Elements / Visibility.Visibility : 10

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Global 5000 (Bombardier)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Final Approach

Route In Use : Visual Approach

Airspace.Class D : ZZZ

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 5800

Experience.Flight Crew.Last 90 Days : 150

Experience.Flight Crew.Type : 2850

ASRS Report Number.Accession Number : 1437983

Human Factors : Fatigue

Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Detector.Automation : Aircraft Terrain Warning  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.General : None Reported / Taken

## Assessments

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

## Narrative: 1

The crew and the aircraft were repositioning after a [trans-Pacific overnight] flight. On arrival the crew was informed they were required to position the aircraft to [another airport]. The weather at [destination] was VMC with no ceiling and excellent visibility with little or no wind. We were given and accepted a visual. Approaching from the northwest we positioned for a left base and configured appropriately, rolling out on final at approximately 1500 ft fully configured with speed reducing as per a normal approach on the visual glide path (one red, one white). Once established on final the crew were distracted by a Cessna given clearance for departure. It was after this that the crew were alerted to an amber windshear annunciation on the primary flight display. As the PIC and the [flying] pilot I elected to continue the visual approach instead of executing an immediate go-around for the windshear. The windshear lasted 15 seconds approximately with minimal airspeed deviation of +/-5 kts.

In effort to regain the visual glide path from above after the event a single audible "sink rate" from the terrain warning system was heard. The aircraft regained the visual glide path at 500 ft and a normal on speed landing ensued. Given the fact the crew had left [departure airport the previous day] and crossed multiple time zones in two days, quality of judgement had been seriously impaired. In hindsight the crew should have stayed in [original destination] and repositioned the aircraft [later]. This would have ensured the crew were well rested and improved judgement and decision making.

## Synopsis

Global 5000 Captain reported continuing an approach after receiving a windshear alert. Fatigue following a long duty day of international operations affected his judgment.

## Time / Day

Date : 201703

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : IAD.Airport

State Reference : DC

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Weather Elements / Visibility : Snow

Weather Elements / Visibility : Icing

Work Environment Factor : Temperature - Extreme

Light : Dawn

## Aircraft

Reference : X

ATC / Advisory.Ground : IAD

ATC / Advisory.Tower : IAD

Aircraft Operator : Air Taxi

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Nav In Use : GPS

Nav In Use : FMS Or FMC

Flight Phase : Taxi

Flight Phase : Takeoff

Flight Phase : Parked

Airspace.Class B : IAD

## Component

Aircraft Component : Turbine Engine

Aircraft Reference : X

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1432830

Human Factors : Workload

Human Factors : Confusion

Human Factors : Distraction



Human Factors : Fatigue  
Human Factors : Situational Awareness

## Events

Anomaly.Aircraft Equipment Problem : Less Severe  
Anomaly.ATC Issue : All Types  
Anomaly.Flight Deck / Cabin / Aircraft Event : Illness  
Anomaly.Deviation - Procedural : Other / Unknown  
Anomaly.Ground Event / Encounter : Other / Unknown  
Anomaly.Inflight Event / Encounter : Weather / Turbulence  
Detector.Person : Flight Crew  
Detector.Person : Gate Agent / CSR  
When Detected : Pre-flight  
Result.General : Maintenance Action  
Result.Aircraft : Aircraft Damaged

## Assessments

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

## Narrative: 1

On the flight into IAD early in the morning we had initially been cleared for the ILS 1R. Approach control then cancelled the approach clearance because he had been informed that 1R was now closed due to unacceptable runway condition. 1C was declared active runway and we received vectors for ILS 1C with runway condition of 3/3/3. When we landed on 1C it was extremely rough. Snow had melted and refrozen, creating big ice berms several inches high in places. Snow plows and sweepers were out but had yet to clean the majority of taxiways and any runway. I asked for taxi assistance to get to our ramp and airport operations vehicle came out to marshal us across the airport. Throughout the taxi we had to cross vast areas completely covered in ice and snow and snow drifts up to a foot tall. I kept engine de-ice on throughout all air and ground operations.

After we parked at our ramp I decided to put plugs and engine covers on the aircraft. It was windy and blowing snow and I did not want snow to get into the engine cores and melt and refreeze in case we had a substantial ground delay. The engine fans were still turning rapidly in the wind and I did not notice any damage at that time. I turned my attention to the landing gear which was completely covered in ice and snow. I cleaned off the landing gear and inspected for damage to tires, struts, actuators and brake lines because my main concern was landing gear damage due to the rough ground condition we had encountered.

About an hour later with passengers on board we received clearance to our filed destination with runway 1C still the active runway, runway condition 3/3/3 and no departure delays. We then proceeded to the de-ice pad and got de-iced with type 1 and type 4. We kept engines running during the de-icing. We then received taxi instructions across the airport to runway 1C. Again I kept the engine heat on throughout all taxiing. While some taxiways had been cleared of snow in the meantime, most were still in really bad condition. In the hour we had been on parked on the ramp there had been a lot of snow plow activity on the airport. I made the wrong assumption that since IAD is a major

international airport the active runway had received priority and been swept before they would clear anybody to depart from it. We were cleared for takeoff on 1C. The runway was just as rough and contaminated as when we had landed. The aircraft was jostled and shaken violently and combined with the poor friction it was literally skipping sideways across the runway. At around 80-90 knots it became clear I would not be able to maintain directional control and I aborted the takeoff. I never touched the wheel brakes as the snow and roughness of the runway was enough to slow the aircraft down and we coasted to a stop before exiting. I informed ATC that 1C was unacceptable for takeoff due to the rough ice contamination. They offered us runway 30 for takeoff instead. Last runway condition for 30 was 2/2/2 and last aircraft had departed 2.5 hours ago. I refused runway 30. Runway 1R was offered. It was in the process of being cleared and would be ready shortly with an updated runway condition report. At this point the temperature had increased to zero Celsius, the sun was up and our type 4 de-ice fluid had not sheared off on the takeoff attempt. There was no visual wing contamination and I decided that further de-icing would be unnecessary. Rather than taxi back, I accepted runway 1R and would wait for an updated condition report. We received taxi instructions across the airport to runway 1R. Again we encountered significant taxiway contamination that required significant thrust to taxi across. Halfway across the airport, the airport ground operations supervisor broke in on the radio and said "runway 1R is closed. I don't know why they're sending you there". A discussion ensued on the radio between ATC and airport operations as which runway was open and active. Everything seemed rather disorganized. Airport operations told us directly it would be 30-40 minutes before they would have 1R cleared. We then told ATC we would taxi back and wait it out instead.

The passengers deplaned and we added some more fuel. I also spent considerable time cleaning snow and ice accumulation off the landing gear and injured my hands in the process. It was still windy and the fans were spinning and I did not notice any external damage to the engines. The air temperature was now just above freezing and I decided against a second de-icing. It was nearly an hour before we got word that runway 1R had now been cleared and opened for takeoff. The engine de-ice bleed air switches were selected ON throughout all ground operations from right after engine start. Again it took considerable power to taxi across the ice contaminated portions of the taxiways. I briefed my copilot that we would cycle the gear an extra time after takeoff to fling off snow and ice. We [were] the third aircraft to take off from 1R. I was flying pilot and I did notice that the aircraft was pulling slightly left. That was consistent with the wind direction but I also assumed it was more pronounced because of possible snow and ice in the brakes. After takeoff there was some vibration which I ascribed to ice on the underside of the wing from the takeoff roll or possibly an inboard landing gear door not being able to close completely. The engines performed normally at that time. As I accelerated above 10000 feet the vibration subsided. As we reached 30000 feet it became clear that the left engine was operating subpar and we would not be able to climb to the planned 40000 feet cruise altitude. I switched engine sync to N2 instead of N1 but there would be an N1 split between the engines with left engine maxing out first. Fuel flow, oil temp, oil pressure, generator performance etc. seemed consistent with an otherwise healthy engine so I elected to complete the flight at 36000 feet. I was extremely tired and exhausted at this time.

After landing and deplaning passengers the FBO line service man mentioned that we appear to have lost some fan blades. A post flight inspection revealed ice damage to several fan blades on #1 engine and a chip out of a stator on Number 2 engine. I do not know at what point throughout the morning's events the damage might have occurred.

I should have called fatigue and scrubbed the flight that morning. My judgement was

impaired by job fatigue, stress and lack of sleep. We had been flying a lot, had a full schedule every single day of this rotation. We've had to deal with weather, missed approaches, destination changes due to weather and multiple maintenance issues. For the last couple of days I had been dropping hints to our company that I was getting really tired and close to calling fatigue. The company response was to keep loading up our schedule. The night prior I had been locked out of my hotel room after returning from dinner due to a technical issue with the electronic lock. It took considerable time and hotel security to come and fix the lock and let me into my room. I was around midnight before I got to sleep. My alarm woke me up at well before sunrise. On the final leg I was unable to stay awake and had to take controlled nap. I was not thinking clearly that morning and my judgement as a captain could have been much better.

One of our RTU's (Radio Tuning Unit) had failed days earlier. Company maintenance decided to defer it by MEL as long as possible rather than fix or replace it as soon as practical. There had been opportunities to replace the RTU in either north or south maintenance stations, but instead we kept flying with a single RTU. On every flight we had to operate two radios using a single RTU. It takes a lot of mental focus to keep from messing up frequencies when using a single unit. During all of our taxiing across the airport in IAD we had to communicate on 3 frequencies simultaneously: ATC ground control, ramp control and FBO. It was extremely mentally exhausting to only have a single RTU for that.

Dulles Airport seemed caught by surprise by the late season snow storm and didn't seem to have a coherent plan. I was appalled by the lousy condition of the active runway 1C. While we managed to land on it alright, along with some heavier jets, the small wheels on our jets were unable to cope as well as the larger jet's wheels. The same goes for the poor condition of the taxiways. I have been at many airports over the years, big and small, and this is by far the worst snow cleaning I have ever experienced. The poor planning was evidenced by the confusion and discussion on open radio between ATC and airport operations. Ironically, if this had been a small uncontrolled airport I would have personally made the call and deemed all surface conditions unacceptable for operating until completely cleaned. But because this was a major international airport with snow cleaning equipment and airport operations vehicles inspecting taxiways and runways I deferred to their judgment instead. I did not think that a major airport would clear aircraft to operate on unsafe surfaces. I should have listened to my personal intuition and experience, but I was tired and stressed.

I never heard any chunks of ice being ingested into the engines even though considerable power had to be used during taxi at IAD. The roughness, drag and noise from the wheels plowing through the taxiway snow might have masked any engine events. I should probably have given more thought to a more thorough inspection of the engines. But every time we were parked I did not see any external damage to the engine cowlings or intakes and the fans were spinning rapidly in the breeze. Inspecting the fans would have entailed climbing up on the slippery wing and stopping the fan disc with my hands first. My main focus had been on inspecting and cleaning the landing gear which had seen significant abuse.

## Synopsis

Air taxi Captain reported departing IAD during an unexpectedly late snow and ice event which resulted in damage to both engines discovered at their destination.

## Time / Day

Date : 201703

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : XNA.Airport

State Reference : AR

Relative Position.Angle.Radial : 030

Relative Position.Distance.Nautical Miles : 3

Altitude.MSL.Single Value : 3000

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 9

Light : Daylight

Ceiling.Single Value : 2000

## Aircraft

Reference : X

ATC / Advisory.TRACON : FSM

Aircraft Operator : Air Taxi

Make Model Name : Beech 1900

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Ferry

Flight Phase : Initial Climb

Route In Use : Vectors

Airspace.Class D : XNA

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 7800

Experience.Flight Crew.Last 90 Days : 100

Experience.Flight Crew.Type : 3000

ASRS Report Number.Accession Number : 1432130

Human Factors : Fatigue

Human Factors : Situational Awareness

## Events

Anomaly.Conflict : Airborne Conflict  
Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Clearance  
Detector.Automation : Aircraft RA  
Detector.Person : Air Traffic Control  
Miss Distance.Horizontal : 6000  
Miss Distance.Vertical : 1000  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented  
Result.Flight Crew : Returned To Clearance  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

I was repositioning my aircraft to a nearby airport after dropping off a crewmember. There was no specified airway or fixes because I was to be operating in Razorback's airspace the entire time. I had just completed a recurrent checkride in the area and was familiar with the weather, airspace, and airports.

On departure from Runway 34 at XNA, I climbed through 3000 on a heading of 339, then when switched to Razorback Approach I cancelled IFR in visual conditions to proceed to ZZZ. Having cancelled IFR I was already thinking ahead to navigating visually. Razorback Departure instructed me to turn left to heading 200 for following traffic. The unexpected instruction caught me off-guard and I asked them to confirm the LEFT turn to 200. When they confirmed, I turned RIGHT in error, which pointed me back towards the airport. This brought me on a bearing towards a corporate jet that had just departed. I saw them leave the runway and began turning southeast away from the assigned heading when they called departure to report that I was causing a Resolution Advisory.

I was instructed to turn to heading 090, and I complied while stating that I had the jet in sight, and that I had ZZZ in sight and requested to navigate visually. At this point I did not realize that I had turned the wrong way, and believed that ATC had given me a vector that had caused the RA. Razorback Departure instructed me to maintain a 090 heading and shortly thereafter a supervisor came on and explained that I had turned the wrong way. At all times, I was in VFR conditions, and as soon as I had the airport in sight I also saw the jet.

I sincerely regret my error. The error was mine and a contributing factor was my expectation of being given a particular instruction. ATC gave me a clear instruction, I read it back and even asked for confirmation, but I turned the way I expected to hear, rather than what was instructed and what I read back. My focus was on quickly completing my reposition flight, whereas it should have been on the process of the flight. Another factor was feeling tired, though not fatigued to a point that I thought would affect safety- I had just finished a recurrent ride and was returning to my normal duty station in preparation for the evening flight. Familiarity with the area is also a factor- I knew where I was and where I wanted to go, and that contributed to what I expected to hear.

In the future, maintaining an IFR flight plan and planning for an instrument approach rather than cancelling IFR to shorten a flight would reduce the chances of committing a

similar error, as would taking better stock of my mental state and taking rest or calling for a replacement crew if I am not in good condition to fly.

## Synopsis

B190 pilot reported an airborne conflict after turning the wrong direction in response to an ATC clearance. Fatigue was cited as a contributing factor.

## Time / Day

Date : 201702

Local Time Of Day : 0001-0600

## Place

Locale Reference.Airport : MPTO.Airport

State Reference : FO

Altitude.MSL.Single Value : 1700

## Environment

Flight Conditions : VMC

Light : Night

## Aircraft

Reference : X

ATC / Advisory.Tower : MPTO

Aircraft Operator : Fractional

Make Model Name : Gulfstream IV / G350 / G450

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Nav In Use : FMS Or FMC

Nav In Use : GPS

Nav In Use.Localizer/Glideslope/ILS : Runway 3

Flight Phase : Initial Approach

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1427643

Human Factors : Fatigue

Human Factors : Situational Awareness

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 5800

Experience.Flight Crew.Last 90 Days : 60

Experience.Flight Crew.Type : 500  
ASRS Report Number.Accession Number : 1427444  
Human Factors : Fatigue

## Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude  
Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Clearance  
Anomaly.Deviation - Procedural : Published Material / Policy  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

We were cleared direct to Toboga Island VOR (TBG) and cleared for the ILS 03R MPTO (Panama City, Panama). Prior to crossing TBG we had set 1700 ft (the final approach fix altitude) in the altitude selector and started a VNAV descent with the FMS guiding the aircraft laterally and vertically with the autopilot connected. Upon being cleared for the approach, the pilot flying armed the approach button on the guidance panel. The aircraft overflew TBG and started to turn to track the 041 radial towards the ILS intercept. Because the approach had been armed, the nav systems started to pick up the localizer frequency and switched over to track the localizer inbound. This caused the automation to kick out the VNAV descent and the LNAV/FMS guidance and turn sharper to intercept the ILS. The pilot not flying noticed we were turning off course and pointed it out to the pilot flying. The pilot flying immediately disconnected the autopilot and began to correct back to the intermediate course segment. Concurrently, both flying and non-flying pilots noticed that the VNAV had also kicked off because the FMS guidance had switched to localizer guidance, and the aircraft was descending through 1800 ft. The pilot flying stopped the descent at 1700 ft and immediately climbed back to 2200 ft, returning the aircraft to the appropriate TBG 041 radial outbound at 2200 ft. From this course and altitude, the LOC course 033 was properly intercepted, and appropriate descent to 1700 ft was made to intercept the glideslope once crossing the TBG/041/8.4. The crew continued the approach without further incident to an uneventful landing.

The problem arose when the pilot flying armed the approach too early. The approach should have been armed when the FAF was the "TO" waypoint. This would have allowed the FMS to guide the aircraft in LNAV/VNAV mode to track the proper feeder route and intercept the localizer inbound at the proper time. This was the end of a nearly 7 hour leg that was operated during a circadian low. Although we had 3 pilots on board so that we could rest and stay alert, the operations during the circadian low were still a factor despite our best efforts to combat the effects. Once the deviation was noticed, proper corrective actions were taken promptly.

## Narrative: 2

[Report narrative contained no additional information.]

## Synopsis



G450 flight crew reported lateral and vertical deviations occurred when approach mode was selected too early in the approach. Crew cited fatigue as a factor.

## Time / Day

Date : 201702

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : BOS.Airport

State Reference : MA

Altitude.MSL.Single Value : 6100

## Environment

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.TRACON : A90

Make Model Name : PC-12

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Nav In Use : FMS Or FMC

Flight Phase : Climb

Airspace.Class B : BOS

## Component : 1

Aircraft Component : Autopilot

Aircraft Reference : X

Problem : Failed

## Component : 2

Aircraft Component : Aerofoil Ice System

Aircraft Reference : X

Problem : Failed

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1424209

Human Factors : Distraction

Human Factors : Workload

Human Factors : Fatigue

## Events

Anomaly.Aircraft Equipment Problem : Less Severe  
Anomaly.Deviation - Altitude : Overshoot  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.General : Maintenance Action  
Result.Flight Crew : Became Reoriented  
Result.Flight Crew : Returned To Clearance

## Assessments

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

## Narrative: 1

We departed out of BOS off of runway 9. Climbing out of 6,400 feet to FL260, the autopilot was engaged. The command bars were set in pitch mode ~5 degrees with altitude armed and not yet captured. Heading mode was the active lateral guidance. When the autopilot was engaged, the aircraft immediately pitched un-commanded to 9-10 degrees and was immediately followed by a nose down descending pitch of ~6 degrees. I am unsure what the exact pitch down was at the time; however, the aircraft was descending +1500 feet/min. Recognizing the autopilot was not responding to commands, I disconnected the autopilot. The autopilot disconnected, and the controls were extremely heavy with a nose down tendency. The autopilot had trimmed the aircraft nearly full nose down. By the time the aircraft was back under positive control, we had lost 300 feet (6,400 feet to 6,100 feet indicated) in the climb. Primary flight control movement was free and correct. The aircraft was hand flown until we topped the clouds. Reaching FL240, we attempted to reengage the autopilot. The flight director was commanding nav mode and altitude capture. The same results occurred. The last attempt was after we leveled off at FL260. In level flight with nav and altitude commanded, the autopilot still displayed the same results: a rapid pitch to 8-10 degrees nose up followed by a rapid descent to about 6 degrees nose down with the pitch trim motor trimming full nose down. The flight director commanded level flight during this occurrence. No Caution and Warning System (CAWS) messages or aural warnings were received. [Captain] called Maintenance and Company to inform them of the situation. VFR conditions prevailed in [destination]; thus, it was a good place to land. To combat fatigue from hand-flying, [Captain] and I alternated Pilot Flying/Pilot Monitoring duties. Several minutes before the descent, we collectively decided to run the QRH procedure for a failed autopilot since the conditions were near identical to what we had received. Further, we did not want the autopilot servo to engage un-commanded. The procedure called for the autopilot circuit breaker to be pulled.

ATC gave us a crossing restriction on the arrival into [destination]: cross ZZZZ Intersection at 11,000. During the descent, we ran the QRH procedure. The Autopilot circuit breaker was pulled, and the entire autopilot control panel became inoperative: the autopilot, altitude alerts, yaw damper, and flight director went out. Since the QRH did not specify we would lose these items, it came as a bit of a shock. Our workload increased drastically. As I was setting up the approach for the RNAV into ZZZ, [Captain] asked what altitude we were supposed to be at, and we then realized that we had blown our assigned altitude of 11,000 by 500 feet (10,500 feet). During this, we had been given a controller change to Approach. Checking on with the controller, we stated that we were 10,500

climbing 11,000 and stated that we had descended through our assigned altitude and were correcting for the mistake. The controller was very calm, and relaxed and did not mention a notice of pilot deviation. Had the QRH specified that the altitude alerts would be inoperative, we would not have had the altitude deviation. After landing, the autopilot was written up per the MEL and maintenance request.

In the initial cruise, we also suffered a de-ice boot fail. We ran the QRH for a de-ice boot failure. The CAWS appeared at 35 seconds into the cycle. We maintained flight in non-icing conditions and landed in ZZZ. The de-ice boots were written up per the MEL and maintenance request.

Limit autopilot failures to VFR conditions. Increase awareness that the QRH will not state the loss of altitude alerts, flight director, yaw damper, etc with this procedure. In my opinion, we would not have had the altitude deviation had the QRH stated it would become inoperative.

## Synopsis

A PC-12 First Officer reported that they overshot an altitude crossing clearance during descent. Autopilot failure and increased workload were mentioned as key contributors.

## Time / Day

Date : 201702

Local Time Of Day : 0001-0600

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Weather Elements / Visibility : Snow

Weather Elements / Visibility.Visibility : 10

Light : Night

Ceiling.Single Value : 12000

## Aircraft

Reference : X

ATC / Advisory.CTAF : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Small Transport, Low Wing, 2 Turboprop Eng

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Landing

Route In Use : Visual Approach

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 2563

Experience.Flight Crew.Last 90 Days : 210

Experience.Flight Crew.Type : 1100

ASRS Report Number.Accession Number : 1423914

Human Factors : Fatigue

Human Factors : Situational Awareness

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi  
Function.Flight Crew : First Officer  
Function.Flight Crew : Pilot Flying  
Qualification.Flight Crew : Commercial  
Experience.Flight Crew.Total : 1300  
Experience.Flight Crew.Last 90 Days : 200  
Experience.Flight Crew.Type : 300  
ASRS Report Number.Accession Number : 1423916  
Human Factors : Situational Awareness  
Human Factors : Fatigue

## Events

Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : FAR  
Detector.Person : Air Traffic Control  
Were Passengers Involved In Event : N  
When Detected.Other  
Result.General : None Reported / Taken

## Assessments

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

## Narrative: 1

We took off on a 55 minute, empty reposition leg. Our crew had been on duty for ten hours at the point of departing. This was the third leg. Our incident being reported is landing on a runway that was temporarily closed for snow removal. Earlier in the day weather and NOTAMS were checked. Everything was going to be clear and good weather overall. While enroute the AWOS was checked. ZZZ1 tower was closed. Visibility reported was ten miles, with winds favoring Runway XX. Starting the descent, we were talking to Approach. Cleared for the visual, we continued down while making numerous radio calls with our intentions on CTAF. As it was a clear, full moon night we could easily see everything on the entire field. On final to Runway XX we cancelled our IFR flight plan with Approach. The runway had a few small patches of snow, but nothing noteworthy. After the uneventful landing we taxied to the FBO, closed the plane up and left for the night.

The next morning, we got to the FBO and there was a note for us to call the tower. Tower informed us of the NOTAM and closure. We checked our EFB's after realizing this mistake and the old NOTAM started just 20 mins before we took off. While we completely understand the severity of our mistake and understand that this could have been much worse, a couple factors lead to us believing the runway was open.

- All runway and glide slope lights were on and glide slope indicated it was working with a planned normal descent
- No "X" on the runway
- Approach control didn't mention any NOTAM's, closures, or ask us what runway we were planning
- No runway closures mentioned on the AWOS
- Runway was plowed and looked like a normal safe-to-land area
- We saw snow removal equipment workers on terminal ramps, but not on the runway or adjacent taxiways (they have radios and are supposed to be listening to the CTAF)

Since this event we have talked about many ways we can avoid anything like this in the future. We talked about making sure both captain and co-pilot are reviewing the NOTAM's and briefing more thoroughly. We have also become more aware that procedures need to be triple checked at times when fatigue can be a factor, such as the end of a duty period and late night. This incident was preventable and has not been taken lightly by us or our company. Thank you for reviewing this report.

#### Narrative: 2

[Report narrative contained no additional information.]

#### Synopsis

Air taxi flight crew reported they landed on a runway that was closed by NOTAM.

## Time / Day

Date : 201701

Local Time Of Day : 0001-0600

## Place

Locale Reference.Airport : RNO.Airport

State Reference : CA

Relative Position.Distance.Nautical Miles : 10

Altitude.MSL.Single Value : 9000

## Environment

Flight Conditions : Marginal

Weather Elements / Visibility : Cloudy

Weather Elements / Visibility.Visibility : 6

Light : Night

Ceiling.Single Value : 1200

## Aircraft

Reference : X

ATC / Advisory.TRACON : NCT

Aircraft Operator : Air Taxi

Make Model Name : Citation II S2/Bravo (C550)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class E : NCT

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Engineer

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 23039

Experience.Flight Crew.Last 90 Days : 60

Experience.Flight Crew.Type : 254

ASRS Report Number.Accession Number : 1418186

Human Factors : Human-Machine Interface

Human Factors : Fatigue

Human Factors : Distraction



## Person : 2

Reference : 2  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Captain  
Function.Flight Crew : Pilot Not Flying  
Qualification.Flight Crew : Instrument  
Qualification.Flight Crew : Flight Instructor  
Qualification.Flight Crew : Multiengine  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
Experience.Flight Crew.Total : 5400  
Experience.Flight Crew.Last 90 Days : 30  
Experience.Flight Crew.Type : 120  
ASRS Report Number.Accession Number : 1418194  
Human Factors : Distraction  
Human Factors : Human-Machine Interface

## Events

Anomaly.Deviation - Altitude : Overshoot  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented  
Result.Flight Crew : FLC Overrode Automation  
Result.Flight Crew : Returned To Clearance

## Assessments

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

## Narrative: 1

I was the co-pilot and flying pilot with no passengers. This was the third mission in this airplane and unlike the usual aircraft I fly this one has a glass cockpit with the Mode Control Panel in front of the Captain. We had worked together very well as a crew with excellent CRM. We were descending to land at RNO where the weather was about 1200 overcast with tops about 8000 ft and because of the temperature, icing was expected, level unknown. The autopilot was engaged. I had briefed the approach and we completed the appropriate checklists. We were getting step down descents and when we were cleared from 10000 to 9000 ft. I saw the captain select 9000 in the altitude preselect window but failed to notice the arm button was not pushed. I had just called for engine anti-ice to be turned on and we were discussing when to turn on the wing anti-ice. Then I noticed the airplane going through 8700 ft. I immediately disconnected the autopilot and started a climb back to 9000. Just as the airplane started climbing ATC announced "stop your descent." We received further vectors and descents and accomplished the approach, landing in RNO.

Contributing factors were I had little time on this glass panel airplane, night flight, IFR weather ahead with possible icing and busy time of flight. We lost situational awareness and my inaction was not confirming autopilot status and reliance on automation.

## Narrative: 2

Prior to descent, all appropriate checklists/briefs were complete in accordance with SOPs. PF was descending to assigned altitude of 10,000 ft. Pilots entered brief conversation about cloud deck, thickness and potential icing. Decision was made to turn anti-ice on (anti-ice switches accessed from left seat) PNF moved to select AI switches "ON." Concurrently, ATC directed a descent from 10,000 to 9,000 just prior to PF reaching 10,000 (SOP calls for PNF to select/reset alt preselect controller to new alt (9,000) and select ALT ARM -- this is to be announced and subsequently acknowledge by PF). Upon receipt of ATC instructions, PNF selected 9,000 in Alt pre-select window. Announced "Pilot, cleared to 9,000." PNF failed to select ARM as attention went back to verifying proper anti-ice controls were in place.

Acknowledgment of "preselects" did not occur. Passing through 8800, PF recognized AP failed to capture preselected altitude of 9,000. PF interrupted AP and started a smooth climb (night IMC conditions at this time) back to 9,000. In process of maneuvering, the aircraft descended to 8700. During climb back to 9,000 ATC directed "Stop descent." During climb back to altitude, ATC directed subsequent vector and descent to intercept the LOC with clearance for approach. Subsequent approach was uneventful.

ROOT CAUSE: Failure to follow SOP.

CAUSAL FACTORS: Distraction due to environmental factors; Crew fatigue, early morning hours, PF completed early morning sortie the day prior. Although it was the fourth leg of mission the PNF had not flown in 17 days.

## Synopsis

C550 pilots reported incorrectly setting their altitude during a descent to RNO resulting in overshooting their assigned altitude.

## Time / Day

Date : 201701

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : RNO.Airport

State Reference : NV

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : IMC

Weather Elements / Visibility : Snow

Weather Elements / Visibility.Visibility : 5

Work Environment Factor : Poor Lighting

Light : Night

Ceiling.Single Value : 3000

## Aircraft

Reference : X

ATC / Advisory.Ground : RNO

Aircraft Operator : Corporate

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

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 26000

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 400

ASRS Report Number.Accession Number : 1414761

Human Factors : Workload

Human Factors : Situational Awareness

Human Factors : Confusion

Human Factors : Fatigue

## Events

Anomaly.Ground Excursion : Taxiway  
Detector.Person : Flight Crew  
Were Passengers Involved In Event : Y  
When Detected : Taxi  
Result.General : Flight Cancelled / Delayed  
Result.Flight Crew : Requested ATC Assistance / Clarification  
Result.Flight Crew : Returned To Gate  
Result.Air Traffic Control : Provided Assistance

## Assessments

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

## Narrative: 1

My passengers were boarded and I started engines at approximately XD: 45. I completed all after start checklist and programming items before taxiing as is SOP in a single-pilot jet. It was snowing very lightly so I turned on the windshield heat to aid exterior vision. My taxi clearance was from the FBO to runway 16R via Charlie. Due to cloud cover and the early hour, it was still very dark. The ramp and taxiway markings were covered with a thin layer of snow. On the G1000 MFD I brought up the taxi diagram of the airport. I observed there was a non-paved area separating the ramp from the taxiway. My plan was to exit the ramp westbound on the connector, then the next right turn would be taxiway C. As I exited the ramp I was trying to discern from the blue taxiway lights ahead exactly when I was going to intersect Charlie. I thought the dark area to my right was part of the ramp when it was really the unpaved area between the ramp and Charlie. As I continued westbound on the connector, I thought the white area to my right was the unpaved area when in fact I was crossing Charlie. I saw a break in the blue lights straight ahead and assumed that was the end of the connector and entrance to Charlie. Due to the darkness, I assumed the dark surface past the blue lights was the groomed taxiway. It was not and now I was taxiing into the gravel. I didn't know what kind of surface I was on so I tried to turn around but couldn't in the soft material. I informed Ground Control that I believed I had overshot taxiway C. I then shut the plane down. I called the FBO for assistance and the passengers were taken back there. The FBO brought a tug and with assistance from Airport Operations pulled the plane back to the ramp. There was no damage to the plane or airport equipment or structures.

Here are my thoughts on this humbling event:

1. Fatigue may have been a contributing factor. I received a text from one of my passengers at XA:00 informing me they would arrive at about XD: 30. I had trouble falling back to sleep and finally got up at XB:00 with about 5 hours of sleep.
2. I'm not very familiar with this area of the airport. I had only used this ramp once prior and that was during daylight with much better weather.
3. Difficult outside vision through a windshield covered with droplets combined with a mediocre taxi light. These were red flags calling out for extra vigilance.
4. Negative transference. When driving a car, the road is usually the dark area and the snow-covered areas are dirt, grass, and other non-paved places. Today's visual cues were the opposite. The G1000 Safe Taxi is a wonderful tool, but you mostly look out the windshield while taxiing. That subjects us to errors of interpretation.
5. The biggest contributing factor was the lack of signage combined with the confusing break in the taxiway lights at my 12 o'clock when exiting the ramp. If there were blue

lights in front of me, I would have stopped to question my navigating skills. Instead there were two dim reflectors spaced on either side of me that I wrongly assumed marked the connector's intersection with Charlie. The reflectors aren't helpful. I feel they contributed to the error. There are no taxiway signs at that ramp exit and yellow lines don't help when they can't be seen.

## Synopsis

Pilot reported a taxiway excursion during night operations in degraded weather conditions. Single pilot operations, poor taxiway signage, and fatigue all reportedly contributed to the event. The aircraft was towed from the unprepared surface with no damage noted.

## Time / Day

Date : 201612

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 24000

## Environment

Flight Conditions : VMC

Light : Dusk

## Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Corporate

Make Model Name : Turbo Commander 690 Series

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Cruise

Route In Use : Direct

Airspace.Class A : ZZZ

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Single Pilot

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 25200

Experience.Flight Crew.Last 90 Days : 35

Experience.Flight Crew.Type : 6000

ASRS Report Number.Accession Number : 1412163

Human Factors : Situational Awareness

Human Factors : Fatigue

## Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : Clearance

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Returned To Clearance

Result.Flight Crew : Became Reoriented

## Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

## Narrative: 1

I was 11 hours into a 12 hour duty day flying single pilot on a positioning leg. The previous three legs had all had some stress due to weather. I was in level flight cruise in VMC on autopilot. I was trying to catch up on paperwork and had the flight log binder propped on the control yoke. I heard the autopilot disconnect warning but it didn't immediately register on my brain. A few seconds later I looked up and the airplane was in a right wing down nose down attitude. I immediately rolled wings level and pitched back up to regain my assigned altitude. The binder had hit the trim switch which disconnected the autopilot and possibly added some nose down trim. The only reason I can think of for not reacting sooner to the autopilot disconnect warning is fatigue. I had had two long days in a row.

## Synopsis

Aero Commander 690 pilot reported an altitude deviation occurred when the autopilot was inadvertently disconnected.

## Time / Day

Date : 201612  
Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : TEB.Airport  
State Reference : NY  
Altitude.MSL.Single Value : 1500

## Environment

Flight Conditions : VMC  
Light : Night

## Aircraft

Reference : X  
ATC / Advisory.Tower : TEB  
ATC / Advisory.TRACON : N90  
Aircraft Operator : Corporate  
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng  
Crew Size.Number Of Crew : 1  
Operating Under FAR Part : Part 91  
Flight Plan : IFR  
Mission : Passenger  
Flight Phase : Initial Climb  
Route In Use.SID : RUUDY 5  
Airspace.Class B : N90

## Person

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Corporate  
Function.Flight Crew : First Officer  
Function.Flight Crew : Pilot Flying  
Qualification.Flight Crew : Flight Instructor  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
Qualification.Flight Crew : Multiengine  
Qualification.Flight Crew : Instrument  
Experience.Flight Crew.Total : 4500  
Experience.Flight Crew.Last 90 Days : 65  
Experience.Flight Crew.Type : 350  
ASRS Report Number.Accession Number : 1409246  
Human Factors : Situational Awareness  
Human Factors : Fatigue

## Events

Anomaly.Flight Deck / Cabin / Aircraft Event : Other / Unknown  
Anomaly.Deviation - Speed : All Types  
Anomaly.Deviation - Track / Heading : All Types



Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

After takeoff from TEB Runway 24 on the RUUDY 5 departure, while leveling at 1,500 feet MSL, a delayed turn to the 260 course to WENTZ resulted in a course deviation and airspeed deviation of 20 KIAS above limit of 200 KIAS. After engaging the autopilot and auto-throttle, the aircraft resumed the normal departure profile and the flight continued normally.

After completing two short legs as Pilot Not Flying (PNF) on a long duty day the Pilot Flying (PF) flew the last leg. The long duty day and fatigue were a factor as well as the failure of the PF to utilize automation on a high-workload SID. Another contributing factor that added to pilot workload was the time pressure to depart from TEB Runway 24 prior to when the noise abatement limits came into effect.

## Synopsis

Corporate pilot reported a course and airspeed deviation on the RUUDY5 Departure from TEB due to fatigue, workload and time pressure.

## Time / Day

Date : 201611

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : IMC

Weather Elements / Visibility : Icing

Weather Elements / Visibility : Snow

Light : Night

## Aircraft

Reference : X

ATC / Advisory.Ground : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Citation V/Ultra/Encore (C560)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Taxi

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1404137

Human Factors : Workload

Human Factors : Confusion

Human Factors : Distraction

Human Factors : Fatigue

Human Factors : Situational Awareness

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1404138  
Human Factors : Workload  
Human Factors : Fatigue  
Human Factors : Distraction  
Human Factors : Confusion  
Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Procedural : Clearance  
Anomaly.Ground Excursion : Taxiway  
Anomaly.Inflight Event / Encounter : Weather / Turbulence  
Detector.Person : Flight Crew  
When Detected : Taxi  
Result.General : Flight Cancelled / Delayed  
Result.Flight Crew : Requested ATC Assistance / Clarification

## Assessments

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

## Narrative: 1

Crew taxied out for deice on the opposite end of ramp. Crew accomplished all flows and checklists relating to deice with engines running. After given the all clear signal from deice truck, SIC contacted metering and advised ready to taxi. We were instructed to switch to ground where we received taxi instructions to taxi to Runway via Whiskey. After taxiing a short bit, ATC called looking to amend taxi instructions as the ILS critical area was active, given the heavy snow and low visibility. SIC was distracted copying instructions as per AOM/FOM. In attempting to taxi onto Whiskey, I taxied the aircraft toward the blue lights on the parallel taxiway. Unfortunately, the clear area of the ramp and grass blended together with snow cover and I taxied off the ramp with the nose gear and the left main gear.

Once I felt the slump on the left side, I immediately recognized the aircraft had departed the ramp and was on the grass. We stopped the aircraft, advised ATC and performed a normal shutdown. I then called maintenance for guidance on how to proceed.

The aircraft was left chalked and marked with cones before leaving the airport. I would suggest both pilots be required to keep eyes outside in low light foul weather ground operations until on a lighted taxiway, or ramp. In addition, specific to this airport, I would recommend reflectors, or lights on the ramp edge as a snow covered surface is very difficult to discriminate between ramp and grass at night.

## Narrative: 2

We had just completed deicing and had begun to taxi when we received an amended taxi clearance. I was copying the new taxi clearance when my partner, the left seat pilot, told me that we had accidentally left the FBO ramp and had entered the grassy area. Visibility was poor, as it was snowing at a moderate rate and I was unable to assist the left seat

pilot to avoid exiting the ramp due to the limited visibility and the necessity to divert my attention to copy the amended taxi clearance.

## Synopsis

A CE-560 Captain taxied the left and nose gear off a ramp onto the adjacent grass at night with moderate snow in limited visibility while the First Officer copied a new taxi clearance. The ramp and snow covered grass blended together.

## Time / Day

Date : 201610  
Local Time Of Day : 1201-1800

## Place

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

## Environment

Flight Conditions : Marginal  
Light : Daylight

## Aircraft

Reference : X  
ATC / Advisory.Tower : ZZZ  
Aircraft Operator : Air Taxi  
Make Model Name : Cessna 402/402C/B379 Businessliner/Utiliner  
Crew Size.Number Of Crew : 1  
Operating Under FAR Part : Part 135  
Mission : Passenger  
Flight Phase : Landing

## Component

Aircraft Component : Main Gear Tire  
Aircraft Reference : X  
Problem : Failed

## Person

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Single Pilot  
Qualification.Flight Crew : Multiengine  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1392360  
Human Factors : Fatigue  
Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Inflight Event / Encounter : Unstabilized Approach  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Aircraft : Aircraft Damaged

## Assessments

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

### Narrative: 1

I went in range about 2 miles left base for Runway XX and put the gear down with landing checks shortly thereafter, with flaps and props to go. Over the threshold I was still fast. I reached over to make sure the flaps were fully down. This extended the flaps and I landed hard. The right main blew while braking but I was able to stop on the runway.

Suggest fewer legs and shorter days to lower fatigue, particularly on IFR single-pilot days. It would be beneficial to include go around training for no flap situations in VFR; there could be a flap failure or late flap extension that wasn't noticed early enough as in this situation. Going around would have certainly been a better solution than the outcome here.

### Synopsis

Cessna 402C pilot reported the right main tire failed after a hard landing. Fatigue was cited as contributing.

## Time / Day

Date : 201609

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : LAX.Airport

State Reference : CA

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Light : Night

## Aircraft : 1

Reference : X

ATC / Advisory.Tower : LAX

Aircraft Operator : Corporate

Make Model Name : Gulfstream V / G500 / G550

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Landing

## Aircraft : 2

Reference : Y

ATC / Advisory.Tower : LAX

Aircraft Operator : Air Carrier

Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Flight Phase : Landing

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 7500

Experience.Flight Crew.Last 90 Days : 90

Experience.Flight Crew.Type : 150

ASRS Report Number.Accession Number : 1389015

Human Factors : Fatigue

Human Factors : Communication Breakdown

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

## Events

Anomaly.ATC Issue : All Types  
Anomaly.Conflict : Ground Conflict, Less Severe  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
Detector.Person : Air Traffic Control  
When Detected : Taxi  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

We were landing LAX on runway 25L at night. Traffic was very busy and we were following traffic in and did not get landing clearance until very short final. After touchdown, we rolled out as we had briefed to exit left on A7. Coming upon and almost abeam taxiway H4, ATC requested us to exit right on H4 due to landing traffic behind us. We determined it was not safe to comply with the last minute ATC instruction and continued to turn left on A7 without delay. An airliner landed on 25L behind us with no problems but it was tight.

I believe it's important to be aware of traffic around you but in this case with the high work load, last minute clearance to land (which we were focused on), and a long international flight (12 hours and fatigued) we did not realize it was as tight behind us as it was. ATC needs to do a better job of communicating that and if they would like us to exit a certain point to request that sooner than almost abeam the requested taxiway.

## Synopsis

G550 Captain reported he was unable to clear the runway in LAX at the ATC cleared exit because the clearance came too late to comply with.



## Time / Day

Date : 201609

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : VNY.Airport

State Reference : CA

Altitude.MSL.Single Value : 4700

## Environment

Flight Conditions : VMC

Light : Dusk

## Aircraft : 1

Reference : X

ATC / Advisory.TRACON : SCT

Aircraft Operator : Fractional

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Nav In Use.Localizer/Glideslope/ILS : Runway 16

Flight Phase : Initial Approach

Airspace.Class E : SCT

## Aircraft : 2

Reference : Y

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

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Phase : Cruise

Airspace.Class E : SCT

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1388602

Human Factors : Distraction

Human Factors : Fatigue

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Confusion

Person : 2

Reference : 2  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Fractional  
Function.Flight Crew : First Officer  
Function.Flight Crew : Pilot Not Flying  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1388883  
Human Factors : Workload  
Human Factors : Fatigue  
Human Factors : Distraction  
Human Factors : Confusion  
Human Factors : Time Pressure

## Events

Anomaly.ATC Issue : All Types  
Anomaly.Conflict : Airborne Conflict  
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Anomaly.Inflight Event / Encounter : Weather / Turbulence  
Detector.Automation : Aircraft RA  
Detector.Person : Air Traffic Control  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Took Evasive Action  
Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : FLC Overrode Automation  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

While on a flight to SMO the weather at SMO required a divert to VNY. On approach into the VNY area the approach controller cleared us to intercept the localizer for the ILS Z 16R at VNY. We were already flying through the course. We corrected the course and we were told to descend to 3000 then he came back and said to maintain 5500 for traffic. We set 5500 in the altitude selector and began looking for the traffic. We called the airport in sight, and the traffic about the same time he said to descend to 5000. The approach controller cleared us for the visual approach. He then came back and said maintain 5000. When he cleared us for the approach the pilot flying activated the APPR mode. We were both looking for the traffic because the traffic had initiated a turn back towards us. The aircraft intercepted the glideslope and continued descending through 5000 ft to about 4700 ft when the pilot realized the aircraft was still descending. The pilot flying disengaged the autopilot and returned the aircraft to the assigned altitude of 5000 ft. About the same time the TCAS sounded off with a RA to climb and ATC called traffic again. We told him we

still had the traffic in sight. The other aircraft was passing off the right side below us at about 3 miles. ATC told us to delete the altitude restriction and contact the tower. We did and landed safely.

The confusing clearance of cleared for the visual and then giving an altitude restriction combined with multiple traffic to see and avoid and poor visibility with the sunset created a heavy workload environment and the pilot flying neglected to change the automation from APPR to NAV modes. Both pilots were tired and there was confusion over clearance phraseology. Quickly correcting the navigation after the late turn from the arrival to the approach course coupled with multiple headings and altitude changes in a very short time plus quite a few aircraft to locate on the TCAS was a busy flight deck. A long day made us a little slower to respond and react than typical.

It had been a very long day. This was the end of the day and occurred after a divert into VNY had been initiated. We had been flying over 9 hours and were approaching our 14th hour of duty. Flying into the sun all day both eastbound and then westbound trips took its toll. We were tired. ATC was confusing. VFR traffic was abundant and not talking to ATC. Everyone has to fly through the same pass to get into or out of the VNY area. It's not uncommon to have multiple VFR traffic flying through approach altitudes which disrupts normal operations for IFR traffic. I think had we not been on such a long day we would have responded quicker, been more attentive and not missed the automation error.

#### Narrative: 2

[Report narrative contained no additional information.]

#### Synopsis

A Fractional flight crew flying the VNY Runway 16R ILS reported taking evasive action from VFR traffic as they began their descent at 5,000 feet. The crew cited fatigue as a factor.

## Time / Day

Date : 201608

Local Time Of Day : 1201-1800

## Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 49000

## Environment

Flight Conditions : IMC

Weather Elements / Visibility : Thunderstorm

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility : Windshear

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Corporate

Make Model Name : Citation X (C750)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Cruise

Route In Use : Direct

Airspace.Class A : ZZZ

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 19300

Experience.Flight Crew.Last 90 Days : 100

Experience.Flight Crew.Type : 1000

ASRS Report Number.Accession Number : 1381841

Human Factors : Fatigue

Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Altitude : Undershoot

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Procedural : Clearance  
Anomaly.Inflight Event / Encounter : Weather / Turbulence  
Detector.Person : Flight Crew  
Were Passengers Involved In Event : N  
When Detected : In-flight  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

We were positioning the aircraft (w/o passengers) to our home base and attempted to cross a line of thunderstorms approximately 300 miles from our destination. We had climbed to FL490 but as we approached the final part of the line it was evident that we would enter the cloud tops unless we climbed higher (FL510 is aircraft ceiling). We received a clearance to climb but started to enter the tops at nearly the same time. Engine anti-ice heat was selected 'on' with a corresponding loss of climb performance and downdrafts encountered nearly simultaneously. Significant turbulence and precipitation began to occur and our climb turned into a descent over which we had no control as in order to maintain adequate airspeed we had to descend. [We] were unable to advise ATC immediately due to other radio traffic. We were able to arrest the descent and maintain FL450 with anti-ice heat 'on' and eventually advise ATC of the need for a revised clearance to maintain FL450. The controller promptly cleared us to maintain FL450 and we passed on the turbulence/precipitation report. No other communication was exchanged with ATC except for the next routine frequency change.

The weather encounter was avoidable and solely my responsibility as I should have requested a lateral deviation and/or altitude change much sooner. A weather cell to our left was 'painting red' and the one to the right was 'yellow'. I did not anticipate the degree of turbulence/precipitation we encountered because I thought we had adequate horizontal and vertical clearance from the cells. Obviously, I was not taking into account the vertical development already seen. A contributing factor may have been my past experience of successfully 'topping' similar lines of weather, but not at this altitude. I should have realized the fact that there was not sufficient margin to attempt this. After landing we advised our 'maintenance crew' of the turbulence/precipitation encounter and asked that appropriate inspections be completed. Some 'static electricity' protection elements on the airframe needed to be replaced but there was no evidence of a lightning strike or turbulence damage (the autopilot was, fortunately, in the 'pitch mode' rather than altitude hold or some other vertical mode during the turbulence encounter and remained engaged during the descent). Two other potential contributing factors may be that I was feeling tired on this leg (only 9 hours of duty at this point) and that we had no passengers on board. I have evaluated my decision making process as a result of this event and will continue to work on improving it.

## Synopsis

CE-750 Captain reported descending without a clearance to maintain airspeed while trying to go over the top of a line of thunderstorms.

## Time / Day

Date : 201607

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : ZZZ1.Airport

State Reference : US

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Ceiling.Single Value : 12000

## Aircraft

Reference : X

Aircraft Operator : Air Taxi

Make Model Name : King Air C90 E90

Operating Under FAR Part : Part 135

Flight Plan : None

Mission : Ambulance

Flight Phase : Landing

Route In Use : Direct

Airspace.Class G : ZZZ1

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 6230

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 750

ASRS Report Number.Accession Number : 1375426

Human Factors : Fatigue

Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : FAR

Anomaly.Ground Incursion : Runway

Detector.Person : Flight Crew

When Detected : Aircraft In Service At Gate

Result.Flight Crew : Became Reoriented

## Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

### Narrative: 1

My crew was dispatched from ZZZ to ZZZ1 at which point we were to pick up a patient in ZZZ1 and take them to a better care facility in ZZZ2. I was taking a safety nap when dispatch came in, because of sleep inertia I assumed that we were leaving from ZZZ to ZZZ2, which is our routine flight and because of this I took my time filing flight plans and even took a shower because our medics usually take about 30 minutes packaging the patient to bring them to the plane. One of the medics came in the crew quarters and ask if I was ready for departure, it was at this point that I realized that I had sleep inertia and had planned the flight completely wrong. I hurriedly exited the crew quarters and entered the plane, took off to ZZZ1 without checking NOTAMs. The Runway was NOTAMed closed for resurfacing, I did not notice the yellow X off the end of the runway because it was laying in weeds which blocked my view of it from a lateral angle. There were no workers or equipment present on the runway. I spoke with the Airport Manager and he gave me permission to depart ZZZ1.

### Synopsis

C90 Captain reported being awakened from sleep to fly a medevac flight but not comprehending the assignment due to fatigue. When informed that the flight is ready to depart he quickly jumped in the aircraft without checking NOTAMs. After landing he learned that the airport was closed for runway resurfacing.

## Time / Day

Date : 201606

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : ATL.Airport

State Reference : GA

Altitude.MSL.Single Value : 11000

## Environment

Flight Conditions : VMC

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.TRACON : A80

Aircraft Operator : Air Taxi

Make Model Name : Light Transport

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Cargo / Freight

Flight Phase : Initial Approach

Route In Use : Vectors

Airspace.Class E : A80

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 19000

Experience.Flight Crew.Last 90 Days : 150

Experience.Flight Crew.Type : 10000

ASRS Report Number.Accession Number : 1366999

Human Factors : Communication Breakdown

Human Factors : Situational Awareness

Human Factors : Fatigue

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

## Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : Clearance



Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

On initial approach vectors to land with Atlanta Approach. The radio traffic was very congested. Approach was very busy. I was given a descent to 12,000, I copied the instruction. We descended to 12,000. Around the time we leveled at 12,000, I was given a speed reduction assignment. I acknowledged and we complied. Shortly thereafter, I thought that I was given another descent assignment to 10,000. I copied the instruction. My copilot was busy with some flying stuff and didn't hear the instruction. He then saw that 10,000 was in the altitude alerter, and asked, "when were we told to go to 10?" I said, "just now." So we started down. At 11,000, ATC came on and told us to stop, and asked why we were descending. I said, "We were instructed to descend to 10,000". ATC said we were not instructed. I said that I read back the assignment, and if it wasn't for me, why didn't you correct me. The remainder of the flight was normal. Just before going to tower frequency, approach gave me the TRACON phone number to call. I called. The lady on the phone said that she had pulled the tape, and there was no recording of an instruction for me to descend to 10,000 and furthermore no reply from me to that instruction. I told her that I didn't know why my response was not there, but the radio was so busy, that another plane may have keyed up at the same time and cut me out. But I know that I acknowledged an instruction that I believed was for me even though it was now apparent that it was for someone else. And that since I wasn't corrected, I felt I was properly complying with said instruction. She then said the instruction was for a [commercial] jet with a somewhat similar callsign. She said that paperwork was going to be filed with the FAA and to be waiting for a call.

I realize now that I should've clarified the instruction with ATC, when my copilot asked about 10,000 being in the alerter. I was confident I heard correctly, even though it is good CRM to clarify an instruction when a crew member questions the instruction. One of the controllers had told a couple of other planes that they needed to pay better attention to hearing their callsigns because they were calling these planes multiple times with no response. One controller told one plane to "listen up". And he said it quite sternly. So when my copilot questioned the assignment, I felt that I had it right and I also didn't want to anger the controller by trying to cut in. Not confirming was my biggest mistake. Fatigue may have had something to do with it also. We were arriving in ATL after a four hour plus flight. We left my home base [late at night]. So, I was tired as well.

## Synopsis

Air taxi Captain reported an altitude deviation resulted after responding to a descent clearance that was intended for an aircraft with a similar call sign.

## Time / Day

Date : 201605

Local Time Of Day : 1201-1800

## Place

Locale Reference.ATC Facility : ZZZ.ARTCC

State Reference : US

Altitude.MSL.Single Value : 39000

## Environment

Flight Conditions : VMC

## Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : HS 125 Series

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Flight Phase : Cruise

Airspace.Class A : ZZZ

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1352434

Human Factors : Communication Breakdown

Human Factors : Fatigue

Human Factors : Situational Awareness

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

## Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : FAR

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Became Reoriented

## Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

## Narrative: 1

In cruise at FL390 we lost radio contact with ATC for an extended period of time. After a lengthy cockpit discussion on the arrival, weather, and reprogramming the FMS to reflect the NOTAM missed approach procedure for the ILS, I realized I was only hearing one side of the airborne communications. The non-flying pilot thought he had heard from the controller a short while ago. I immediately turned up the volume on the 121.5 standby and began to search the EFB for the communications box, while the non-flying pilot tried to hail someone on the primary radio.

I eventually transmitted on 121.5 and was able to reach [another air carrier flight] to get a relay for a new frequency. I recognized the similar call sign from an earlier sector and considered our call sign could have been a contributing factor to our blackout. Shortly after I heard a Guard Controller trying to contact us. The non-flying pilot also was able to find a good frequency on the primary.

It became very apparent to me that we had been out of radio contact for an extended period. I immediately removed myself from flight duty upon landing because I felt I had fallen to extreme task fixation due to chronic fatigue. We had been placed on the late night schedule with a transcontinental red eye followed by [late night] standby shifts for days until they flipped us to an AM show for this trip. To be candid, this lost communication event alarmed me. I had thought I could handle this type of situation better than I did, but it was insidious in how we thought we were on task, but in reality we had fixated on the arrival instead of alert to what was happening.

## Synopsis

HS-125 Captain reported experiencing an extended period of no communications with ATC. Reporter cited chronic fatigue as a contributing factor.

## Time / Day

Date : 201604

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : ZZZZ.Airport

State Reference : FO

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Light : Daylight

## Aircraft

Reference : X

Aircraft Operator : Fractional

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Flight Phase : Parked

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Pilot Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1345779

Human Factors : Fatigue

Human Factors : Situational Awareness

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1345782

Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Detector.Person : Gate Agent / CSR  
Detector.Person : Flight Crew  
When Detected : Aircraft In Service At Gate  
Result.General : None Reported / Taken

## Assessments

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

## Narrative: 1

About 15 minutes after landing it was brought to my attention that I was at the scheduled alternate airport instead of the scheduled intended airport. The cause of the mistake was initiated when I had entered the alternate airport as destination airport into the FMS and iPad. This mistake was never identified by either myself or the pilot monitoring. Halfway into the flight ATC asked us the name of the airport where we were landing and we replied what was in our FMS, the alternate airport. ATC did not question this, which only reinforced our error. Approach control cleared us for an approach to the wrong airport and the tower cleared us to land.

Upon shutting down at the gate, I called [company] and informed [them] of our arrival. At that time the passenger deplaned without saying a word about the airport. The FBO at first didn't say anything to me about being at the wrong airport. Everything seemed normal until I contacted dispatch about our next release. At that time it was discovered that I was at the wrong airport. I contacted [company] and informed them of the situation. They did not indicate any problem. I did not have any contact with the passenger after he left the aircraft. I did not walk him into the FBO. I stayed in the aircraft as the PIC escorted the passenger. By the time I entered the FBO the passenger had left. We received a release to [a new destination] and flew there without further incident

All the necessary procedures for entering data into the FMS have already been put into operation. I cannot think of anything to improve the procedures. I cannot explain how or why I entered the wrong destination or why it was not corrected. All the waypoints were double checked per procedures, but the destination was not noticed to be wrong. With some fatigue it is possible, as in this case, that the crew could enter the wrong airport in the FMS as the destination.

## Narrative: 2

All I can add to the above is that I should have put the destination in my iPad from my brief not the box my partner programmed, then I would have caught our mistake. I also wish when ATC questioned our destination I would have looked at my phone not iPad.

## Synopsis

Light transport flight crew reported landing at the wrong airport following an FMS programming error.

## Time / Day

Date : 201603

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : AGC.Airport

State Reference : PA

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.Ground : AGC

Aircraft Operator : Air Taxi

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

Route In Use : None

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 8500

Experience.Flight Crew.Last 90 Days : 55

Experience.Flight Crew.Type : 2500

ASRS Report Number.Accession Number : 1339547

Human Factors : Situational Awareness

Human Factors : Fatigue

Human Factors : Confusion

Human Factors : Distraction

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi  
Function.Flight Crew : Pilot Not Flying  
Function.Flight Crew : First Officer  
Qualification.Flight Crew : Instrument  
Qualification.Flight Crew : Multiengine  
ASRS Report Number.Accession Number : 1338644

## Events

Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
When Detected : Taxi  
Result.Flight Crew : Became Reoriented  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

This event was a situation that almost led to a runway incursion. Myself and the SIC had a very early start to the day (4am show) and are not a crew that normally flies together. These may have nothing to do with the incident, but both are worth noting. We had a position leg to AGC where we picked up passengers at the FBO. We received a clearance to taxi to RW28 via Taxiway Alpha and had been cleared to cross RW13-31. An airplane was taking off on RW28 as we were taxiing. We were the only two aircraft on the airport in motion. I am unsure whether ground and tower were combined on the same frequency. We have Jepps built into the avionics on our aircraft and the appropriate airport diagram was displayed with the aircraft depicted at the time. As we exited, I taxied perpendicular to Taxiway Alpha, so as not to shortcut across the ramp. As we approach Alpha, we never saw a sign for Alpha and actually taxied unknowingly onto A3. We had mistaken RW13-31 for taxiway A. As we approached runway RW13-31, we realized our error and stopped the aircraft short of Runway 13-31. This took place at the A3 taxiway. Because of A3's close proximity to the runway and the ground controller's lack of knowledge of our intent to stop, he instructed us to stop. At that time we were almost at a complete stop. We never crossed onto the runway until we were cleared to taxi on it afterwards. This was all located in a Hotspot on the diagram (HS1).

I feel that when I became convinced that runway 13-31 was the taxiway that I was looking at, I became fixated on this and did not take heed from the rest of the information that I had to use. We did not brief the hotspots before or during the taxi, which now seems like a prudent thing to do. The lack of delineation of ramp to taxiway also contributed to my confusion. Nowhere is there any signage to show taxiway A from the direction that I came. The fact that I chose to take the perpendicular route to the taxiway still seems to be a prudent thing to do, but added to my fixation on the taxiway. Looking at the diagram it seems like this would not be possible, but I am afraid it was. In addition, the fact that the SIC had his head down for part of the taxi, to read a checklist, contributed to the confusion once he looked up. He had to reevaluate our current position and figure out what my intentions were. Also the fact that we both were not paying 100% attention to the taxi, while operating in close proximity to a runway, took away the doubling checking that would have been there if we had both been paying attention.

## Narrative: 2

After accomplishing the After Start Checklist we proceeded with a right turn out of the ramp area. Once headed in the correct direction I commenced reading the Taxi Checklist items and shortly thereafter heard over the radio to STOP. We had inadvertently crossed through taxiway alpha and onto A3 headed for Runway 31.

A3 is approximately 20 feet long in length and is where we came to a stop. At no point did the aircraft cross the hold short lines onto Runway 31. The visual perception as you approach Alpha from afar is that Runway 31 or 28 could be taxiway Alpha. This entire area is noted as a Hot Spot area on charts. I feel that a combination of where you exit this particular ramp from along with constricted taxiways and runway intersections can be visually misleading.

## Synopsis

Light transport flight crew taxied onto Taxiway A3 towards Runway 13-31 at AGC after mistaking the runway for Taxiway A.



## Time / Day

Date : 201602

Local Time Of Day : 0001-0600

## Place

Locale Reference.Airport : LAS.Airport

State Reference : NV

Altitude.MSL.Single Value : 6000

## Environment

Flight Conditions : VMC

Light : Night

## Aircraft

Reference : X

ATC / Advisory.TRACON : L30

Aircraft Operator : Air Taxi

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Ferry

Nav In Use : FMS Or FMC

Nav In Use : GPS

Flight Phase : Initial Approach

Route In Use : Visual Approach

Route In Use.STAR : GRNPA 1

Airspace.Class B : LAS

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1330496

Human Factors : Situational Awareness

Human Factors : Workload

Human Factors : Confusion

Human Factors : Fatigue

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1330495  
Human Factors : Fatigue  
Human Factors : Confusion  
Human Factors : Situational Awareness

## Events

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Clearance  
Anomaly.Inflight Event / Encounter : CFTT / CFIT  
Detector.Person : Flight Crew  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : Took Evasive Action  
Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : FLC complied w / Automation / Advisory  
Result.Flight Crew : Became Reoriented  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

The crew was scheduled for a late night reposition flight that departed well after midnight. We'd just landed and dropped off our passenger. Later we refuel for the reposition to LAS and began to preflight for the next leg. On the previous leg I was the PF, approximately 4:54 flight time. I did not feel sleepy or fatigued and shared my status with my crewmember. Overall we both cross checked with one another for fatigue issues and stressed "safety first" prior to departing for LAS. With the reposition to LAS forecasted VFR weather we both agreed fatigue was a non-issue. While enroute to LAS I was the PM. We were flying the GRNPA 1 RNAV arrival via MLF during the descent. Later while on the arrival ATC assigned us a heading towards LAS in prep for ILS-1L. I asked the PF "you want me to extend the centerline?" He replied "yeah go ahead and extend it." I proceeded to extend the centerline from NODIY (FAF) since we'd already programed and briefed the approach. We continued on the assigned heading below 10,000 soon to be within close proximity of LAS. ATC-Approach then advised us of the location of the airport (2 o'clock & 6 miles) and queried if we had a visual on the field. The PF gave the thumbs up & acknowledged the location of the field. I then transmitted "field in sight" & we were "cleared for the visual approach to runway 1L." Next the PF made a left turn towards the south paralleling the inbound LOC course for runway 1L. But as we continued to extend southbound we began to descend I felt our situational awareness was in jeopardy. As I stated "Man we are getting too low!" ATC queried our intentions / altitude and advised us of the MSA and location of LAS (McCarran). The PF corrected the flight path with pitch and power and maneuvered the aircraft in the direction to intercept the localizer towards the runway. ATC then mentioned there must have been some confusion between Henderson Executive and McCarran Intl. Airport.

Flights departing after midnight should be micro-monitored. I feel that this reposition flight

could have been scheduled for the next day. In the future I will have to be much more diligent assessing in-flight crew fatigue issues. Also VFR night approach policies should include the use of instrument approach procedures.

## Narrative: 2

Approaching LAS, ATC gave us direction and range information and requested we report the field in sight. I spotted a beacon approximately 11 to 12 o'clock and spotted what I thought was the destination airport and instructed the first officer to report the field in sight. We were then "cleared for the visual for runway 1L base turn at your discretion". I immediately turned left and started a descent out of 5000 ft because in my judgment we were high and needed a little more distance for a turn to final. As we got closer to the airport I began to realize that the airport I was setting up to land at may not be the intended destination which I should have recognized much sooner but could not due to my degraded attention and lack of reaction time caused by being awake approximately 20 hours at the time. Upon finally realizing that my situational awareness had been compromised I asked the first officer to confirm that the airport I was setting up for was the intended destination. ATC then advised that the MSA for the area we were in was 6000 ft and suggested a right turn and reissued direction and range info for LAS. I executed an immediate climbing right turn to more of an intercept for the final approach course for runway 1L at LAS which we had fortunately programmed in the FMS for backup. We were then able to acquire a visual on the intended destination and continued the approach without further incident. ATC then commented that it appeared we mistook HND for LAS which was fact.

I was concerned about the reposition leg to LAS in the afternoon and called flight tracking to see if the schedule could be adjusted to mitigate the potential fatigue factor. The flight tracker I spoke to said he would take a look at the schedule to see if it could be adjusted and call me back. He never did. I notified him at the time that I was likely going to be awake for more than 20 hours when reaching the destination. In the future when flight crews make tracking aware of extreme situations such as this it needs to be taken more seriously and more effort needs to be made to insure that back side of the clock flying is limited as much as possible. Also in the future I will be more responsible in my risk assessment and will call in fatigued if I have been awake more than 18 hours at the termination of the flight.

## Synopsis

A fatigued air taxi crew transitioning from the LAS GRNPA 1 RNAV Arrival to a night visual mistook HND for LAS and descended below the MSA before ATC alerted.

## Time / Day

Date : 201601

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 1700

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Daylight

Ceiling.Single Value : 3200

## Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Air Taxi

Make Model Name : Caravan Undifferentiated

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 135

Flight Plan : IFR

Mission : Cargo / Freight

Flight Phase : Final Approach

Route In Use : Visual Approach

Airspace.Class C : ZZZ

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Commercial

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 6300

Experience.Flight Crew.Last 90 Days : 125

Experience.Flight Crew.Type : 2200

ASRS Report Number.Accession Number : 1326879

Human Factors : Situational Awareness

Human Factors : Fatigue

Human Factors : Distraction

## Events

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

Number two on a visual approach behind an [airliner]. Cleared to land runway 25L. Coming in on a visual, even in daylight conditions, I always load an approach as a backup. I saw the traffic ahead over the numbers and began to angle the base to stay closer to the shore. I watched the traffic land and turn off [the runway], and somewhere in that time I became over focused on the glide slope to maintain a dot high and remain above the wake. As I continued to look inside configuring for landing the controller advised I was lined up for 25R, now on about one and a half to two mile final. I acknowledged his correct perception and switched over to the left side. I've flown airplanes for [over] 20 years and never landed on the wrong runway. This made me realize it can happen to anyone.

Having the course dialed in certainly helps but only if you actually look at the instruments. The G600 display has the glide slope off to the right, and as I discovered you can see the glide slope without ever actually looking at the localizer. Thinking about wake turbulence, with the complacency of a day time visual approach to an airport I've worked out of for [many] years, checking the inbound course fell on the priority list, unintentionally.

Fatigue. While not overly tired, I was flying during the circadian rhythm time of two thirty to three thirty in the afternoon. Normally I'm drinking coffee during that time, but two days out of the month I'm flying instead. [This was] the end of the work week. Without meaning to I'm taking a little of a back seat to finishing up the job.

There was no other traffic in the area. I'd like to think I would have caught my error, given the familiarity with the field and the backups in place. Regardless, I'm thankful the controller felt confident in speaking up. It's possible they fall into a mindset of seeing us all of the time and thinking "they know what they're doing", most of time.

## Synopsis

The pilot of a C208 reported lining up for a parallel runway during a visual approach due to fatigue and distraction.

## Time / Day

Date : 201601  
Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ZZZ.Airport  
State Reference : US  
Altitude.MSL.Single Value : 12500

## Environment

Flight Conditions : VMC  
Weather Elements / Visibility.Visibility : 30  
Light : Night  
Ceiling.Single Value : 12000

## Aircraft : 1

Reference : X  
ATC / Advisory.Center : ZZZ  
Aircraft Operator : Air Taxi  
Make Model Name : Light Transport, Low Wing, 2 Turboprop Eng  
Crew Size.Number Of Crew : 1  
Operating Under FAR Part : Part 135  
Flight Plan : IFR  
Mission : Cargo / Freight  
Flight Phase : Cruise  
Route In Use : Direct  
Airspace.Class E : ZZZ

## Aircraft : 2

Reference : Y  
Make Model Name : Small Transport  
Flight Phase : Cruise  
Airspace.Class E : ZZZ

## Person

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi  
Function.Flight Crew : Single Pilot  
Qualification.Flight Crew : Multiengine  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
Qualification.Flight Crew : Flight Instructor  
Experience.Flight Crew.Total : 11030  
Experience.Flight Crew.Last 90 Days : 150  
Experience.Flight Crew.Type : 1825  
ASRS Report Number.Accession Number : 1324254  
Human Factors : Fatigue

## Events

Anomaly.Conflict : Airborne Conflict  
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude  
Anomaly.Deviation - Altitude : Overshoot  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : Took Evasive Action  
Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : Became Reoriented  
Result.Air Traffic Control : Provided Assistance

## Assessments

Contributing Factors / Situations : Company Policy  
Contributing Factors / Situations : Human Factors  
Contributing Factors / Situations : Staffing  
Primary Problem : Human Factors

## Narrative: 1

After driving 6 hours and being fatigued from flying 32 legs the previous week, I deviated from my assigned altitude. The controller pointed out the oncoming traffic, which I even altered course 15 degrees to avoid the oncoming aircraft. I suddenly discovered that I exceeded my assigned altitude of 12000 feet by at least 500 feet. I rapidly made a descent back down to 12000 feet. Visual contact with the oncoming aircraft was never lost until passing and my main goal was to maintain visual separation with that traffic.

I would be remiss if I didn't say that fatigue and emotional factors contributed greatly to this pilot deviation. My company is short on pilots and long on work. I was covering this run for the time being until we hire a pilot to fly it permanently. Just another example that even if you are getting legal crew rest doesn't mean it's safe.

## Synopsis

Pilot drifted above cleared altitude conflicting with opposite direction traffic. The pilot reporter corrected the error after Controller advised him of the situation. Pilot commented fatigue was a contributing factor.

## Time / Day

Date : 201512  
Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : ZZZZ.Airport  
State Reference : FO  
Altitude.MSL.Single Value : 5000

## Environment

Flight Conditions : Mixed  
Weather Elements / Visibility.Visibility : 10  
Light : Daylight  
Ceiling.Single Value : 1500

## Aircraft

Reference : X  
ATC / Advisory.Center : ZZZZ  
Aircraft Operator : Corporate  
Make Model Name : Medium Large Transport, Low Wing, 2 Turbojet Eng  
Crew Size.Number Of Crew : 2  
Operating Under FAR Part : Part 91  
Flight Plan : IFR  
Mission : Passenger  
Nav In Use : FMS Or FMC  
Flight Phase : Initial Approach

## Person

Reference : 1  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Corporate  
Function.Flight Crew : First Officer  
Function.Flight Crew : Pilot Flying  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
Qualification.Flight Crew : Instrument  
Qualification.Flight Crew : Multiengine  
Experience.Flight Crew.Total : 7000  
Experience.Flight Crew.Last 90 Days : 75  
Experience.Flight Crew.Type : 1500  
ASRS Report Number.Accession Number : 1318344  
Human Factors : Fatigue  
Human Factors : Human-Machine Interface  
Human Factors : Communication Breakdown  
Communication Breakdown.Party1 : Flight Crew  
Communication Breakdown.Party2 : ATC

## Events



Anomaly.ATC Issue : All Types  
Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Returned To Clearance

## Assessments

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

## Narrative: 1

Entering the terminal area after an overnight oceanic flight from the United States. The flight planned route terminated with a STAR. Based upon our experience from previous trips, we were expecting the RNAV Transition following the STAR to end up with an ILS to runway 26R. During the STAR, Approach cleared us to ZZZZZ and ZZZZZ1. We were NOT cleared for the RNAV Transition. We entered the waypoints and continued.

We were then handed over to the Final Controller. Passing ZZZZZ1 we were told to expect the ILS Runway 26L approach (we previously were expecting the ILS 26R). At that point the PIC (Pilot Not Flying) was focused on changing the approach in the FMS. As the aircraft passed ZZZZZ1, the aircraft began a right turn based on the ILS being loaded into the FMS. We immediately asked the Controller for a heading and were given a turn back to 070. We then took vectors for an ILS 26L and completed an uneventful landing. At no time did we come near any other aircraft (noted both visually and on TCAS).

The RNAV Transition notes that at ZZZZZ1 the aircraft should maintain track and expect radar vectors to the final approach.

In our minds, this event developed due to a combination of a bad clearance from Approach and our failure to confirm what actions would be required following ZZZZZ1. If Approach had cleared us for the entire RNAV Transition, the procedure loaded in the FMS would have prevented us from turning towards the runway at ZZZZZ1. Further complicating the issue, upon initial contact with the Final Controller, aircraft are expected to state only their call sign, again, a full check in might have increased situational awareness for both our crew and ATC.

Given the long oceanic flight and our operations within a circadian low, we believe that fatigue was a factor in this event. We intend to share our experience with our entire pilot group to ensure that as a team we learn from this situation.

## Synopsis

A corporate flight crew on an international arrival started a turn to the initial approach fix before asking for further clearance.

## Time / Day

Date : 201512

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : SEA.Airport

State Reference : WA

Altitude.AGL.Single Value : 2700

## Environment

Flight Conditions : IMC

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility : Icing

## Aircraft

Reference : X

ATC / Advisory.TRACON : S46

Aircraft Operator : Air Taxi

Make Model Name : Small Transport

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 135

Flight Plan : IFR

Nav In Use.Localizer/Glideslope/ILS : Runway 16R

Flight Phase : Initial Approach

Airspace.Class B : SEA

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1316577

Human Factors : Fatigue

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Confusion

## Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met

Anomaly.Deviation - Procedural : Clearance

Anomaly.Inflight Event / Encounter : Weather / Turbulence

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

Cleared for the ILS 16R at SEA and established on the LOC, prior to Bugne, SEA Approach Control advised new cleared for the LOC 16R. [GPS] was set-up "Vectors-to-Final" and #2 Nav set-up to the LOC. I started flipping thru approaches to bring-up the fixes, the weather was bad, faster traffic behind me, using the #2 Nav/DME, I had the field in sight, and continuing to flip thru the approaches to bring-up the fixes. My altitude was then 2,700 feet prior to Bugne (3,200 ft) and then Approach Control advised me to "Cross Bugne at 2,700 feet." Then halfway between Bugne and Finka (1,900 feet), the Gilde Slope came alive and I continued to landing.

After landing and waiting for clearance to cross 16L, I flipped thru the approaches again, pressed Agane fix and there was what I was trying to get. I can only explain that I had a brain-lock at the worst possible time.

## Synopsis

Air taxi pilot reported his confusion during an SEA ILS Runway 16R Approach.

## Time / Day

Date : 201511

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 43000

## Environment

Flight Conditions : Mixed

Light : Night

## Aircraft

Reference : X

ATC / Advisory.Center : ZZZ

Aircraft Operator : Corporate

Make Model Name : Citation X (C750)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Cruise

Airspace.Class A : ZZZ

## Component

Aircraft Component : Hydraulic Main System

Aircraft Reference : X

Problem : Malfunctioning

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 6000

Experience.Flight Crew.Last 90 Days : 100

Experience.Flight Crew.Type : 1200

ASRS Report Number.Accession Number : 1309226

Human Factors : Situational Awareness

Human Factors : Fatigue

## Events

Anomaly.Aircraft Equipment Problem : Less Severe  
Anomaly.Deviation - Procedural : Published Material / Policy  
Detector.Automation : Aircraft Other Automation  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.General : Maintenance Action  
Result.Flight Crew : Diverted  
Result.Flight Crew : Landed in Emergency Condition

## Assessments

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

## Narrative: 1

Several minutes into cruise flight, we received the CAS message "HYD VOLUME LOW A" with the Master Caution light. I called for the Master Caution-Amber Message checklist, acknowledged the light, and brought up the Fuel/Hydraulic system synoptic page on the EICAS. Step one on the checklist is to check the hydraulic pressure and fluid quantity. Pressure appeared normal, but the quantity was holding steady at 17%, and temperature appeared normal. At top of cruise, a few minutes before, the A system quantity was checked per normal operations checklist and read better than 60%. Given that there was no abnormal temperature, nor fluctuations in pressure, I elected to wait and monitor before continuing with the Master Caution checklist. The next step in the checklist has you unload the main hydraulic pump which effectively makes that system inoperative and I did not want to shut a system down unnecessarily if the problem was indication only and not mechanical. A short time later, I observed the fluid quantity drop to 16% and then, after some additional time, finally to 15%. At that time, I asked my FO to unload the A system hydraulic pump and complete the checklist which ends with "...Land as soon as practical...". My FO and I reviewed the Cessna 750 checklist page which defines this and agreed that with the hydraulic system secured, and no other abnormal indications, nor any catastrophic failure, we did not need to land immediately at the nearest airport. We were over the northern plains states at FL430, airspeed approximately .89M-.90M and fuel was not an issue as I had planned to tanker additional fuel back to base.

We began reviewing various suitable airports within several hundred miles of our position and determined that many were either below minimums for the available instrument approach, or the prevailing winds were not well suited for an approach with a only the B hydraulic system and the Rudder Standby System. My FO and I discussed several options for landing, the first being the possibility of landing in ZZZ1 which was several hundred miles from our current position, but appeared the closest suitable major airport with light winds, relatively clear skies.

At this point, I asked my FO to bring up the weather at our filed alternate [California]. At that time, the weather there was reported as VFR, winds that favored the active runway. I asked my FO to change our destination to ZZZ even though this was substantially further away. My reasoning was that ZZZ provided an excellent balance between getting our passengers to their destination, specialized repair capability for the aircraft, close proximity to our home base, as well as suitable multiple runways and emergency capabilities. I discussed my thought processes with my FO and reviewed other various options. My FO stated she agreed with continuing to ZZZ instead of diverting to ZZZ1.

During the descent into ZZZ, we began to receive weather reports that showed substantial weather deterioration with many storm cells moving over the airport. My FO and I again discussed other landing options, but came to the conclusion that ZZZ was still our best one. It was at this point that my FO reminded me that we had not declared an emergency, nor informed ATC of the loss of the A hydraulic system. I immediately asked my FO to report our condition to Approach and communicate with the ZZZ tower that we would need time to complete the manual extension of the landing gear, various checklists, and would prefer a longer than normal final on the ILS. Additionally, we informed ATC that we would not be able to clear the runway on our own after landing. Approach and ZZZ Tower worked us as priority in the airspace for our arrival and I executed an uneventful approach and landing, using the predicted amount of runway for our condition.

Looking back, the decision to carry on to ZZZ was NOT CORRECT. We should have landed in ZZZ1, or another suitable airport much closer to our position when the hydraulic issue presented itself. To continue on with a primary hydraulic system inoperative for an extended amount of time is less than ideal judgment and I believe several human factors contributed to this. Among them, a Target Fixation and Mission First mentality: I had been dealing with the other previous trip interruptions and cancelations due to maintenance issues before launching on this trip. There had been two chronic problems, unrelated to the hydraulic fault, that had just recently been resolved the night before and I did not want to down the aircraft at another out-station with the additional expense of putting our passengers on the airlines again. Also, Fatigue: As part of the continuing unrelated maintenance issues, I had recently traveled to the service center to pick up the current airplane, in addition to continuing to fly trips on our company's other aircraft and had been at a high activity level for an extended amount of time.

## Synopsis

CE750 Captain experienced a CAS message "HYD VOLUME LOW A" at FL430 a few minutes after level off. The applicable checklist directed that the system be unloaded by turning off the engine driven pump and ends with "land as soon as practical." The reporter elected to continue to an alternate that was two hours ahead and closer to destination.

## Time / Day

Date : 201511

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : LAX.Airport

State Reference : CA

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Night

Ceiling.Single Value : 4500

## Aircraft

Reference : X

ATC / Advisory.Ground : LAX

Aircraft Operator : Air Taxi

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 14000

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 4200

ASRS Report Number.Accession Number : 1308314

Human Factors : Distraction

Human Factors : Fatigue

Human Factors : Situational Awareness

Human Factors : Confusion

## Events

Anomaly.Flight Deck / Cabin / Aircraft Event : Other / Unknown

Anomaly.Conflict : Ground Conflict, Less Severe

Anomaly.Deviation - Procedural : Clearance

Anomaly.Ground Incursion : Runway

Detector.Person : Flight Crew

When Detected : Taxi  
Result.Flight Crew : Took Evasive Action

## Assessments

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

## Narrative: 1

I was a contract pilot on a crew of three pilots. Two contract captains and a copilot that was company employed. Two of crew had never flown together. We arrived LAX after departing ZZZZ 15 hours earlier, stopping through ZZZ for customs and fuel.

Weather at LAX was generally good VFR with a light scattered layer at 2,400 and a higher broken layer, visibility was greater than ten miles. The aircraft was cleared to land the North Complex, Runway 24 Right. General aviation parking is located on the south side of the airport. We were a three pilot crew and flight attendant with no crew rest in the aircraft. Any crew rest was obtained by sleeping on the Galley floor or a small Lawn Chair again, located in the Galley area and or the cockpit jumpseat.

Proposed departure was XD:00 with a decided show time of XA: 15 local. Actual Departure was XD: 30, well into our circadian low period. Arrival into ZZZ was uneventful with a 45 minute refuel/customs stop. None of the flight crews obtained any true rotational crew rest due to the lack of space and configuration. The leg from ZZZ to LAX was to be flown by the co-pilot from the right seat. All taxiing would be accomplished by the pilot in the left seat. The flight was expected to land at XC:50 local with the majority of the flight at night.

After landing LAX after a 19 hour duty day to that point, all crew members were feeling extremely fatigued. There were a few radio procedural mistakes and a requirement to clarify a hold short instruction by the copilot now operating the radios. It was then read back incorrectly for the reciprocal runway. Our position was holding short of runway 25 Left at Uniform. At that time we also had a Brake temperature probe sensor spiking indication. It did draw our attention and a discussion. Although it was obviously erroneous it did divert our attention after an extremely long, fatiguing day. Runway 25 Left is the widest of the runways at 200 feet with a slight rise at that end of the runway resulting in difficulty looking across to obtain sight of the opposite taxiway entrance. At a first glance "Uniform" also appeared as being on a slight angle to our position. Taxiway Uniform is also very wide and the lighting blended with the other markings. After a very short period of time we were instructed to cross runway 25L at taxiway uniform and follow Uniform to Taxiway Alpha. Traffic was reported a two mile final and to (I believe) expedite.

We began the taxi, entered the runway and I began what I thought was the correct angle for the entry of the taxiway Uniform. Both pilots were attempting to locate the entrance but the angular path we took was too much and we had passed it. I realized it and was about to instruct the co-pilot to radio we had missed Uniform and would have to clear at Tango taxiway if possible, when the tower transmitted we were on the runway and to clear at taxiway Tango. And for a flight to go around. We expedited the taxi and cleared at the designated taxiway. Taxiing to general aviation we were informed to contact the Tower Supervisor. I was informed there would be a report and that there had been no loss of separation and no RA alert had been indicated. I indicated the basic problem in judging the taxi angle as well as obtaining site of the designated taxiway. As well our attention slightly diverted by the Brake temperature indication.



## Synopsis

Air taxi Captain reported missed Taxiway Uniform while crossing LAX Runway 25L at Uniform and was cleared to continue and exit at Taxiway Tango. An aircraft on final for Runway 25L was sent around.

## Time / Day

Date : 201511

Local Time Of Day : 0601-1200

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 0

## Environment

Flight Conditions : VMC

Light : Daylight

## Aircraft

Reference : X

Make Model Name : Gulfstream G650

Crew Size.Number Of Crew : 2

Flight Phase : Parked

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Function.Flight Crew : Pilot Not Flying

Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1308123

Human Factors : Fatigue

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1308124

Human Factors : Fatigue

Human Factors : Situational Awareness

## Events

Anomaly.Aircraft Equipment Problem : Less Severe

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Ground Event / Encounter : Object

Anomaly.Inflight Event / Encounter : Object

Detector.Person : Flight Crew

When Detected : Taxi

Result.General : Maintenance Action  
Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

Aircraft was parked on ramp following a 10.9 hour flight. The PIC cleared customs with the passengers and returned to the aircraft to finish paperwork and prepare for a surface reposition to the FBO while SIC and Cabin Hostess cleared Customs. Upon our return, the door was closed and we began a normal engine start procedure. After start, PIC began taxiing by applying normal break-away thrust and then turning the nose-wheel to maneuver in a narrow ramp. Immediately after turning the nose-wheel, he noticed an unusual resistance on the tiller which was immediately followed by "thump" sound and a "Nose Wheel Steering Fail" CAS message. He immediately stopped the aircraft, shut down the engines, and exited the aircraft to investigate the situation. He then discovered that the nose-wheel had "pushed" the small nose-wheel rubber chocks forward about 1 meter. When the nose-wheel was turned, the outboard nose-wheel "lifted" onto the triangular chock and started to "climb" the chock, resulting in an uncommanded nose-wheel deflection of approximately 90 degrees angle that exceeded limits. This exceedance triggered the red oversteer "pop out" collar on the nose-wheel assembly.

PIC immediately contacted Maintenance and the lead captain to explain the situation. In full cooperation with maintenance, he remained with the aircraft until an approved tow was arranged to a maintenance hangar. Assessment of aircraft condition determined that no aircraft damage occurred. Trip was completed with no equipment change.

Suggest that a new SOP require that both pilots check wheel chock removal and/or "final walk-around" prior to every aircraft ground movement.

## Narrative: 2

Also the policy of having a 3 pilot crew if a flight is more than 10 hours should strictly be enforced. In this case we flew 10.9 hours with two pilots.

## Synopsis

G650 flight crew starts up and attempts to taxi to the FBO. A bump is felt and a nose wheel steering fail CAS message appears. Nose chocks had been installed and caused the nose wheel steering to disconnect. Maintenance is called to reconnect the steering. Fatigue was cited as a factor in the incident.

## Time / Day

Date : 201511

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : BVS.Airport

State Reference : WA

Relative Position.Distance.Nautical Miles : 15

Altitude.MSL.Single Value : 5000

## Environment

Flight Conditions : Mixed

Weather Elements / Visibility : Rain

Weather Elements / Visibility : Icing

Weather Elements / Visibility : Turbulence

Weather Elements / Visibility.Visibility : 1

Light : Night

Ceiling.Single Value : 3000

## Aircraft

Reference : X

ATC / Advisory.TRACON : NUW

Aircraft Operator : Corporate

Make Model Name : Small Transport, Low Wing, 2 Turboprop Eng

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Nav In Use : GPS

Flight Phase : Initial Approach

Route In Use : Direct

Airspace.Class E : ZSE

## Component

Aircraft Component : GPS & Other Satellite Navigation

Problem : Improperly Operated

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 3800

Experience.Flight Crew.Last 90 Days : 100  
Experience.Flight Crew.Type : 15  
ASRS Report Number.Accession Number : 1307577  
Human Factors : Situational Awareness  
Human Factors : Fatigue  
Human Factors : Confusion

## Events

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Anomaly.Inflight Event / Encounter : Weather / Turbulence  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented

## Assessments

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

## Narrative: 1

Part 91 corporate flight back to western Washington over the Cascade Mountains. Daylight departure, night arrival into MVFR/IFR conditions after a VMC descent into the terminal/approach area. Cleared direct to the IAF for an RNAV approach at destination, a transition and approach I have flown a couple dozen times in training and operationally. Entered IMC conditions with light icing and light turbulence just prior to the IAF. Was given a crossing restriction at the IAF and cleared for the approach; after passing the fix, noticed my position on my iPad depicted me well north of the desired transition course and deviating. As I started the turn to the right (east) to correct, noticed that I had misprogrammed the GPS (GNS 480) where the approach wasn't 'executed'. The GPS steering had me going to the airport rather than the next IF on the approach. As I attempted to reload and activate the approach while correcting back on course, broke out into night, visual conditions, announced as much to approach while requesting the visual and cancelled IFR. Landed uneventfully. (Approach never mentioned deviation and there was never any threat to terrain or other aircraft.)

Lessons: don't take a milk run back to home base for granted. Light icing, rain and turbulence surprised me, as METAR and local TAFs showed only BKN layers and good vis. I had a good plan for the approach, but executed it very poorly, specifically with regards to GPS programming and confirmation of "what is it doing next?" I have been flying several different type aircraft lately with different avionics and have to believe this contributed to my complacency and error. One of the dirty secrets of aviation is fatigue. I had brought these passengers out early that morning and sat all day at destination waiting for them. Of course they were well past the proposed departure time. Lesson: even though the schedule isn't known, you MUST grab some rest if you need it, especially with a return to IMC conditions and/or if you are fatigued. I definitely was tired looking back on the flight on the drive home. I had a supremely capable airplane, flying a well-known route and approach to my home airport, and I made a couple errors that could have compounded into something more serious like an official deviation or worse. Great lesson and won't happen again anytime soon.

## Synopsis

Pilot became disoriented during an instrument approach in IMC conditions. Pilot discovered the track error by noticing his previous error while programming his iPad for the approach. Pilot reprogrammed the approach and landed safely in VMC.

## Time / Day

Date : 201510

Local Time Of Day : 0601-1200

## Place

Locale Reference.ATC Facility : ZMP.ARTCC

State Reference : MN

## Aircraft

Reference : X

ATC / Advisory.Center : ZMP

Aircraft Operator : Fractional

Make Model Name : Citation X (C750)

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Cruise

Airspace.Class A : ZMP

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1303033

Human Factors : Fatigue

Human Factors : Situational Awareness

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Fractional

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1303579

Human Factors : Situational Awareness

## Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Procedural : Clearance

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : Became Reoriented

## Assessments

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

### Narrative: 1

I was the flying pilot. We were in contact with Minneapolis Center and were issued a frequency change to a different sector. SIC made the frequency change and the female controller responded with something like "[callsign] Roger". She was busy and there was other normal ATC chatter on the frequency that neither of us paid much attention to. After a little while I realized that I thought the controller had called herself "Toledo Approach", or possibly another "Approach". So we called and she said go back to our last assigned frequency. The controller on the last assigned frequency checked and by then we were in Chicago Center airspace and he gave us the correct frequency. After we checked in with Chicago that controller gave us a phone number for Minneapolis Center to call after we landed.

I didn't think that we were out of communication more than 10-12 minutes but when I called and spoke with the person at Minneapolis Center he said we were NORDDO for about 260 miles, or probably twice as long as I had thought.

The only thing I would say to help the situation is better monitoring of the frequency on our part. A contributing factor was the response of the controller when we checked in on the incorrect frequency. She acknowledged the call but never told us that we had an incorrect frequency. She was probably just so busy that she acknowledged us but then forgot about us as she was dealing with other traffic.

We had started the day [very early]. Originally, when it first happened, I didn't think fatigue was a factor, but looking back it could have been.

### Narrative: 2

[Report Narrative Contained No Additional Information.]

## Synopsis

CE-750 flight crew reported they were off ATC frequency for about 260 miles when they copied an incorrect frequency.



## Time / Day

Date : 201509

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 0

## Environment

Weather Elements / Visibility : Rain

Weather Elements / Visibility.Visibility : 7

Weather Elements / Visibility.Other

Ceiling.Single Value : 6000

## Aircraft

Reference : X

ATC / Advisory.Tower : ZZZ

Aircraft Operator : Corporate

Make Model Name : Challenger 605

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Flight Phase : Taxi

Route In Use : Vectors

## Person : 1

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Experience.Flight Crew.Total : 23000

Experience.Flight Crew.Last 90 Days : 100

Experience.Flight Crew.Type : 3000

ASRS Report Number.Accession Number : 1296397

Human Factors : Fatigue

Human Factors : Time Pressure

## Person : 2

Reference : 2

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : First Officer

Function.Flight Crew : Pilot Not Flying  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
ASRS Report Number.Accession Number : 1296462

## Events

Anomaly.Aircraft Equipment Problem : Less Severe  
Anomaly.Ground Excursion : Runway  
Detector.Person : Flight Crew  
Were Passengers Involved In Event : N  
When Detected.Other  
Result.General : Flight Cancelled / Delayed

## Assessments

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

## Narrative: 1

Late night; after 14-15 hours, a missed approach to [destination] for no lighted runway returned to [departure airport] and were told we were to continue, refuel, and return to [destination] as they would have lights on. On Line up I was apparently distracted as left brake dragged and lined up way right of center. I powered up and drifted right more into grass and aborted takeoff before 80 knots and re-centered on the runway.

Returned to hangar; no injury or damage was noted, but dirt was on the main gear.

[After the hours I had] flown [I] should have told [Company] to cancel all flights as I said I was very tired. [There were] numerous calls from the Company to get fuel and go let alone explain why I had to file new flight plans, add fuel, negotiate with customs to accept us at near midnight on our return flight. [This is] pilot pushing at the least. Both pilots should have caught it, but I am the Pilot In Command.

## Narrative: 2

[Report narrative contained no additional information].

## Synopsis

CL605 Captain reported lining up on the right side of the runway, then drifting further right on the takeoff roll and eventually going off the runway onto grass. Takeoff was rejected and the aircraft returned to the centerline without damage. Reporter attributed the incident to fatigue and pilot pushing by the Company.

## Time / Day

Date : 201508

Local Time Of Day : 1801-2400

## Place

Locale Reference.ATC Facility : ZSE.ARTCC

State Reference : WA

Altitude.MSL.Single Value : 4000

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 10

Light : Dusk

## Aircraft

Reference : X

Aircraft Operator : Corporate

Make Model Name : Falcon 2000

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Initial Climb

Flight Phase : Climb

Route In Use : Vectors

Airspace.Class E : ZSE

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 7000

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 250

ASRS Report Number.Accession Number : 1286947

Human Factors : Fatigue

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Confusion

## Events

Anomaly.ATC Issue : All Types

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.General : None Reported / Taken

## Assessments

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

## Narrative: 1

First Officer (FO) [Pilot Not Flying] received IFR clearance from Seattle Center while on the ramp at RDM. He read back the entire clearance and there were no errors noted. FO briefed the Captain on clearance and setup the cockpit accordingly. The altitude clearance limit was for 4,000 feet MSL. The altitude of the airport is 3,080 feet with mountainous terrain in the vicinity. A normal altitude limit for this airport is 14,000 feet. It is highly unusual for the clearance limit to be that low and the pilots did not catch it due to fatigue.

All checklists were complied with prior to takeoff. Taxi and takeoff were normal except being rushed for a wheels up time limit for flow to [destination]. The Captain performed the takeoff from Runway 04 with a left turn to heading 310. Once in the climb, the 4,000 feet level-off came very quickly and while in the turn to 310 heading. Both pilots immediately were alert to our low altitude status. The low AGL altitude and mountainous terrain were verbalized by both pilots. Later, the mountains that exceeded 4,000 feet MSL were calculated to be within 4 miles in front of the flight path of the plane; this is less than minute to impact at 200 kts.

PNF immediately contacted Seattle Center while we were leveling off to check in. A clearance to 14,000 feet was then received. Normal climb ensued. Neither terrain alerter was triggered nor were we ever below 1,000 feet AGL. If PNF had not been expeditious in calling Center for further clearance or if we had been distracted by some other concern, a CFIT event would have been close at hand. Fatigue had been discussed at length, so we were aware of our fatigue state. We were also a little rushed due to a wheels up time for flow into [destination].

At time of event, pilots had been on duty for 13hrs with only 3.7hrs of flight for the day. Pilots were unable to nap at the previous station due to unsuitable sleeping facilities. Duration of sleep in the two prior nights had been poor due to early morning show times and inability to shift sleep schedule adequately.

## Synopsis

A possible CFTT event departing RDM was avoided by the crew through good situational awareness and an expeditious climb.

## Time / Day

Date : 201507

Local Time Of Day : 0601-1200

## Place

Locale Reference.ATC Facility : ZKC.ARTCC

State Reference : KS

Altitude.MSL.Single Value : 43000

## Environment

Flight Conditions : VMC

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.Center : ZKC

Aircraft Operator : Corporate

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

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Flight Phase : Cruise

Route In Use : Direct

Airspace.Class A : ZKC

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Instrument

Experience.Flight Crew.Total : 3900

Experience.Flight Crew.Last 90 Days : 75

Experience.Flight Crew.Type : 100

ASRS Report Number.Accession Number : 1281938

Human Factors : Communication Breakdown

Human Factors : Fatigue

Communication Breakdown.Party1 : Flight Crew

Communication Breakdown.Party2 : ATC

## Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude

Anomaly.Deviation - Procedural : FAR

Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : Returned To Clearance  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

We thought we were cleared to descend out of FL430 after responding to and reading back a clearance to descend. As we passed through FL420 ATC cleared us to FL400 with the statement that the previous descent clearance had not been for us. No known loss of separation. We subsequently determined that clearance had been for a similar call sign. My guess is that our readback was either blocked by the other aircraft or ATC did not realize it was us acknowledging the clearance.

I believe contributing factors include: We had not been made aware of a similar call sign upon checking in on the frequency. Fatigue we had already completed nearly 9 hours of flying including an ocean crossing in what was a back side of the clock operation for our circadian rhythm. Our failure to adequately monitor the frequency.

## Synopsis

A small transport crew acknowledged a descent clearance and began a descent that was intended for another aircraft with a nearly identical "N" number. No warning of a similar call sign had been given.

## Time / Day

Date : 201507

Local Time Of Day : 1201-1800

## Place

Locale Reference.Airport : FAT.Airport

State Reference : CA

## Environment

Flight Conditions : VMC

Light : Daylight

## Aircraft

Reference : X

ATC / Advisory.TRACON : FAT

Aircraft Operator : Air Taxi

Make Model Name : Small Transport

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Ferry

Nav In Use : GPS

Flight Phase : Initial Climb

Route In Use.SID : FRESNO EIGHT

Airspace.Class C : FAT

## Component

Aircraft Component : GPS & Other Satellite Navigation

Manufacturer : Garmin

Aircraft Reference : X

Problem : Improperly Operated

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

ASRS Report Number.Accession Number : 1281797

Human Factors : Distraction

Human Factors : Fatigue

Human Factors : Situational Awareness

Human Factors : Time Pressure

Human Factors : Workload

Human Factors : Confusion

## Events

Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : Returned To Clearance  
Result.Air Traffic Control : Issued New Clearance  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

I departed runway 29L from FAT to reposition equipment under an IFR flight plan using the FRESNO EIGHT DEPARTURE, FRES8.FRA. On handoff to departure control, I was told to proceed direct to the first fix on my clearance, FRAME intersection. During pre-flight I had inadvertently set up FRIANT VOR (FRA) instead of FRAME as my first fix. I had forgotten the location of FRAME to the west and had not taken the time to verify its location. The controller, to the best of my memory, did not assign a direction of turn toward FRAME nor did he give a radar vector (heading) to follow to establish a firm direction, but simply said to proceed "direct to FRAME". Using the "direct to" function of my Garmin 530 navigation radio, I saw what I thought was FRAME to my right and turned right toward it. This put me in potential conflict with aircraft departing from 29R, but I assumed departure control [would notify me] of any traffic. Fortunately there were no traffic departing from 29R at that time. After 30 seconds or so the controller queried my right turn. Still thinking FRA was FRAME, I told him I was going "direct FRAME". He told me that FRAME was to my left and gave me a left vector toward the northwest, but then changed his mind back to a right turn to the southeast. After that he cleared me present position direct to SHAFTER VOR (EHF).

A few minutes after that, a second controller came on and asked if I had time to answer a question. He asked me how I had gone the wrong direction, and if I had put the wrong information in my navigation device. I told him I mistook FRIANT VOR for FRAME INTERSECTION on initial setup of my nav equipment. I then asked him if there was going to be a problem and he replied to "just be more careful next time". That was all that was said regarding the incident. I was aware I had done something wrong when the controller asked me why I had turned right instead of left. Then he told me the location of FRAME was to my left. I finally realized that FRA was not FRAME.

My day started typically early at XA:00 AM. My showtime was at XB:05 AM. I took off on my scheduled flight at XB:53, arriving XC:49. I called in my times at XC:52. I had been having problems with the fuel gauges on my plane and been in contact about the issue with maintenance. I called maintenance at XC:57 AM to report some numbers we were using to find what the fuel problem could be. I was told they would let me know what to do next, so I went to the hotel thinking it would be a normal day.

During my breakfast I received a call from maintenance that I would be needed to fuel the airplane to a known quantity by watching the fueler and using a measuring stick to verify exact quantity. I finished breakfast and went back out to the airport to order fuel and watch the fueling closely, which I did. The decision after calling back was to move the plane up to Fresno for them to work on it and to swap into another plane. I did this



arriving in Fresno at exactly XI:00, a 2.3 hour trip. I then used the bathroom, filed an IFR flight plan using my phone's flight planning app, swapped airplanes, and did the pre-flight on the new plane. In the aircraft, I received my clearance to use the FRESNO8 departure, FRAME, EHF VOR (SHAFTER), then as filed. I then set up my nav radio to use the pre-loaded FRESNO8 departure. From runway 29L it had the FRA fix and I loaded it, thinking it was the VOR and not the FRAME intersection in spite of knowing quite well the difference. I was under a time constraint and had sweat running down my face from the heat in the cockpit. At this time, I should have either just put FRAME in as a fix, or at least verified its location on the IFR enroute chart. This was the main mistake that set up the others. I started up and taxied out at XJ:05. At this time, I had been up for 9 hours and at work for 8. My scheduled show time back at the original airport was XL:22 and it was over 2 hours away so I had a time constraint. I arrived and blocked in at XL:18, only 4 minutes prior to my showtime for the evening leg.

## Synopsis

Small transport pilot inadvertently loaded FRA instead of FRAME into their GPS for the FAT FRESNO.8 Departure and turned the wrong way when cleared direct.

## Time / Day

Date : 201507

Local Time Of Day : 0001-0600

## Place

Locale Reference.Airport : OTH.Airport

State Reference : OR

Altitude.MSL.Single Value : 2400

## Environment

Flight Conditions : IMC

Weather Elements / Visibility : Fog

Weather Elements / Visibility.Visibility : 1

Light : Night

Ceiling.Single Value : 200

## Aircraft

Reference : X

Aircraft Operator : Air Taxi

Make Model Name : Small Transport

Crew Size.Number Of Crew : 1

Operating Under FAR Part : Part 135

Flight Plan : IFR

Nav In Use.Localizer/Glideslope/ILS : ILS RWY 4

Flight Phase : Final Approach

Airspace.Class D : OTH

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Taxi

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Air Transport Pilot (ATP)

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Flight Engineer

Experience.Flight Crew.Total : 11300

Experience.Flight Crew.Last 90 Days : 50

Experience.Flight Crew.Type : 210

ASRS Report Number.Accession Number : 1278005

Human Factors : Communication Breakdown

Human Factors : Confusion

Human Factors : Distraction

Human Factors : Situational Awareness

Human Factors : Fatigue

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

## Events

Anomaly.Aircraft Equipment Problem : Less Severe  
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude  
Anomaly.Deviation - Track / Heading : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Detector.Automation : Air Traffic Control  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Flight Crew : Returned To Clearance  
Result.Flight Crew : Executed Go Around / Missed Approach  
Result.Air Traffic Control : Issued Advisory / Alert  
Result.Air Traffic Control : Issued New Clearance

## Assessments

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

## Narrative: 1

I was PIC on a flight going to OTH. When I first checked weather in OTH it was at 8 miles vis., but it started deteriorating rapidly. But due to the nature of the coastal weather, I had planned for this and took on extra fuel. Our original destination had been ZZZ1, but we had to file for OTH because ZZZ1 was below minimums. Seattle Center cleared me for the ILS Runway 4 via the 16 DME Arc from LUPCI. Things were going smoothly until I realized as I was approaching LUPCI for the approach that I hadn't heard from Seattle Center for a while and I was still high. I realized that I was still on CTAF to activate the approach lights and hadn't switched back. I contacted Seattle Center and, frustrated, he cleared me down to 2400 feet for the approach. I was able to get down to 2400 feet and stabilized in order to make the ILS intercept.

The DME ARC and ILS Intercept went fine, and I continued down to minimums. My autopilot clicked off, but I reset it through the mode control panel with no problem. With no runway environment in sight, I executed the published missed approach INITIALLY, with a climb to 600 feet and then a climbing left turn back to EMIRE LOM. It was here that I got confused on the Controller's "state your intentions" remark that I started on the wrong path. I don't know why I thought that I could do this, but somehow I thought that I could re-intercept the 167 radial off of OTH VOR and start another DME Arc to have a better amount of time for the weather to clear. Again, looking back, I knew that I was in a non-radar environment, so I don't know why I thought that I could be off the published missed approach but I was. The Controller expressed concern and instructed me to climb immediately to 4000 feet because of terrain. I wasn't indicating any terrain conflict on my TCAS or Garmin 650/750 combo, but the Controller advised me of terrain in that area. The Controller advised me to proceed back to EMIRE and execute the published missed approach the way I should have done it initially, with the procedure turn, etc. I was a little turned around by this point, but got back on course to EMIRE. This time, because of my obvious newfound stupidity and ineptitude, he read me the entire missed approach instructions verbally so I wouldn't screw up another missed approach.

At one point, my autopilot clicked off again, but I don't remember how high I got, 200 feet

above charted I think, but I thought that it was maybe something I did or the surprising amount of turbulence for the low coastal visibility. This time, I hand flew the procedure turn inbound and the ILS 4 and broke out just above minimums with a 12 knot crosswind. I landed uneventfully and cancelled my flight plan. I thanked the Controller and I think that I apologized, but if I didn't I should have.

From OTH, we flew uneventfully. On a side note, on our return flight, my autopilot clicked off again in smooth air, so I wrote it upon arrival. While I haven't done very many DME Arcs in my career, my DME Arc wasn't the problem, it was my home made missed approach procedure. Since then, I have been brushing up on my non-radar procedures, especially missed approaches to LOM's with a procedure turn outbound.

## Synopsis

The charter pilot did not fly the complete missed approach procedure at OTH and was corrected by ATC, even though it was a non-radar environment.

## Time / Day

Date : 201507

Local Time Of Day : 1801-2400

## Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.MSL.Single Value : 8700

## Environment

Flight Conditions : VMC

Weather Elements / Visibility.Visibility : 50

Light : Dusk

## Aircraft

Reference : X

Aircraft Operator : Corporate

Make Model Name : Cessna 340/340A

Operating Under FAR Part : Part 91

Flight Plan : IFR

Mission : Passenger

Flight Phase : Climb

Route In Use : Vectors

## Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Corporate

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Flight Instructor

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 5000

Experience.Flight Crew.Last 90 Days : 25

Experience.Flight Crew.Type : 25

ASRS Report Number.Accession Number : 1277973

Human Factors : Human-Machine Interface

Human Factors : Situational Awareness

Human Factors : Confusion

Human Factors : Workload

Human Factors : Fatigue

Human Factors : Distraction

Human Factors : Time Pressure

## Events

Anomaly.Deviation - Altitude : Overshoot  
Anomaly.Deviation - Procedural : Clearance  
Detector.Person : Flight Crew  
When Detected : In-flight  
Result.Air Traffic Control : Issued Advisory / Alert

## Assessments

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

## Narrative: 1

I was returning home solo in the aircraft from recurrent flight training for the Challenger 300. I had finished up the last simulator session around XA: 30 and headed to get the Cessna 340 fueled and preflighted and ready to go. I took off around XC and was in contact with Center climbing to altitude. They cleared me to maintain 8,000 feet and to expect a higher altitude shortly. I turned on the autopilot around 7,000 feet on the climb and was busy syncing the throttles and prop levers. As I was climbing ATC queried what my assigned altitude was. I checked my altimeter and noticed I had climbed through 8,000 feet and was around 8,700 feet at that point. I responded to ATC with 8,000 feet and they asked what altitude I was at. I turned off the auto pilot and had began to descend back down to 8,000 feet at that point and responded that I was coming back down to 8,000 feet. I returned to 8,000 ft and ATC didn't say anything more about it. After a few minutes they cleared me higher and I completed the flight uneventfully. Looking back, there were several contributing causes that allowed this deviation to happen. First, I had been in training all week and had just completed a simulator session and was tired mentally from that. Second, the Challenger 300 has an altitude pre-selector and altitude alert-er, while the Cessna 340 does not. Lastly, I was ready to get home after a long week at training. I could have avoided this altitude deviation by recognizing I was tired and possible stayed the night, got some sleep, and left the next morning more refreshed. However, I wanted to get home and so I took off in a hurry and tired, not the best combination. Also, being in the Challenger sim all week I was used to setting and altitude in the pre-selector and having the altitude alerter let me know I was 1,000 feet from my assigned altitude and leveling off at the pre-set altitude. In my head, since I hadn't heard any alerts from the Cessna 340 I neglected to pay attention to my altitude and blew right through it. In conclusion, trying to rely on automation that wasn't there, being mentally tired, and in a hurry to get home led to this altitude deviation.

## Synopsis

The pilot overshoot an assigned altitude due to fatigue and automation dependency.