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

Update Number...........................................30.0

Date of Update..............................................November 30, 2016

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

Number of New Records in Report Set .............5

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.
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, 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
<table>
<thead>
<tr>
<th>ACN: 1381841 (1 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
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<td>CE-750 Captain reported descending without a clearance to maintain airspeed while trying to go over the top of a line of thunderstorms.</td>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
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<tr>
<th>ACN: 1366999 (3 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

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<tr>
<th>ACN: 1352434 (4 of 50)</th>
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</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>HS-125 Captain reported experiencing an extended period of no communications with ATC. Reporter cited chronic fatigue as a contributing factor.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1345779 (5 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Light transport flight crew reported landing at the wrong airport following an FMS programming error.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1339547 (6 of 50)</th>
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</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Light transport flight crew taxied onto Taxiway A3 towards Runway 13-31 at AGC after mistaking the runway for Taxiway A.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1330496 (7 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1326879 (8 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Light transport flight crew taxied onto Taxiway A3 towards Runway 13-31 at AGC after mistaking the runway for Taxiway A.</td>
</tr>
<tr>
<td>ACN</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>The pilot of a C208 reported lining up for a parallel runway during a visual approach due to fatigue and distraction.</td>
</tr>
<tr>
<td><strong>ACN: 1324254</strong></td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>ACN: 1318344</strong></td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>A corporate flight crew on an international arrival started a turn to the initial approach fix before asking for further clearance.</td>
</tr>
<tr>
<td><strong>ACN: 1316577</strong></td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air taxi pilot reported his confusion during an SEA ILS Runway 16R Approach.</td>
</tr>
<tr>
<td><strong>ACN: 1309226</strong></td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>CE750 Captain experienced a CAS message &quot;HYD VOLUME LOW A&quot; 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 &quot;land as soon as practical.&quot; The reporter elected to continue to an alternate that was two hours ahead and closer to destination.</td>
</tr>
<tr>
<td><strong>ACN: 1308314</strong></td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>ACN: 1308123</strong></td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>ACN: 1307577</strong></td>
</tr>
</tbody>
</table>
### 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 (16 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 (17 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 (18 of 50)**

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

**ACN: 1281938 (19 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 (20 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 (21 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 (22 of 50)**
Synopsis
The pilot overshot an assigned altitude due to fatigue and automation dependency.

ACN: 1272241 (23 of 50)

Synopsis
Helicopter pilot reported an NMAC after taking off from FNL when he failed to spot conflicting traffic that was on final for runway 15.

ACN: 1269056 (24 of 50)

Synopsis
A CE-680 air crew, while enroute, were cleared to fix 'SINDE'. The Captain mistakenly typed the fix as 'CINDE'. The crew began to turn to the wrong fix when they were queried by ATC who also respelled the fix name. The crew entered the correct fix and proceeded as cleared. CINDE is 150 NM northwest of SINDE.

ACN: 1268602 (25 of 50)

Synopsis
Gulfstream IV flight crew reported flying through cleared altitude when the pilot flying misunderstood the descent clearance.

ACN: 1261310 (26 of 50)

Synopsis
King Air 200 pilot experienced loss of GPS signal after departing ELP and passing through FL250. The failure was due to NOTAM’d GPS jamming in the area and ATC assigned a heading to destination. With the loss of NAV capability the autopilot also lost altitude capture, resulting in an 800 foot overshoot of FL270.

ACN: 1252762 (27 of 50)

Synopsis
C680 Captain reported losing situational awareness on a night visual approach into BED, citing fatigue from a difficult scheduling assignment as contributing factor.

ACN: 1251865 (28 of 50)

Synopsis
A G200 Captain reports being cleared to hold south of OWB on the 180 degree radial but inadvertently sets the FMC to hold north of OWB. ATC is advised and the crew is allowed to stay in their current holding pattern. Eventually a diversion is required when the weather did not improve. Fatigue was cited as a factor in the incident.

ACN: 1241462 (29 of 50)
Synopsis
A G280 First Officer, preparing for a pre-dawn departure from a frigid EWR airport, encountered numerous interruptions and freezing temperature related system difficulties while conducting his pre-flight. The Captain was otherwise engaged with passenger greeting and boarding and was, thus, unavailable for consultation or assistance. After takeoff the Captain's ASI and altimeter were inoperative, which reminded the First Officer that the last interruption of his pre-flight prevented him from completing the left side exterior inspection and he had forgotten to return to complete the task. The static port cover, as a result, was still in place preventing associated instrumentation from operating. They returned safely to the VFR airport.

ACN: 1221963 (30 of 50)

Synopsis
CE560 Captain experiences a NMAC on short final during a day visual approach. An aircraft symbol was detected on TCAS in close proximity with no aural alert and a shallow climb is initiated. At 900 feet a TCAS RA is generated with any descent depicted as red and a go-around is initiated. A VFR aircraft that was told to report four miles, did not and was forgotten by the Tower.

ACN: 1217220 (31 of 50)

Synopsis
G450 Flight Crew reports setting an incorrect altimeter setting (30.58 vs 29.58) during descent and approach. This error is not discovered until ATC issues a low altitude alert at the same time the crew receives a GPWS warning. Fatigue was cited as a factor by both pilots.

ACN: 1208722 (32 of 50)

Synopsis
The pilot of a light jet took-off from Runway 15 from intersection C vice full length as planned. Cited as contributing factors were: fatigue (over 12 hours on duty), distractions from passenger conversation, and multiple inoperative taxiway lights.

ACN: 1206886 (33 of 50)

Synopsis
After completing the charted JAIKE RNAV STAR, given a vector and cleared to descend to 4,000 MSL, a Falcon 10 flight crew noted they would be passing below the New York Class B floor of 7,000 MSL and reduced their airspeed to 200 KIAS as required. Approach Control remonstrated them for doing so, advising they were not to reduce below 250 knots without approval--appearing to reference the SPEED note on the STAR chart--and vectored them out of sequence, advising they had been moved from number one for the airport to number six.

Fatigue, the STAR chart format and the inadequacy of their EFB tablets to display the entire chart were cited as contributing factors.
ACN: 1202902 (34 of 50)

Synopsis
C206 pilot laments the lack of flight time or duty time regulations for Part 91 commercial pilots and offers his recent experience as an example.

ACN: 1195312 (35 of 50)

Synopsis
A Lead Aircraft Maintenance Technician (AMT) was informed he had not tighten one of the bolts that secure the Tail Rotor Control tube on a Bell-206L helicopter after replacing the Aft Evaporator Blower motor. Technician noted that pressure from supervisors to get the job done and the use of pilots to look over major maintenance work accomplished by mechanics were contributors.

ACN: 1191512 (36 of 50)

Synopsis
A Mechanic tasked with a 1.5 hour C208 deadhead flight felt ill, developed an intoxicated feeling, a sore throat, burning sinus and headache following prolonged TKS fluid exposure during the flight.

ACN: 1181675 (37 of 50)

Synopsis
G200 flight crew reports getting very low during a night visual approach after a 12 hour duty day and five legs. The Captain recognizes that he is only 500 FT above the field elevation at the same time the Tower issues a low altitude alert.

ACN: 1180378 (38 of 50)

Synopsis
A fatigued flight crew landed at CMH during late night operations without clearance. Fatigue and distractions including bright LED approach lights and a lull due to the lack of frequency activity.

ACN: 1175642 (39 of 50)

Synopsis
Small Transport aircraft Captain reports departing without checking the fuel, causing both engines to quit enroute. A successful dead stick landing on a 2,500 foot runway is accomplished with only the main gear tires the worse for wear.

ACN: 1165981 (40 of 50)

Synopsis
C172 pilot reports a NMAC with another pilot in the traffic pattern due to mistakenly entering right traffic for Runway 1 while attempting to join left traffic for Runway 19.

**ACN: 1151237 (41 of 50)**

**Synopsis**
An Aircraft Maintenance Inspector reports an Elevator Bell crank spring was found not re-connected after the left and right Elevator Trim Tab actuators were replaced on a Cessna CE-560XL aircraft. Flight Test crew had noted a lighter than usual control yoke backpressure during their Pre-flight Check. Improper maintenance also noted by Inspector.

**ACN: 1130027 (42 of 50)**

**Synopsis**
Four Aircraft Maintenance Technician (AMT) reports about working conditions at an FAR 135 repair facility that included fatigue, complacency, the lack of an Inspection Department and the lack of adequate maintenance procedures that eventually led to one of their pilot's performing a precautionary landing of a Bell 206L helicopter.

**ACN: 1120923 (43 of 50)**

**Synopsis**
CE680 Captain reports a communication mixup departing SDM late at night after a long duty day. Several radio communications to ATC are attempted and apparently completed using the CTAF while listening on the ATC frequency. The crew believes the assigned altitude is 11,000 FT and ATC stating 10,000 FT, resulting in an altitude deviation.

**ACN: 1112901 (44 of 50)**

**Synopsis**
Air Ambulance crew reports being cleared for the visual approach to Runway 17L but the flying First Officer believes that 17R is the clearance and continues to believe so until short final when the Tower changes the clearance to 17R. Extreme fatigue was cited as a factor by both pilots.

**ACN: 1110489 (45 of 50)**

**Synopsis**
Fatigue, as a result of erratic scheduling practices, may have contributed to an altitude deviation for a single pilot King Air ambulance Captain.

**ACN: 1103644 (46 of 50)**

**Synopsis**
EMS Helicopter pilot contends that his company's policy of operating under both FAR Part 91 and Part 135 subverts crew rest requirements and leads to crew fatigue.
ACN: 1099042 (47 of 50)

Synopsis
Corporate jet flight crew reports a disagreement over the proper altitudes to fly on the RUUDY 4 departure from TEB, with the junior Captain deferring to the senior Captain. WENTZ is crossed above 1,500 FT climbing to 2,000 FT and noted by ATC.

ACN: 1096325 (48 of 50)

Synopsis
CE-560XL flight crew experienced a Cabin Altitude warning during climb at 15,000 FT. They declared an emergency and returned to their departure airport.

ACN: 1092489 (49 of 50)

Synopsis
A C208B pilot reported fatigue from long duty days, six days a week and momentarily climbing 200 FT about the 10,000 FT altitude assigned before an Approach Controller urgently demanded a descent.

ACN: 1086080 (50 of 50)

Synopsis
A pilot describes why he believes the current MEL practice of deferring both Cargo Door Warning Lights on their Fairchild SA-227 aircraft is an unsafe practice. They fly single pilot operations.
Report Narratives
ACN: 1381841 (1 of 50)

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: Turbulence
Weather Elements / Visibility: Thunderstorm
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
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.
**ACN: 1375426 (2 of 50)**

**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: Pilot Not Flying
Function.Flight Crew: Captain
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: Fatigue
Human Factors: Communication Breakdown
Human Factors: Situational Awareness
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: ATC

**Events**

Anomaly.ATC Issue: All Types
Anomaly.Deviation - Altitude: Excursion From Assigned Altitude
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Deviation - Procedural: Clearance
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.
**ACN: 1345779 (5 of 50)**

**Time / Day**
- Date: 201604
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference.Airport: ZZZZ.
- 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**
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.
ACN: 1339547

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
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.
ACN: 1330496

**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: Captain
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.
ACN: 1326879 (8 of 50)

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
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: Multigene
- 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.
ACN: 1318344 (10 of 50)

**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**
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.
**ACN: 1316577 (11 of 50)**

**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.
**ACN: 1308314 (13 of 50)**

**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: Chart Or Publication
Contributing Factors / Situations: Human Factors
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.
**ACN: 1308123** (14 of 50)

**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**: Pilot Flying
- **Function.Flight Crew**: Captain
- **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.
**ACN: 1303033 (16 of 50)**

**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 NORDO 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.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
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.
ACN: 1286947 (18 of 50)

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: Multiengine
Qualification, Flight Crew: Flight Instructor
Qualification, Flight Crew: Air Transport Pilot (ATP)
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.
**ACN: 1281938** (19 of 50)

**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: Multiflame
- 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.
ACN: 1281797 (20 of 50)

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
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 fight 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.
ACN: 1278005 (21 of 50)

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. Party 1: Flight Crew  
Communication Breakdown. Party 2: 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 New Clearance  
Result. Air Traffic Control: Issued Advisory / Alert

**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 Controllers "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.
**ACN: 1277973** （22 of 50）

**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: Distraction
- Human Factors: Fatigue
- Human Factors: Time Pressure
- Human Factors: Situational Awareness
- Human Factors: Confusion
- Human Factors: Workload
- Human Factors: Human-Machine Interface

**Events**
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 overshot an assigned altitude due to fatigue and automation dependency.
ACN: 1272241 (23 of 50)

Time / Day
Date: 201506
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: FNL.Airport
State Reference: CO
Altitude.AGL.Single Value: 250

Environment
Flight Conditions: VMC
Weather Elements / Visibility. Visibility: 10
Light: Daylight
Ceiling. Single Value: 12000

Aircraft: 1
Reference: X
Make Model Name: Helicopter
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Training
Flight Phase: Takeoff
Airspace.Class E: FNL

Aircraft: 2
Make Model Name: Small Aircraft
Flight Phase: Final Approach
Airspace.Class E: FNL

Person
Reference: 1
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function. Flight Crew: Captain
Function. Flight Crew: Pilot Flying
Qualification. Flight Crew: Flight Instructor
Qualification. Flight Crew: Commercial
Qualification. Flight Crew: Multiengine
Qualification. Flight Crew: Instrument
Experience. Flight Crew. Total: 11000
Experience. Flight Crew. Last 90 Days: 45
Experience. Flight Crew. Type: 4185
ASRS Report Number. Accession Number: 1272241
Human Factors: Situational Awareness
Human Factors: Fatigue

Events
Anomaly.Conflict : NMAC  
Detector.Person : Flight Crew  
Miss Distance.Horizontal : 150  
Miss Distance.Vertical : 200  
When Detected : In-flight  
Result.General : None Reported / Taken

**Assessments**

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

**Narrative: 1**

While taking off from hangar area at FNL I crossed the runway in front of an airplane on final approach. I was about 250 feet on climbout when I looked right again saw him. I continued climbing. I believe he was obscured (blended into houses) on his north side. Traffic was landing runway 15.

I was taking a checkride so a lot of my attention was focused on that (butterflies in stomach). I had initially lifted out of a confined area of hangars south bound to avoid aircraft on ramp then turned westbound to go to test ride area. [I] had slept in terminal overnight on way to get helicopter. [It took a] day and half to get to FNL. Some fatigue may be a factor. Some static on unicom.

**Synopsis**

Helicopter pilot reported an NMAC after taking off from FNL when he failed to spot conflicting traffic that was on final for runway 15.
**ACN: 1269056 (24 of 50)**

**Time / Day**
- Date: 201506
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference.ATC Facility: ZDC.ARTCC
- State Reference: VA
- Altitude.MSL.Single Value: 34000

**Environment**
- Flight Conditions: Mixed
- Weather Elements / Visibility: Thunderstorm
- Light: Daylight

**Aircraft**
- Reference: X
- ATC / Advisory.Center: ZDC
- Aircraft Operator: Air Taxi
- Make Model Name: Cessna Citation Sovereign (C680)
- 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: Cruise
- Airspace.Class A: ZDC

**Component**
- Aircraft Component: FMS/FMC
- 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: First Officer
- Function.Flight Crew: Pilot Not Flying
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- ASRS Report Number.Accession Number: 1269056
- Human Factors: Confusion
- Human Factors: Fatigue
- Human Factors: Human-Machine Interface
- Human Factors: Communication Breakdown
- Communication Breakdown.Party1: Flight Crew
- Communication Breakdown.Party2: ATC
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 Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1269060
Human Factors : Confusion
Human Factors : Fatigue
Human Factors : Human-Machine Interface
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew
Communication Breakdown.Party2 : ATC

Events
Anomaly.ATC Issue : All Types
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Provided Assistance

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

Narrative: 1

We were in route deviating through a line of weather. I believe we changed controllers when the new [controller] cleared us direct to "Sin-Dee". Controller spelled it out for us as "Sierra-India...etc". I was pilot monitoring (PM). I recorded the fix on paper. As I was writing the Captain plugged what was heard as "CINDE" into the FMS. By the time I got done copying the fix he said Captain got "Sin-Dee" already and asked what was after that. I told Captain and we proceeded along not yet catching the correct spelling as "SINDE". Somehow the captain typed a C. Maybe because the first syllable of "Sierra" sounds like "Cee". I don't know. Somehow I didn't yet catch it. Usually when you do this the wrong fix is obviously wrong. This time was different.

The resulting flight path on the MFD looked very reasonable as it took us around some weather and then to the airport. No big deal, right? That's when ATC asked us where we were going. Said we should have made a left turn. I told Controller we were going to "Sin-Dee" and as I was saying it I looked and that's when I saw the pilot flying (PF) put in CINDE instead of SINDE. In the same breath I told ATC I was turning left and asked
Controller to spell it again. We corrected everything never getting too far off course it. It was a heading error of about 30 degrees. Thankfully ATC was quick to recognize the error before it became a problem. Team work, right?

Researching our flight we discovered that CINDE is the FAF to a VOR A approach to 3G4 airport in Ohio. This was southwest of CVG and reasonable as a route assignment. This is also not in Washington center's area so he wouldn't know about it. Two fixes that sound the same are best kept far away from each other. Also, the PF should have the PM who took the clearance put it in the box. However, had PF been the PM and I PF and PM copied the clearance and loaded the box I believe PM still would have said Sierra but typed C because that word is so commonly spelled that way and we were tasked with weather and arrival procedures.

Again I am really surprised to see two fixes that sound the same so close to each other. Additionally we were over 10 hours of duty at this point and our cognitive responsiveness may not have been as high as it was earlier in the day. Removing any one of these by themselves may or may not have broken the error chain but together they all added up to a mistake. Again, I am greatful for the watchful eye of a controller who fixed the mistake before it became an issue.

**Narrative: 2**

While in cruise, ATC issued us new routing which began by having us proceeding directly to SINDE intersection. The fix name was spoken first, but despite ATC also spelling the fix, the name was copied as CINDE. The error in the first letter was not recognized, probably due to the more common spelling of the name "Cindy" creating an expectation bias. Oddly, both CINDE and SINDE are located closely enough that the route appeared completely logical on the MFD, especially given that CINDE would take us away from convective weather ahead. One is northeast of CMH and the other is south of CMH, resulting in a roughly 30 deg. track divergence from our correct route as we proceeded to the wrong fix. About 2 min after turning towards the wrong fix, ATC queried us and respelled the fix, at which point the error was recognized and corrected.

The reason for this error was the failure to correctly copy the fix spelling given by ATC, coupled with the existence of identical sounding fixes located so closely together. CINDE is a FAF on the VOR-A approach to Ashland Cty Airport (3G4) and is not a Low or High IFR enroute fix. SINDE is a High IFR fix on J149 west of AML VOR. We were about halfway between ESL VOR and MRB VOR when we got the reroute. Ordinarily, a clearance to a fix so far from XXX would've looked suspicious and been questioned. However, our previous route had us taking J134 from COLNS all the way to HNN VOR (well south of XXX) before turning north to XXX. Thus, from our particular position, and in light of the circuitous weather related routings, the incorrect fix looked valid.

In this case, I admit that SOP was not followed. Despite being the pilot flying, I typed the fix into the scratch pad as my partner watched and acknowledged it to ATC. No excuses for that. However, had I been the non-pilot flying, responsible for FMS entry, I firmly believe the outcome would've been exactly the same. SOP was not the issue. It was a matter of attention, expectation bias, and a unique circumstance of position.

**Synopsis**

A CE-680 air crew, while enroute, were cleared to fix 'SINDE'. The Captain mistakenly typed the fix as 'CINDE'. The crew began to turn to the wrong fix when they were queried
by ATC who also respelled the fix name. The crew entered the correct fix and proceeded as cleared. CINDE is 150 NM northwest of SINDE.
ACN: 1268602 (25 of 50)

Time / Day
Date: 201506
Local Time Of Day: 0601-1200

Place
Locale Reference.ATC Facility: ZOA. ARTCC
State Reference: CA
Altitude.MSL.Single Value: 42250

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Center: ZOA
Aircraft Operator: Air Taxi
Make Model Name: Gulfstream IV / G350 / G450
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Flight Phase: Descent
Route In Use.STAR: MOD5
Airspace.Class A: ZOA

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: Flight Instructor
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total: 5500
Experience.Flight Crew.Last 90 Days: 75
Experience.Flight Crew.Type: 750
ASRS Report Number.Accession Number: 1268602
Human Factors: Communication Breakdown
Human Factors: Fatigue
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: ATC

Person: 2
Reference: 2
Location Of Person.Aircraft: X
We were given an initial descent from FL450 to FL430 on the MOD5 arrival. The incident occurred between OAL and INYOE. As the pilot in command I misheard the communication and thought we were cleared to FL320. I noticed the First Officer change the altitude pre-select but I did not verify what number was put in the window. I initiated a Vertical Speed descent of 1500 FPM and disconnected the autothrottles to keep from over speeding. I called for the descent checklist which was run by the First Officer.

I was preoccupied with the speed in the descent because of the autothrottles being off. I was not monitoring the vertical descent since that was hard selected at 1500 FPM but I noticed the speed all of sudden started dropping from my target of .8M to .77M very quickly. At that moment I noticed we were level at FL430 and I looked at the altitude pre-select which said FL430. I manually initiated another VS descent still thinking we had been cleared to FL320. I asked the first officer why 430 was in the preselect window and he stated that was what were cleared to. I called Oakland center and ask for a clarification on our altitude to which [they] verified FL430. I disconnected the auto pilot and initiated a climb. The deviation was 750 FT below assigned altitude.

I believe the cause was twofold:
The primary reason for the deviation was failure by both the Captain and the First Officer to follow proper procedures in verifying and verbally confirming assigned altitude, and vertical mode in use.

A second contributing factor was an early morning departure which and multiple maintenance issues with the airplane which contributed to the fatigue. Both the Captain
and the First Officer received very little sleep and were at the airport [early] morning for departure. (Assigned crew rest was not a factor)

**Narrative: 2**

[Report narrative contained no additional information.]

**Synopsis**

Gulfstream IV flight crew reported flying through cleared altitude when the pilot flying misunderstood the descent clearance.
**Time / Day**

Date: 201505
Local Time Of Day: 0001-0600

**Place**

Locale Reference.Airport: ELP.Airport
State Reference: TX
Relative Position.Distance.Nautical Miles: 36
Altitude.MSL.Single Value: 27000

**Environment**

Flight Conditions: VMC
Weather Elements / Visibility.Visibility: 50
Light: Night

**Aircraft**

Reference: X
ATC / Advisory.Center: ZAB
Aircraft Operator: Corporate
Make Model Name: Super King Air 200
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Passenger
Nav In Use: GPS
Nav In Use.VOR / VORTAC: INK
Flight Phase: Climb
Route In Use: Vectors
Route In Use: Direct
Airspace.Class A: ZAB

**Component**

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

**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: 4000
Experience.Flight Crew.Last 90 Days: 80
Experience.Flight Crew.Type: 80
ASRS Report Number.Accession Number: 1261310
Human Factors : Fatigue
Human Factors : Distraction

**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 : Overcame Equipment Problem
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 : Environment - Non Weather Related

**Narrative: 1**

Climbing out of ELP and passing through around 25,000 feet, My GPS unit flagged an integrity message. At the time of the GPS losing signal, I was direct to INK vor. I reported the failure to ATC (with the understanding that there was a NOTAM for GPS jamming being conducted). The controller gave me a vector direct when able to my destination. As a result of my GPS losing signal the autopilot went into "roll hold" a basic level that the autopilot defaults to. I placed the autopilot into heading mode and rolled to the assigned heading. What I failed to notice was that the autopilot had also dropped "altitude select". This mode is responsible for capturing the assigned altitude. In this case, that altitude was 27,000 feet. I recall acknowledging the altitude alerter at the 1000 feet prior annunciation. However, instead of focusing on the level off I left my attention to resetting the GPS and tuning in frequencies to ground based navigation facilities.

As I was looking up a frequency to tune, I noticed the amber light from the altitude alerter was still illuminated. Through all of my previous flying experience I instantly knew that we should have already leveled off. I looked at the altimeter and we were 800 feet higher than our assigned altitude of 27,000 feet. I immediately disengaged the autopilot and corrected to the assigned altitude.

Contributing factors include distraction from losing GPS. Fixation while attempting to find other means of navigation, even though the controller gave me an initial vector and I had plenty of time to wait until level off to determine frequencies. In addition, I was approaching the end of my duty day so fatigue may have contributed to my error.

**Synopsis**

King Air 200 pilot experienced loss of GPS signal after departing ELP and passing through FL250. The failure was due to NOTAM'd GPS jamming in the area and ATC assigned a heading to destination. With the loss of NAV capability the autopilot also lost altitude capture, resulting in an 800 foot overshoot of FL270.
Time / Day
Date: 201504
Local Time Of Day: 1801-2400

Place
Locale Reference, ATC Facility: A90.TRACON
State Reference: NH

Environment
Flight Conditions: VMC
Light: Night
Ceiling, Single Value: 9000

Aircraft
Reference: X
ATC / Advisory, TRACON: A90
Aircraft Operator: Fractional
Make Model Name: Cessna Citation Sovereign (C680)
Crew Size, Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: IFR
Flight Phase: Initial Approach
Route In Use: Visual Approach
Route In Use: Vectors
Airspace, Class E: A90

Person
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: 1252762
Human Factors: Fatigue
Human Factors: Situational Awareness

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: Became Reoriented

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

Narrative: 1

It was Day 6 of a 7 Day [assignment]. We were conducting a passenger flight [to] BED. The crew had been on duty since XA:00. We departed during daylight VFR conditions and proceeded to BED. The sun went down, we entered IMC and freezing precipitation and didn't break out of the clouds until Boston Center began vectoring us for a visual approach to Bedford Airport at 9000 feet. 20 miles from the field they cleared us for a visual approach and directed us to enter a right downwind for RWY 29. I saw the field and lined up parallel on the downwind to RWY 29. I began my base turn at the appropriate interval and as I rolled out of the right turn, I immediately lost situational awareness of where I was in relation to my position and the runway. I responded to my FO that I had lost the runway and he pointed out that I was still in a turn and heading away from the airport. I stopped my turn and descent and leveled off. I regained my situational awareness after a few seconds and proceeded to the runway without difficulty in a stable condition and landed without event.

Scheduling of the day had a lot to do with the fatigue factor of this trip. I began at XA:00 that morning after a min turn the night before. We had a maintenance issue with the aircraft that morning and the company decided the split the crew up. I got a new FO and sat in [departure airport of the first leg] for an additional 6 hours. At the last minute the company threw a 3 leg trip on us with planned 45 minute turns between each leg.

Day 6, min rest, poor food quality, and constant pressure by the company finally caught up with me on the downwind leg into BED. It hit me immediately. The sun went down and so did my situational awareness. I never felt or saw it coming.

Better scheduling and less punitive scheduling.

Synopsis

C680 Captain reported losing situational awareness on a night visual approach into BED, citing fatigue from a difficult scheduling assignment as contributing factor.
ACN: 1251865 (28 of 50)

Time / Day
Date: 201504
Local Time Of Day: 1801-2400

Place
Locale Reference.ATC Facility: ZID.ARTCC
State Reference: IN
Altitude.MSL.Single Value: 24000

Environment
Flight Conditions: IMC
Weather Elements / Visibility: Thunderstorm
Weather Elements / Visibility: Turbulence
Light: Night

Aircraft
Reference: X
ATC / Advisory.Center: ZID
Aircraft Operator: Fractional
Make Model Name: Gulfstream G200 (IAI 1126 Galaxy)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Ferry
Nav In Use.VOR / VORTAC: OWB
Flight Phase: Cruise
Airspace.Class A: ZID

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Fractional
Function.Flight Crew: Pilot Not Flying
Function.Flight Crew: Captain
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1251865
Human Factors: Fatigue
Human Factors: Situational Awareness

Events
Anomaly.Deviation - Track / Heading: All Types
Anomaly.Deviation - Procedural: Clearance
Anomaly.Inflight Event / Encounter: Weather / Turbulence
Detector.Person: Flight Crew
When Detected: In-flight
Result.Flight Crew: Became Reoriented
Result.Air Traffic Control: Provided Assistance
Assessments

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

Narrative: 1

Enroute to SDF we were issued holding at OWB due to heavy thunderstorm activity at SDF. We were instructed to hold south of OWB on the 180 radial @ F240 with an EFC. We acknowledged the clearance and quickly programmed the FMS for the hold. A brief review of the holding page was accomplished and the hold was activated. The Second In Command (SIC) and I immediately began discussing options for a possible diversionary airport. In addition, we were busy with scrutinizing the radar picture to determine any weather that could impact our current holding situation, route to SDF, or route to diversionary airport. We entered holding at OWB and very quickly determined that the holding pattern we programmed was not correct. The incorrect holding pattern rendered us holding north with an inbound course of 180. We immediately recognized the incorrect programming and promptly notified ATC. We told the controller we would re-program the hold and re-enter the hold once we pass over OWB. He indicated that we were fine and we could remain in our current holding pattern.

Approximately 20-25 minutes we advised ATC that our current holding pattern was placing us in close proximity to the encroaching severe weather and that we would like to hold on the south side as initially instructed. The controller complied with our request and issued new holding instructions. We entered the new hold and held for approximately an additional 15 minutes. After nearly 45 minutes of holding and no evidence of a pending approach clearance, we coordinated with company dispatch and other departments and diverted. At no point was there any conflict with ATC or the numerous aircraft operating/holding in the vicinity of OWB.

I believe good CRM prevailed in this case. My SIC and I recognized the programming error and immediately notified ATC. There was some compression/haste in programming as we were close to the holding fix upon receiving our holding instructions. In retrospect more time could have been spent during the confirmation and activation phase of programming. This will undoubtedly be the case moving forward. I believe fatigue partially contributed to the event, as it was after midnight and we had already completed 2 lengthy flights prior to this ferry. That in combination with the severe weather surrounding our position posed some great human factor challenges for us.

Synopsis

A G200 Captain reports being cleared to hold south of OWB on the 180 degree radial but inadvertently sets the FMC to hold north of OWB. ATC is advised and the crew is allowed to stay in their current holding pattern. Eventually a diversion is required when the weather did not improve. Fatigue was cited as a factor in the incident.
ACN: 1241462 (29 of 50)

Time / Day
Date: 201502
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: EWR.Airport
State Reference: NJ
Altitude.AGL.Single Value: 100

Environment
Flight Conditions: VMC
Weather Elements / Visibility. Visibility: 10
Light: Dawn

Aircraft
Reference: X
Aircraft Operator: Corporate
Make Model Name: Gulfstream G250
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Passenger
Flight Phase: Takeoff
Route In Use.SID: EWR1
Airspace.Class B: EWR

Component
Aircraft Component: Pitot-Static System
Aircraft Reference: X
Problem: Improperly Operated

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Corporate
Function.Flight Crew: Captain
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Total: 6500
Experience.Flight Crew.Last 90 Days: 100
Experience.Flight Crew.Type: 600
ASRS Report Number.Accession Number: 1241462
Human Factors: Distraction
Human Factors: Physiological - Other
Human Factors: Time Pressure
Human Factors: Workload
Human Factors: Fatigue

Person: 2
Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy

Narrative: 1

On takeoff out of Newark, we received a yellow IAS and ALT annunciations on my PFD. I told my copilot about the situation and he immediately remembered that he neglected to remove the pitot/static plate from the left side of the aircraft. We advised ATC that we needed to return to Newark due to an instrumentation issue. We were cleared for the stadium visual 29 and landed without incident. Newark tower elected to dispatch the fire trucks, however their services were not needed.

Human factors for this include:

One pilot goes to the terminal to pick up passengers while the other pre-flights the aircraft. This divides the crew, which I feel is unique to any operation.

My co-pilot had issues starting the aircraft preflight because the inlet for the water system had frozen up despite being emptied at our home hangar prior to departure. A line personnel member disturbed my co-pilot during his routine and he never completed the preflight.

My co-pilot mentioned that he had a bad nights sleep the night before. We departed the hotel at XA00 which may be a compounding factor.

The weather was extremely cold at 4 degrees Fahrenheit which lead to a minimal amount of loiter time outside of the aircraft.

As with most incidents, it is not one item that causes a problem, but a chain of events. I walked past the cover in question as I entered the aircraft and did not notice it. There is not a flag on the plate and it is the same red color as the paint.

This situation will be submitted to our company safety system and root causal analysis will be conducted.

Narrative: 2

Aircraft had been parked outside, on the ramp overnight with all covers, plugs, and pins installed.

The preflight inspection was performed under night lighting conditions on an unlit ramp.
Near the completion of my first circuit around the exterior of the aircraft, a line service technician approached me and informed me that they could not get the valves open on the aircraft to service with potable water. At the same time another line service technician approached with ice, newspapers, and the bag of galley stock that had been removed the night before to prevent from freezing. This technician also requested the coffee decanters from the galley. I interrupted my normal pre-flight flow to deal with both line technicians and did not remove the LH Static port ground cover (making a mental note to remove the cover after dealing with the line technicians).

While evaluating the potable water uploading issue it was determined that the Water/Waste System control panel had not powered up subsequent to the APU start. This is a common problem with G280 aircraft that have cold soaked while powered down on the ground and require the aircraft APU and all electrical power be shut down after the environmental system has warmed the aircraft. While shutting down and restarting the APU and electrical system, to address the Water/Waste System issue, I completely forgot to remove the LH Static Port cover.

Primary factor;
. Allowing my normal pre-flight flow to be interrupted in mid flow, expecting to remember to pick up where I left off after distraction was resolved.

Other contributing factors;
. Short rest interval between the flight the night before and the subject scheduled flight.
. Other pilot attending to other duties necessitating the entire pre-flight and aircraft flight prep to a single crewmember.
. Less than restful sleep period prior to flight.

Synopsis
A G280 First Officer, preparing for a pre-dawn departure from a frigid EWR airport, encountered numerous interruptions and freezing temperature related system difficulties while conducting his pre-flight. The Captain was otherwise engaged with passenger greeting and boarding and was, thus, unavailable for consultation or assistance. After takeoff the Captain's ASI and altimeter were inoperative, which reminded the First Officer that the last interruption of his pre-flight prevented him from completing the left side exterior inspection and he had forgotten to return to complete the task. The static port cover, as a result, was still in place preventing associated instrumentation from operating. They returned safely to the VFR airport.
ACN: 1221963 (30 of 50)

Time / Day
Date: 201412
Local Time Of Day: 0601-1200

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

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Fractional
Make Model Name: Citation Excel (C560XL)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Phase: Initial Approach
Airspace.Class D: ZZZ

Person
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: 1221963
Human Factors: Confusion
Human Factors: Fatigue

Events
Anomaly.Conflict: NMAC
Detector.Automation: Aircraft RA
Detector.Person: Flight Crew
Miss Distance.Horizontal: 0
Miss Distance.Vertical: 200
When Detected: In-flight
Result.Flight Crew: Executed Go Around / Missed Approach
Result.Flight Crew: Took Evasive Action
Result.Flight Crew: FLC complied w / Automation / Advisory
Result.Air Traffic Control: Separated Traffic

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

**Narrative: 1**

At approximately 700 feet MSL while on final approach to runway 36 and after being cleared to land by the local controller, we both recognized at about the same time that there was a target on our TCAS display. It seemed to appear suddenly. Initially, we did not receive a Traffic Advisory (TA) or a Resolution Advisory (RA) associated with the target aircraft. I slowly arrested the descent as we both were trying to determine if the target was above us or below us. Because the target on the TCAS display was close to our aircraft icon symbol on the TCAS display, we could not determine if there was a plus or minus sign next to the vertical distance of the target. I gradually began a shallow climb while adding power. At approximately 900 feet MSL, we received an aural "monitor vertical speed" TCAS alert. The VSI showed red below and a green arc above 0 VSI. At about the same time that we recognized the target on TCAS display, the controller asked the target aircraft what his position was and the pilot said that he was on final. So much concentration was being made by us to avoid collision that neither of us remember the exact dialog that the local controller was having with the target aircraft pilot. I think that I heard the local controller instruct the target aircraft pilot to turn to the east immediately and that he was told earlier to make a position report 4 miles from the airport. We executed a normal and uneventful landing after the second visual approach.

Fatigue may have been a factor in my alertness and not recognizing this aircraft earlier on the TCAS display. I felt rested, but cumulative days of waking up at 2 and 3am body clock time, may have contributed to my alertness level. I think that management should factor in the time zones of the crew members when scheduling early flights especially for West Coast crews. Scheduled later starts/trips should be assigned at least every other or second day to avoid cumulative fatigue. Additionally, avionics manufactures that provide TCAS equipment that incorporate TA's and RA's, should be required to program this equipment to provide aural warnings all the way to the ground. We operate a lot in high impact traffic areas at smaller and often non-towered airports where this feature would be useful and could save lives.

**Synopsis**

CE560 Captain experiences a NMAC on short final during a day visual approach. An aircraft symbol was detected on TCAS in close proximity with no aural alert and a shallow climb is initiated. At 900 feet a TCAS RA is generated with any descent depicted as red and a go-around is initiated. A VFR aircraft that was told to report four miles, did not and was forgotten by the Tower.
**ACN: 1217220 (31 of 50)**

**Time / Day**
Date: 201411

**Place**
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 2600

**Environment**
Flight Conditions: Marginal
Light: Daylight

**Aircraft**
Reference: X
ATC / Advisory.TRACON: ZZZ
Aircraft Operator: Fractional
Make Model Name: Gulfstream IV / G350 / G450
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Ferry
Flight Phase: Initial Approach

**Component**
Aircraft Component: Altimeter
Aircraft Reference: X
Problem: Improperly Operated

**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 Not Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1217220
Human Factors: Communication Breakdown
Human Factors: Fatigue
Human Factors: Situational Awareness
Communication Breakdown.Party1: ATC
Communication Breakdown.Party2: Flight Crew

**Person : 2**
Reference: 2
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: 1217222
Human Factors: Fatigue
Human Factors: Situational Awareness

Events
Anomaly: Deviation - Altitude: Excursion From Assigned Altitude
Anomaly: Inflight Event / Encounter: CFTT / CFIT
Detector: Automation: Aircraft Terrain Warning
Detector: Person: Flight Crew
Detector: Person: Air Traffic Control
When Detected: In-flight
Result: Flight Crew: Returned To Clearance
Result: Flight Crew: Became Reoriented
Result: Air Traffic Control: Issued New Clearance
Result: Air Traffic Control: Issued Advisory / Alert

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

Narrative: 1

Descending prior to 18,000 feet, the altimeter setting of 29.61 was set in the standby altimeter per the ATIS. As we transitioned through 18,000 feet on our way to 11,000 feet we were given a local altimeter setting of what we believed to be 30.61. I was sitting in the right seat and for some reason, I changed what was in the standby altimeter to 30.61. All three altimeters were now changed to 30.61. At this point I do not recall if I read back 30.61 or 29.61. Either way, 30.61 was set in all three altimeters. We continued to 11,000 feet and received further descent clearance to 3200 feet and an updated altimeter setting of what was supposed to be 29.58. Instead, I read back 30.58 and we both set 30.58. Now all three altimeters read 30.58. We broke out at 7300 feet into good marginal VFR conditions with visibility at least 5 miles. The Descent and first part of the Before Landing Checklists were complete and altimeters cross checked but because all three altimeters were now set to the wrong setting, we still had the wrong altimeter set. We were given further descent clearance to 3200 feet. As we approached 3200 feet we received further descent clearance to 2200 feet. We continued a slow descent towards 2200 feet. We could see some tall smokestacks in the distance below our altitude and off to our right. The stacks still seemed closer to our route than would usually be seen. We were just beginning to question, amongst ourselves, our assigned altitude and vector when approach asked us to level at 2200 feet. At the same moment and roughly 2600 feet indicated, we got an obstacle warning. We arrested our gradual descent but subsequently got a pull up command moments later. We complied with the command with pitch and power as I informed approach that we were climbing for obstacle avoidance and we were currently out of 3100 feet (2100 feet with correct altimeter). Approach told us to descend to 2200 feet. I told him we were complying with an obstacle avoidance command and then I asked for the altimeter setting. Approach answered with an altimeter setting of 29.58. I immediately changed all altimeters and we leveled at 2200 feet. We were cleared for the ILS where the rest of the approach and landing were uneventful. Because of the visual conditions, we could see we were never in a dangerous position and kept clear of the obstacles.
The whole situation was a result of a combination of a few things. One was a lack of common sense on my part. I knew the ATIS called for an altimeter setting of 29.61 yet blindly changed the standby altimeter to something that was drastically different. The weather conditions should have been a good indication that a high pressure setting like 30.61 was unlikely. Another was not hearing what was being said, instead I heard what I expected. I expected to hear an updated altimeter setting near what was set (30.61). When 29.58 was given, I read back 30.58. Complacency played a part in this situation as well. Once we broke out into basically visual conditions, I didn't go back and compare what I had written down for the ATIS with what we had set. A simple ATIS review would have caught the mistake. In addition, the aircraft is loaded with tools to aid in altitude awareness. Some quick mental gymnastics once the radar altimeter was called alive would have caught our altitude discrepancy between what was being indicated on our altimeters and what the radar altimeter was showing. All that being said, more attention to detail would have mitigated this issue. Last but not least of all I believe that fatigue may have played a small role. I do not recall exactly how much sleep I had gotten the few nights prior to this day but I do remember that the quality of sleep was very poor. Combine this with the mental exhaustion of keeping up with the constant changes on a daily basis and I feel like this contributed to the issue.

**Narrative: 2**

Looking back we had a couple of clues that we had set the incorrect altimeter. First was we were flying in to an area we knew was deteriorating conditions in advance of a strong cold front, and an altimeter setting of 30.58 was unlikely.

Secondly we called "radar altimeter alive" somewhere around an indicated altimeter of around 4000ft. With a field elevation of approximately 700ft we should have been alerted to the error.

Thirdly, looking out the windshield in hindsight it did look as the vector was taking us close to the smokestacks.

Additionally I had the HUD down and the EVS on in preparation for the approach. The EVS picture was distracting as I was looking at the EVS image of the smokestacks and that interrupted my scan where the radar altimeter could have alerted us to the situation earlier. [Enhanced Vision System].

The final factor was rest. The night before we arrived at the hotel after 1 am and didn't get to bed until closer to 2 am and woke around 7. Although I only got 5 hours of real sleep I thought I felt fine. However when reaching the hotel after another flight that day, I was exhausted and fell asleep at 8pm.

**Synopsis**

G450 Flight Crew reports setting an incorrect altimeter setting (30.58 vs 29.58) during descent and approach. This error is not discovered until ATC issues a low altitude alert at the same time the crew receives a GPWS warning. Fatigue was cited as a factor by both pilots.
**Time / Day**

Date: 201410  
Local Time Of Day: 1801-2400

**Place**

Locale Reference: ATC Facility: DET.Tower  
State Reference: MI  
Altitude.AGL.Single Value: 0

**Environment**

Flight Conditions: VMC  
Weather Elements / Visibility: Visibility: 10  
Light: Night  
Ceiling.Single Value: 9000

**Aircraft**

Reference: X  
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: Takeoff

**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  
Qualification.Flight Crew: Instrument  
Experience.Flight Crew.Total: 6200  
Experience.Flight Crew.Last 90 Days: 20  
Experience.Flight Crew.Type: 900  
ASRS Report Number.Accession Number: 1208722  
Human Factors: Situational Awareness  
Human Factors: Fatigue  
Human Factors: Distraction

**Events**

Anomaly.Flight Deck / Cabin / Aircraft Event: Other / Unknown  
Anomaly.Deviation - Procedural: Weight And Balance  
Anomaly.Deviation - Procedural: Published Material / Policy  
Anomaly.Deviation - Procedural: Clearance
Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Flight Crew
Were Passengers Involved In Event : Y
When Detected : In-flight
Result.General : None Reported / Taken

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

Narrative: 1

While taxiing for takeoff for runway 15 at night after being on duty for over 12 hours I departed from runway 15 at the intersection of taxiway "C" and 15 instead of the end of runway 15. This was approximately 800-1000 feet from the departure end. The aircraft, fortunately, had no problems with the decreased runway available for takeoff.

Factors which contributed to this error are fatigue, due to the long duty period I was experiencing. Secondly, cockpit distraction from passenger conversations which caused my concentration to not be as focused on taxiing the aircraft. Thirdly, there were numerous taxiway edge lights out of service at the time which contributed to the loss of position awareness.

The tower did not indicate or say anything after departure and rest of flight was uneventful.

Corrective actions would include limiting the duty period for flight crews to help alleviate any fatigue which may arise from the extended duty period. Secondly, stay focused on taxi operations and not let passenger conversations distract from "flying the airplane". Lastly, have timely repairs made to any airport lighting which could have helped illuminate the taxi ways and position awareness.

Synopsis
The pilot of a light jet took-off from Runway 15 from intersection C vice full length as planned. Cited as contributing factors were: fatigue (over 12 hours on duty), distractions from passenger conversation, and multiple inoperative taxiway lights.
**Time / Day**

Date: 201409
Local Time Of Day: 0601-1200

**Place**

Locale Reference.Airport: TEB.Airport
State Reference: NJ
Relative Position.Distance.Nautical Miles: 33
Altitude.MSL.Single Value: 4000

**Environment**

Flight Conditions: VMC
Weather Elements / Visibility: Visibility: 10
Light: Daylight
Ceiling.Single Value: 12000

**Aircraft**

Reference: X
ATC / Advisory.TRACON: N90
Aircraft Operator: Air Taxi
Make Model Name: Falcon 10/100
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Flight Phase: Descent
Route In Use: Vectors
Route In Use.STAR: JAIKE3
Airspace.Class E: N90

**Component**

Aircraft Component: Autopilot
Aircraft Reference: X
Problem: Malfunctioning

**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: Captain
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Air Transport Pilot (ATP)
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total: 8600
Experience.Flight Crew.Last 90 Days: 60
DAY 1 on duty.

Our day started out very early with a XD:00 am airline departure to reposition the crew to the airplane that was in FLL. Our flight [had a connection]. Per company policy we are required to preflight the plane as soon as we arrived in FLL to verify our plane is airworthy. We like to do this as a personal rule and following company policy so as to avoid any cancellations or surprises when it comes time to fly. Both PIC and SIC just came back from 9 days off at home. We had both been on a regular sleep at night, wake during the day, normal hours while at home. The copilot's day started off with a XA:00 am alarm to commute to MSP for the airline flight. The Captain had woke
up at XB:00am.

DAY 2 on duty, day of incident

We had a XC:00am (local) departure the following day. That would be a XB:00 am local from the time zone we spent the last week in. So, we had two days of getting up early am. Yes, I am saying fatigue had a small role in this error.

We had only one leg [to] TEB. I was the captain and pilot flying. Being assigned the Jaike3 arrival procedure into TEB, we briefed the altitudes and speeds for the arrival. We however missed the note: Speed - Advise ATC prior to speed reduction below 250 KTS.

On the Ipad mini and Jeppesen arrival the note is written "sideways" vertically in the lower right corner. In other words, it is easy to overlook. With the Ipad mini, you tend to ZOOM and are viewing about 1/3 of the chart at a time.

We are approved for and were using the Ipads and Jeppesen plates. It's important to note the differences between the government issued NOS Jaike3 plate VS the Jeppesen Jaike3 plate.

During the arrival the autopilot disengaged. I simply chose to hand fly the descent and arrival to insure positive control of the airplane. This ended up affecting (shortening) the time to complete a final review of the arrival.

We met the 11,000 foot and 250 KIAS speed restriction at WACKI on the Jaike3. REGLE at 7,000 feet was the next altitude restriction, we met that as well. Sometime after REGLE we were descended to 4,000 feet and put on a vector/heading. At this point we were no longer on the published arrival. Being assigned a heading, we felt that we were no longer on the arrival. Being close to the Class Bravo airspace (we were within 3 NM of the Bravo). My copilot said, "We are nearing the bottom of the Bravo and there's the 200 KIAS speed restriction below Bravo- you should consider slowing." I began to slow towards the 200 kts. Approaching 200 knots, NY Tracon said, "Aircraft X say speed." We replied, "200 knots" NY said, "That's what I thought. Aircraft X turn left heading 340. You're not supposed to slow below 250 without approval. Anything less than that is a violation. You were number 1 for TEB, you are now number 6." We apologized, found the sideways note for the 250 KIAS speed assignment.

The crew felt that after we were assigned a heading and altitude, that we were no longer ON the arrival Jaike3 according to AIM 5-5-16a, 11 or 5-5-16b.

These are the items that the crew feels could have reduced or eliminated the issue at hand: Better schedules, better sleep, full size Ipads or full size print outs of the arrivals, a working autopilot, better avionics on aircraft giving better situational awareness, more east coast experience, more advanced review of the arrivals ahead of time, any and all of these would have helped to prevent this error. Of course it was not any ONE of these, but a compilation of several of these together.

After crossing SBJ on the Jaike3 arrival we were put on an assigned heading from New York. There may be some room for discussion as to whether or not we were established on the arrival after we were given a heading vector and altitude. The key word from this discussion is the word "Established" and if we were required to hold the assigned speed restriction on the arrival.
**Synopsis**

After completing the charted JAIKE RNAV STAR, given a vector and cleared to descend to 4,000 MSL, a Falcon 10 flight crew noted they would be passing below the New York Class B floor of 7,000 MSL and reduced their airspeed to 200 KIAS as required. Approach Control remonstrated them for doing so, advising they were not to reduce below 250 knots without approval--appearing to reference the SPEED note on the STAR chart--and vectored them out of sequence, advising they had been moved from number one for the airport to number six.

Fatigue, the STAR chart format and the inadequacy of their EFB tablets to display the entire chart were cited as contributing factors.
ACN: 1202902

Time / Day
Date: 201409
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 9500

Environment
Flight Conditions: VMC
Light: Dawn

Aircraft
Reference: X
ATC / Advisory.Center: ZZZ
Aircraft Operator: Corporate
Make Model Name: Cessna Stationair/Turbo Stationair 6
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Photo Shoot
Flight Phase: Cruise
Route In Use: Direct
Airspace.Class B: ZZZ

Person
Reference: 1
Location Of Person: Hangar / Base
Reporter Organization: Corporate
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Last 90 Days: 160
Experience.Flight Crew.Type: 160
ASRS Report Number.Accession Number: 1202902
Human Factors: Fatigue

Events
Anomaly.No Specific Anomaly Occurred: All Types
Detector.Person: Flight Crew
When Detected: In-flight
When Detected: Pre-flight
Result.General: None Reported / Taken
Assessments
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

**Narrative: 1**

This report does not depict a specific, single event, but rather a set of conditions that I think need to be considered sooner or later. I was hired by an Aerial Survey company as a pilot. I have 1000 hours of previous experience flying Aerial Survey, 1800 total time. I had training of three days of flight training, including an IPC and Flight Review, and I was asked the next day (day four of my employment) if I was willing to get underway and start flying "the line." I responded that I was indeed ready. I have flown every day now for four weeks, averaging about six to seven hours per day, including weekends and an intervening holiday. The airplane has undergone two rapid fire 50 hour events, and one 100 hour event. The maintenance is not the issue on this plane, thankfully. At the conclusion of a 7.5 hour flight, part of a 14-hour day, I was told to be at work early the next morning, less than seven hours in the future. I live one hour away. Therefore, the 7 hour rest became 5 hours, including time to eat, shower, get ready, etc. I am already fatigued because I have flown for 27 days straight - every single day, as described.

Upon waking up, I was still groggy, sleepy, and still very tired. Clearly this was a case of long-term and now short-term fatigue. I mentioned this to the individual I was working with and he pointed out that because we are a Part 91 Operator, that no rest requirements exist. And further, because I am the "new guy" I would do better to keep to myself. I have enough time and experience now to know that this is excessive, and that I was operating at less than optimal due to lack of sleep and aggregate fatigue. I know that no time limits other than for flight instruction exist in Part 91, but as an Aerial Survey operator, I feel that this is an oversight on the part of the regulations. I understand that we don't need to add layer on layer of laws and rules, and in the spirit of the IM SAFE checklist, I failed said checklist, but when a company calls the shots, and makes the rules, and the written law doesn't provide protection regarding rest, then for continued employment, I should keep going - operating at less than optimal. I don't mind continuing to work hard for a company and "paying my dues" as I work toward a better, higher paying job in either a part 135 or 121 company, but this particular day was an abuse of the lack of rules, and an abuse of an employment situation.

The bosses aren't pilots and don't understand that concept of fatigue, and being tired while flying and how the effects of it are cumulative. And yet, from my FAA training, I do understand this and certainly my body can feel it. The notion of a 7-hour rest that includes two-hours of freeway driving, plus eating, time to shower and dress and get back in the game, even the CFR's cut that one kinda close. Further, there is no protection under the law that says that in every 7 days, a 24 hour "golden day" needs to be interjected. I've flown for 28 straight days now, living in hotels, and for the most part, working hard to get enough rest and sleep because I want to keep doing this. But at the same time, this directive of the shortened rest period wasn't issued in the spirit of "we will give him a day off in the next 24 hours to compensate for the reduced rest period." The law doesn't call for it, and therefore, we don't enjoy the protection under the law. That said, we still operate in Class B airspace, on long days of hands-on flying, going into and out of airports across the country with big planes, and interacting with controllers, and other pilots and in effect, having just as much at stake if something goes wrong as any other operator.

So I am writing this report to raise an issue that I am certain will come up again because
there is no law that says it can't come up again, and further, the non-pilot bosses who call
the shots get to crawl into their own beds at night and return to an office that sits on the
ground where they can come and go from the coffee pot and not endanger anyone if they
show signs of fatigue from having worked 28 days straight including weekends and
holidays. The bosses are great, and do what they know, but unless it's in the law, there is
nothing to assure us that we are operating safely. I am not upset at the bosses in an "us
and them" approach, rather, I want to point out that these guys are not pilots and may
not understand all of the elements that we do (as I'm sure I don't understand all the
elements of what they go through as well.) This is not the point. Gratefully, nothing
untoward occurred and I somehow drove home on the Interstate at the end of another 7.5
hour flying day, with 4 hours of book work included, rolling down my window to keep
awake and singing along with the radio, with nothing that says I don't have to do it again
the next morning. I just hope this issue of rest for 91 operators starts to receive some
attention before someone gets hurt seriously, or killed.

Synopsis

C206 pilot laments the lack of flight time or duty time regulations for Part 91 commercial
pilots and offers his recent experience as an example.
ACN: 1195312 (35 of 50)

Time / Day

Date: 201405
Local Time Of Day: 0601-1200

Place

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

Environment

Light: Daylight

Aircraft

Reference: X
Aircraft Operator: Air Taxi
Make Model Name: Jet/Long Ranger/206
Operating Under FAR Part: Part 135
Mission: Ambulance
Flight Phase: Parked
Maintenance Status.Maintenance Deferred: N
Maintenance Status.Released For Service: Y
Maintenance Status.Maintenance Type: Scheduled Maintenance
Maintenance Status.Maintenance Items Involved: Installation
Maintenance Status.Maintenance Items Involved: Work Cards
Maintenance Status.Maintenance Items Involved: Inspection

Component: 1

Aircraft Component: Helicopter Control Systems
Manufacturer: Bell Helicopters
Aircraft Reference: X

Component: 2

Aircraft Component: Air Conditioning Compressor
Aircraft Reference: X
Problem: Malfunctioning

Person

Reference: 1
Location Of Person: Hangar / Base
 Reporter Organization: Air Taxi
Function.Maintenance: Lead Technician
Qualification.Maintenance: Airframe
Qualification.Maintenance: Powerplant
Qualification.Maintenance: Inspection Authority
Experience.Maintenance.Inspector: 5
Experience.Maintenance.Lead Technician: 5
Experience.Maintenance.Technician: 14
ASRS Report Number.Accession Number: 1195312
Human Factors: Time Pressure
Human Factors: Fatigue
Human Factors: Situational Awareness
Human Factors: Distraction
Analyst Callback: Completed

Events

Anomaly. Aircraft Equipment Problem: Critical
Anomaly. Deviation - Procedural: Published Material / Policy
Detector. Person: Maintenance
Were Passengers Involved In Event: N
When Detected: Routine Inspection
Result. General: Maintenance Action

Assessments

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

Narrative: 1

I removed the Aft Evaporator Blower motor. To gain access, the Tail Rotor Control tube had to be removed. When the job was finished I asked a Pilot to come and look the job over. We both missed the bolt that I failed to tighten on the Tail Rotor Control tube. We operate a 24/7 Helicopter Emergency Medical Service (HEMS) operation and are on call 24/5. I feel that pressure from Supervisors to get the job done so we can capture flights affected my performance. I feel that the pilots are not adequately trained to look over major maintenance such as Flight Controls. I removed the Aft Evaporator Blower motor. To gain access, the Tail Rotor Control tube had to be removed. When the job was finished I asked a pilot to come and look the job over. We both missed the bolt that I failed to tighten on the Tail Rotor Control tube. We operate a 24/7 Helicopter Emergency Medical Service (HEMS) operation and are on call 24/5. I feel that pressure from supervisors to get the job done so we can capture flights affected my performance. I feel that the pilots are not adequately trained to look over major maintenance such as flight controls being taken loose in places where they don't look on a daily basis. taken loose in places where they don't look on a daily basis.

Callback: 1

Reporter stated the Aft Evaporator Blower Motor draws cabin air and also helps cool the Air Conditioning Pack. Replacement was necessary because the motor had quit. Access is through the baggage compartment door, removing an upper panel behind the cabin aft bulkhead where the blower motor is; in an area known as the "Hell Hole" because of the heat and tight quarters. He had to remove the Tail Rotor Control tube to access the blower motor. The control tubes are inside a "V" channel.

Reporter stated he was sick and fatigued the day he replaced the blower motor and felt he needed someone to look over his work, before he went home early. They are not short staffed on Maintenance personnel. But, a culture has developed at their operation where pilots are called upon by Dispatch to verify the aircraft is mechanically ready for flight, even though pilots do not sign any documents after they reviewed the maintenance work. Maintenance just recently started to add a couple of Quality Assurance (Q/A) items to Mechanic's sign-off. Complacency can be an issue especially if pilot and mechanic are both
known to have a good record.

Reporter stated the Bell-206L was in for a 300-hour Inspection at one of their regional Maintenance Bases when a Mechanic noticed the loose bolt that secures the Tail Rotor Push-Pull Control tube had not been tightened. The Push-Pull tubes control the pitch of the Tail Rotor via input from the Tail Rotor pedals in the cockpit. The Medi-Vac helicopter had flown about 100-hours in that condition. Their Helicopter Emergency Medical Service (HEMS) operations are a push, push, push environment, including Maintenance. He was separated from the company shortly after the incident.

Synopsis

A Lead Aircraft Maintenance Technician (AMT) was informed he had not tighten one of the bolts that secure the Tail Rotor Control tube on a Bell-206L helicopter after replacing the Aft Evaporator Blower motor. Technician noted that pressure from supervisors to get the job done and the use of pilots to look over major maintenance work accomplished by mechanics were contributors.
ACN: 1191512 (36 of 50)

Time / Day
Date: 201407
Local Time Of Day: 1201-1800

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

Environment
Flight Conditions: IMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Center: ZZZ
Aircraft Operator: Air Taxi
Make Model Name: Caravan 208A
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Flight Phase: Cruise

Component
Aircraft Component: De-Icing Fluid
Aircraft Reference: X
Problem: Design

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Taxi
Function.Maintenance: Lead Technician
Qualification.Maintenance: Powerplant
Qualification.Maintenance: Airframe
ASRS Report Number.Accession Number: 1191512
Human Factors: Fatigue
Human Factors: Confusion
Human Factors: Physiological - Other
Analyst Callback: Completed

Events
Anomaly.Flight Deck / Cabin / Aircraft Event: Illness
Detector.Person: Maintenance
When Detected: In-flight
Result.General: Physical Injury / Incapacitation
Assessments
Contributing Factors / Situations: Aircraft
Contributing Factors / Situations: Company Policy
Contributing Factors / Situations: Human Factors
Primary Problem: Aircraft

Narrative: 1

I was tasked to fly on a Caravan to recover a broken aircraft at an outstation. During the flight the Captain was using the TKS System to deice the aircraft leading edges and windshield. I kind of knew I was being exposed to the fumes and vapors, because I could taste a sweetness in my mouth. After arriving at the outstation my first breath outside of the aircraft I knew something wasn't right by the taste and smell. Also my throat began to burn and after a few hours I felt nauseous. I flew home on the repaired aircraft and had a drunken feeling causing me to not be fully alert as normal of my surroundings. I made it home after the flight and felt like I had a film on me, so I took a shower and felt fatigue all of sudden. Went to bed and awoke with a sore throat, burning sinus and a headache. I have felt fatigued all day and still kind of not fully alert as usual. I feel all this is in relation to the exposure of the TKS vapors from the 1.7 hour flight to the outstation. More tests should be done on this system in flight in different conditions. This is an accident waiting to happen. Exposure to flight crew should be looked at to avoid health issues in the future.

Callback: 1

Blood tests were not taken because he was not able to get to the Doctor until the following day and it was thought that results would not be accurate.

Synopsis

A Mechanic tasked with a 1.5 hour C208 deadhead flight felt ill, developed an intoxicated feeling, a sore throat, burning sinus and headache following prolonged TKS fluid exposure during the flight.
ACN: 1181675 (37 of 50)

**Time / Day**
- Date: 201406
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference.Airport: TYS.Airport
- State Reference: TN

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility: Thunderstorm
- Light: Night

**Aircraft**
- Reference: X
- Aircraft Operator: Fractional
- Make Model Name: Gulfstream G200 (IAI 1126 Galaxy)
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Phase: Landing
- Route In Use: Visual Approach

**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 Not Flying
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- ASRS Report Number.Accession Number: 1181675
- Human Factors: Fatigue

**Person: 2**
- Reference: 2
- 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: 1181679
- Human Factors: Fatigue
- Human Factors: Situational Awareness

**Events**
- Anomaly.Deviation - Procedural: Published Material / Policy
- Anomaly.Inflight Event / Encounter: CFTT / CFIT
During the landing phase after a 12 hr + day of duty and this being the 5th leg. I was acting as the PM. We got cleared for the visual approach. Both of us had the field insight and got set up for the pattern maneuver. My partner was the PF. As we maneuvered on the base leg I started noticing that we were getting a little low on altitude. Field elevation was 1,000 FT. My partner had set 1,500 FT on the Altitude Selector on the Flight Director as the AutoPilot was engaged. Suddenly the Tower Controller queried us about our altitude and advised us that MSA in that area is 2,100 FT. My partner immediately commenced a climb back to pattern altitude, as I asked the Controller for the current altimeter setting. Landing was uneventful. No GPWS warning was ever issued by the aircraft system. I definitely believe that fatigue played a major role in this case. It was the last leg of a very long day and also visual approach to a night landing. In the future I would ask ATC for vector to the instrument procedure to add additional assistance into the equation. Also will make sure we double check as a crew the pattern altitude during our approach briefing.

I didn't realize I was fatigued. While cleared for visual I kept autopilot on and descended to pattern altitude so I thought. I set altitude alerter to 1,500 FT for a visual, but didn't factor in airport elevation. I didn't like the way airport looked to my expectations of what base leg should look like, so I started a climb. ATC said low altitude alert right after that and we landed normally no GPWS etc.

G200 flight crew reports getting very low during a night visual approach after a 12 hour duty day and five legs. The Captain recognizes that he is only 500 FT above the field elevation at the same time the Tower issues a low altitude alert.
**ACN: 1180378** (38 of 50)

**Time / Day**

Date: 201406  
Local Time Of Day: 1801-2400

**Place**

Locale Reference.Airport: CMH.Airport  
State Reference: OH  
Altitude.AGL.Single Value: 0

**Environment**

Flight Conditions: VMC  
Light: Night

**Aircraft**

Reference: X  
ATC / Advisory.TRACON: CMH  
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: FMS Or FMC  
Nav In Use: GPS  
Nav In Use.Localizer/Glideslope/ILS: Runway 28L  
Flight Phase: Landing

**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: 1180378  
Human Factors: Confusion  
Human Factors: Distraction  
Human Factors: Fatigue  
Human Factors: Communication Breakdown  
Communication Breakdown.Party1: Flight Crew  
Communication Breakdown.Party2: ATC

**Person : 2**

Reference: 2  
Location Of Person.Aircraft: X  
Location In Aircraft: Flight Deck  
Reporter Organization: Fractional  
Function.Flight Crew: Captain
Landing on CMH Runway 28L without landing clearance. On approach we were being vectored for the ILS 28L in VMC conditions. CMH Approach Control was issuing headings and various speed reductions before final approach fix. The last ATC communications to us were "cleared for ILS 28L approach." We flew the approach uneventfully and upon landing, and exiting the runway at A7 high speed, queried ATC if we should contact Ground Control. The Controller on frequency stated that we were transmitting on Approach frequency. This is when we realized that we did not/were never instructed to contact Tower Controller and we had just landed without landing clearance. We contacted Ground Controller and he gave us a vague clearance to taxi to the ramp. Due to multiple taxiway closures in the vicinity of our taxi route we confirmed our taxi clearance and proceeded to ramp uneventfully. Once on the ramp and parked we had a short conversation with Ground Controller about the incident and they did not seem too concerned about it.

Some contributing factors that may have led to this event. We were on duty 6 hours prior to nighttime departure. As [a] crew we discussed after landing how distracting the [Runway] 28L new style bright LED runway and approach lights were. Also infrequent radio transmissions during final approach phase of flight created a sense of security, as a crew we should have been more vigilant and proactive in receiving landing clearance. ATC could be more proactive in assuring pilots contact appropriate controller/frequency.

I told Ground that we were never handed off to the Tower from Approach and he responded with "yes I know, we had you the whole time, its ok." I readback our taxi clearance back and we proceeded to the ramp. The Controller seemed to be OK with it since it was VMC and [there was] no other traffic in the area or on the ground.
Synopsis
A fatigued flight crew landed at CMH during late night operations without clearance. Fatigue and distractions including bright LED approach lights and a lull due to the lack of frequency activity.
Time / Day
  Date: 201405
  Local Time Of Day: 0601-1200

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

Environment
  Flight Conditions: VMC

Aircraft
  Reference: X
  ATC / Advisory.Tower: ZZZ
  Aircraft Operator: Air Taxi
  Make Model Name: Small Transport
  Crew Size.Number Of Crew: 2
  Operating Under FAR Part: Part 135
  Flight Phase: Cruise
  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: Captain
  Qualification.Flight Crew: Commercial
  ASRS Report Number.Accession Number: 1175642
  Human Factors: Fatigue
  Human Factors: Human-Machine Interface

Events
  Anomaly.Deviation - Procedural: Published Material / Policy
  Anomaly.Deviation - Procedural: FAR
  Anomaly.Inflight Event / Encounter: Fuel Issue
  Detector.Person: Flight Crew
  When Detected: In-flight
  Result.Flight Crew: Landed in Emergency Condition
  Result.Flight Crew: Inflight Shutdown
  Result.Flight Crew: Diverted

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

Narrative: 1
Inadequate preflight. Missed the fuel amount on aircraft. Some human factors involved but pilot error is the main factor. Fuel starvation over the airport, both engines failed. Notified ATC of location and problem. Landed on a 2,500 foot runway with max braking. Damage to the plane was 2 main tires blown. Only the pilot was involved.

**Synopsis**

Small Transport aircraft Captain reports departing without checking the fuel, causing both engines to quit enroute. A successful dead stick landing on a 2,500 foot runway is accomplished with only the main gear tires the worse for wear.
**Time / Day**
- Date: 201404
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference.Airport: ZZZ.Airport
- State Reference: US
- Relative Position.Distance.Nautical Miles: 1
- Altitude.MSL.Single Value: 1900

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility.Visibility: 10
- Light: Daylight
- Ceiling.Single Value: 12000

**Aircraft: 1**
- Reference: X
- ATC / Advisory.CTAF: ZZZ
- Aircraft Operator: Fractional
- Make Model Name: Skyhawk 172/Cutlass 172
- Crew Size.Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Personal
- Flight Phase: Final Approach
- Route In Use: Visual Approach
- Route In Use: Direct
- Airspace.Class E: ZZZ

**Aircraft: 2**
- Reference: Y
- ATC / Advisory.CTAF: ZZZ
- Make Model Name: Skyhawk 172/Cutlass 172
- Crew Size.Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Flight Phase: Initial Approach
- Route In Use: Other
- Airspace.Class E: ZZZ

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Fractional
- Function.Flight Crew: Pilot Flying
- Function.Flight Crew: Single Pilot
- Qualification.Flight Crew: Instrument
- Qualification.Flight Crew: Private
Experience.Flight Crew.Last 90 Days : 24
Experience.Flight Crew.Type : 146
ASRS Report Number.Accession Number : 1165981

Human Factors : Confusion
Human Factors : Fatigue

Events
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Miss Distance.Horizontal : 250
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Became Reoriented

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

Narrative: 1
I mistakenly flew the pattern for Runway 1, while making radio calls for Runway 19. Another plane was in the pattern for Runway 19. Both traffic patterns are on same side of Runway (left traffic for 19, right traffic for 1). As such, the other plane and I passed each other at the same altitude, going opposite direction, about 200 feet apart. I was clearly too fatigued and not concentrating sufficiently on the flight. I regret this close call and will be much more focused from now on.

Synopsis
C172 pilot reports a NMAC with another pilot in the traffic pattern due to mistakenly entering right traffic for Runway 1 while attempting to join left traffic for Runway 19.
**ACN: 1151237 (41 of 50)**

**Time / Day**
- Date: 201402
- Local Time Of Day: 1801-2400

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

**Environment**
- Light: Night

**Aircraft**
- Reference: X
- Aircraft Operator: Fractional
- Make Model Name: Citation Excel (C560XL)
- Operating Under FAR Part: Part 135
- Flight Phase: Parked
- Maintenance Status.Maintenance Deferred: N
- Maintenance Status.Records Complete: N
- Maintenance Status.Released For Service: Y
- Maintenance Status.Maintenance Type: Scheduled Maintenance
- Maintenance Status.Maintenance Items Involved: Installation
- Maintenance Status.Maintenance Items Involved: Testing
- Maintenance Status.Maintenance Items Involved: Work Cards
- Maintenance Status.Maintenance Items Involved: Inspection

**Component : 1**
- Aircraft Component: Elevator Trim System
- Manufacturer: Cessna
- Aircraft Reference: X
- Problem: Malfunctioning

**Component : 2**
- Aircraft Component: Elevator Tab
- Manufacturer: Cessna
- Aircraft Reference: X
- Problem: Malfunctioning

**Component : 3**
- Aircraft Component: Elevator Control System
- Manufacturer: Cessna
- Aircraft Reference: X
- Problem: Malfunctioning

**Person**
- Reference: 1
- Location Of Person: Hangar / Base
Narrative: 1

February 2014, Maintenance Technicians X and Y performed replacement of Left and Right Elevator Trim Tab actuators with new units. After installation, it was noted the Trim Tabs were not making full travel 'Nose-Up'. Due to lateness near end of shift, the Line Item was Short-Signed that the actuators had been removed and replaced, but was not making the correct travel and that the trim cables required rig, tension and safety after adjustments were made. I, Inspector X, Short-Signed the inspection portion of the Line Item. The Line Item remained open for continued entries. The next day, Dayshift personnel Technician-Z, signed-off that rig tension and safety of the trim cable, trim travels were within limits, the No-Takeoff Test was accomplished and the Aft baggage compartment ceiling was reinstalled and was inspected and the Line Item signed-off by Inspector-Y.

In addition, in separate Line items, the actuators were lubricated by Maintenance Technician-A and the Left-Hand (LH) Vertical Stabilizer panel reinstalled by Maintenance Technician-B and both Inspected by Inspector-Y and these Line items were signed-off. Four days later during preflight, the Flight Test crew alerted Maintenance to the control yoke feeling light backpressure. Investigation revealed the elevator bell crank spring was not connected. It was this, the Flight Test crew member had felt as light. The spring was reconnected on a new Work Order (W/O). It was determined that an Elevator Travel Check was required and this was accomplished on a separate Work Order. The LH Elevator was found to need two degrees of adjustment to reach 'Neutral'. This was accomplished and the Line Item was closed.
Evidently, the method used to remove the elevators to gain access to the Elevator Trim Tab actuators was not from the Maintenance Manual (M/M). I do not believe the pushrod to the elevator horns were disturbed and the elevator hinge bolts were removed to allow the elevator to be lifted sufficiently to gain access to the actuators. Even so, I inspected the safeties from the right aft side of the Vertical Stabilizer with an inspection mirror and was not aware of the removed LH Stabilizer panel. Line items should have been used to state that the spring was removed and that travels of the elevator were required so that later shift personnel would have seen this.

**Synopsis**

An Aircraft Maintenance Inspector reports an Elevator Bell crank spring was found not re-connected after the left and right Elevator Trim Tab actuators were replaced on a Cessna CE-560XL aircraft. Flight Test crew had noted a lighter than usual control yoke backpressure during their Pre-flight Check. Improper maintenance also noted by Inspector.
ACN: 1130027 (42 of 50)

Time / Day
Date: 201311
Local Time Of Day: 1801-2400

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

Aircraft
Reference: X
Aircraft Operator: Air Taxi
Make Model Name: Jet/Long Ranger/206
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 135
Mission: Ambulance
Flight Phase: Cruise
Maintenance Status.Released For Service: Y
Maintenance Status.Maintenance Type: Scheduled Maintenance
Maintenance Status.Maintenance Items Involved: Installation
Maintenance Status.Maintenance Items Involved: Inspection

Component
Aircraft Component: Helicopter Gearbox Drive Shaft
Manufacturer: Rolls Royce (Allison)
Aircraft Reference: X
Problem: Malfunctioning

Person: 1
Reference: 1
Location Of Person: Hangar / Base
Reporter Organization: Air Taxi
Function.Maintenance: Inspector
Function.Maintenance: Technician
Qualification.Maintenance: Inspection Authority
Qualification.Maintenance: Airframe
Qualification.Maintenance: Powerplant
Experience.Maintenance.Inspector: 13
Experience.Maintenance.Technician: 16
ASRS Report Number.Accession Number: 1130027
Human Factors: Communication Breakdown
Human Factors: Fatigue
Human Factors: Workload
Human Factors: Time Pressure
Human Factors: Distraction
Communication Breakdown.Party1: Maintenance
Communication Breakdown.Party2: Maintenance
Analyst Callback: Completed
**Person : 2**

Reference : 2  
Location Of Person : Hangar / Base  
Reporter Organization : Air Taxi  
Function.Maintenance : Technician  
Qualification.Maintenance : Powerplant  
Qualification.Maintenance : Airframe  
Experience.Maintenance.Techinician : 10  
ASRS Report Number.Accession Number : 1129761  
Human Factors : Communication Breakdown  
Communication Breakdown.Party1 : Maintenance  
Communication Breakdown.Party2 : Maintenance

**Person : 3**

Reference : 3  
Location Of Person : Hangar / Base  
Reporter Organization : Air Taxi  
Function.Maintenance : Technician  
Function.Maintenance : Inspector  
Qualification.Maintenance : Airframe  
Qualification.Maintenance : Powerplant  
Qualification.Maintenance : Inspection Authority  
Experience.Maintenance.Inspector : 3  
Experience.Maintenance.Techinician : 13  
ASRS Report Number.Accession Number : 1130445  
Human Factors : Communication Breakdown  
Communication Breakdown.Party1 : Maintenance  
Communication Breakdown.Party2 : Maintenance

**Person : 4**

Reference : 4  
Location Of Person : Hangar / Base  
Reporter Organization : Air Taxi  
Function.Maintenance : Lead Technician  
Function.Maintenance : Inspector  
Experience.Maintenance.Inspector : 3  
Experience.Maintenance.Lead Technician : 15  
Experience.Maintenance.Techinician : 20  
ASRS Report Number.Accession Number : 1129236  
Human Factors : Communication Breakdown  
Communication Breakdown.Party1 : Maintenance  
Communication Breakdown.Party2 : Maintenance

**Events**

Anomaly.Aircraft Equipment Problem : Critical  
Anomaly.Deviation - Procedural : Maintenance  
Detector.Person : Flight Crew  
Were Passengers Involved In Event : N  
When Detected : In-flight  
Result.General : Flight Cancelled / Delayed  
Result.General : Maintenance Action  
Result.Flight Crew : Landed As Precaution
Assessments

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

Narrative: 1

The Bell 206L aircraft had been in an FAR 135-Heavy Maintenance facility where it had the transmission replaced. It was released as airworthy and after approximately 50-hours flight time, the flight crew heard an unusual noise and the pilot made a precautionary landing.

The Base Mechanic was dispatched to the aircraft where he performed a visual inspection and couldn't find any obvious source of the noise. The pilot and Mechanic flew the aircraft back to base; the noise was not present for the flight back. While the Mechanic was investigating a transmission oil leak back at the [Maintenance] Base, he discovered the bolts attaching the Main Drive Shaft to the transmission were loose.

I believe a contributing factor was failure by the installing Mechanic to complete the installation of the fasteners [bolts] before moving to a different step of the job. I believe human factors involved in this incident are fatigue, complacency, and the pressure by Management to maintain a high tempo of production at their Heavy Maintenance facilities.

The company's 135-Heavy Maintenance was restructured just over a year ago. The 135-Heavy Maintenance of approximately 118 aircraft had been divided between X number of Heavy Maintenance bases, but now down to four. The scope of work now is more what you would expect at a 145-repair facility, which the company has, but the [remaining] 145-repair facilities can't keep up with company needs. Work at this facility is being performed 14-hours a day using split shifts; and 365 days a year using two crews of four mechanics, each crew working seven days 'on', seven days 'off' hitches. At this facility, there are only seven mechanics instead of the full crew of eight. Out of the seven mechanics, four are housed in living quarters in the hangar during their hitch. This facility is also used for 'after' hours parts support for 25 of the company's field bases. This facility is located on a regional airport approximately 100 yards from the runway and with a four lane highway approximately 30 yards on the other side and directly on a tarmac for a flight school and business jets. So it is difficult to get proper rest. This along with the increased work load and high production tempo leads to a chronic, low to mid level of constant fatigue.

I think a corrective action might be to put in place a Quality Assurance (Q/A) Department whose sole job is to 'Buy Off' on Flight Safety Critical maintenance procedures before the maintenance can even proceed. And also move the living quarters offsite.

The current procedure in place is the mechanic performing an install, prints out the install procedures from the Maintenance Manual (M/M) and initials each step. If he has to stop the job for any reason he puts a red mark after the last step he completes. The mechanic that resumes the job whether it is another mechanic or himself has to go back and verify [that] the three steps before the red line have been completed, before he can proceed. The Maintenance Records do not require the initials or signature of another mechanic on a Flight Safety Critical step of a job before proceeding. The suggested practice is to get
someone else to look the job over, but is not required to be documented in any way.

I was not the installing mechanic, but I initialed one block of an Approved Aircraft Inspection Program (AAIP) Checklist for the Main Drive Shaft area. Since the inspection form block doesn't require a date, I cannot prove I performed a visual inspection of the drive shaft before it was known the aircraft needed the transmission replaced; so I am self disclosing.

**Callback: 1**

Reporter stated he had previously worked for an airline, but the company he works for now does not actually have an Inspection Department similar to what FAR 121 Operators have. Although they have procedures for Safety Critical components, those procedures do not work. The attaching bolts for the Main Drive Shaft from the Engine Gearbox to the Transmission were found loose where the shaft connects to the transmission; the transmission then drives the Main Rotor Assembly. Currently, the lack of an Inspection Department that actually acts as 'Second Set of Eyes' and has a block to sign-off for the inspection, including an entry date for when the work was accomplished would help. No training is provided to mechanics acting as a 'Second Set of Eyes'. The helicopter with the loose drive shaft bolts had two preflight checks each day by pilots with daily flight checks by Maintenance and still the loose bolts were missed. Since the discovery of the loose bolts, more paperwork has been put in place for mechanics to sign-off, but no real Inspection Department has been created.

Reporter stated they work 12-hour shifts, seven days straight. They live and sleep in a small room with bunk beds with fuel fumes. Due to the distance from home that many mechanics drive from and the time to commute on a daily basis to the Maintenance Base, most mechanics elect to just stay on-site. They have two pilots, each doing 12-hour shifts, but their living quarters are off-site. A better facility and more rest would go a long way to improving maintenance.

**Narrative: 2**

It has come to my attention that a Bell 206L helicopter, Aircraft X, had reported a loss of torque on hardware pertaining to the K-Flex Main Drive Shaft. I was a participating mechanic on a large scope of work on this aircraft, but to the best of my recollection was not involved in the removal and installation of the Transmission Drive Shaft. I believe Maintenance Procedure Cards with Quality Assurance (Q/A) signature blocks would be better suited for the type and scale of maintenance being performed.

**Narrative: 3**

I was part of the team that worked on Aircraft X, a Bell 206L, during an [approximate] seventeen day maintenance event in October 2013 and was informed weeks later, that approximately 40 hours after the helicopter left our shop, that the Field Mechanic discovered the transmission input side of the Main Drive Shaft (K Flex STC) had loss of torque on two of the four drive shaft bolts. I personally have not seen the loss of torque of these bolts in the past. My belief to help prevent a recurrence of this is a 10-25 hour re-torque requirement [of the drive shaft bolts] till the torque stabilizes.

**Narrative: 4**

I was involved in maintenance process in where 50 hours after aircraft was returned to service, the forward end of driveshaft, a bolt was found loose. I verified and signed part of the Maintenance printout for transmission installation in which another Technician had done work. In verifying work I did not put a wrench on all items just a visual inspection.
Factors that might have caused incorrect torque: lack of adequate nut drag or one [nut] might have gotten missed. In future, prior to signing other work blocks, will check work for torque or watch process.

Synopsis

Four Aircraft Maintenance Technician (AMT) reports about working conditions at an FAR 135 repair facility that included fatigue, complacency, the lack of an Inspection Department and the lack of adequate maintenance procedures that eventually led to one of their pilot's performing a precautionary landing of a Bell 206L helicopter.
**ACN: 1120923** (43 of 50)

**Time / Day**
- **Date**: 201310
- **Local Time Of Day**: 1801-2400

**Place**
- **Locale Reference. Airport**: SDM
- **State Reference**: CA
- **Altitude.MSL.Single Value**: 10600

**Environment**
- **Flight Conditions**: VMC
- **Light**: Night

**Aircraft**
- **Reference**: X
- **ATC / Advisory.TRACON**: SCT
- **Aircraft Operator**: Fractional
- **Make Model Name**: Cessna Citation Sovereign (C680)
- **Crew Size.Number Of Crew**: 2
- **Operating Under FAR Part**: Part 91
- **Flight Phase**: Climb
- **Airspace.Class E**: SCT

**Component**
- **Aircraft Component**: Integrated Audio System
- **Problem**: Improperly Operated

**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**: 1120923
- **Human Factors**: Communication Breakdown
- **Human Factors**: Fatigue
- **Communication Breakdown.Party1**: Flight Crew
- **Communication Breakdown.Party2**: ATC

**Events**
- **Anomaly.ATC Issue**: All Types
- **Anomaly.Deviation - Altitude**: Overshoot
- **Anomaly.Deviation - Procedural**: Published Material / Policy
- **Detector.Person**: Air Traffic Control
- **When Detected**: In-flight
Preflight and taxi were standard and uneventful. Our clearance involved departure on Runway 26R from San Diego's Brown (Brown) Municipal Airport SDM with published obstacle departure procedure. After SIC [announced] departure on CTAF frequency, initial climbout radio communications transitioned to me as pilot not flying. I was very active in continuing to scan outside in those initial moments after liftoff. For some undetermined reason, when I looked to Comm 2 VHF radio I believed the radio was now already switched to SCT Departure Control (ATC), and checked in. My belief was reinforced by the fact that ATC responded to my call by identifying themselves and issuing a vector as I verified climbing to 4,000 FT. There was an anomaly to sort out in the cockpit as the SIC indicated he could not hear ATC. ATC then issued a further clearance to climb and for lateral navigation. I read back the clearance issued that included "...climb and maintain 11,000 FT." The SIC later verified he had heard me read back 11,000 FT though he was still not hearing ATC. In the climb between 4,000 and 11,000 ATC discovered I had been communicating with them on Brown airport's CTAF frequency 128.25 and asked me to switch to 119.6 where we quickly reestablished communication with each other with the standard check-in procedure. Somewhere along this time period the SIC indicated he is now hearing ATC as well. While climbing and near 10,000 FT, ATC queried us as to what altitude we were climbing to. I responded: "...11,000 FT." ATC then said we were cleared to 10,000 FT, whereby the SIC made an immediate but smooth level off response commensurate with the fact we had passengers in back. In the post flight briefing, the SIC and I recall rounding the top of the level-off correction at approximately 10,600 FT. When we were stable at 10,000 FT I made a query with ATC indicating that I recalled having read back 11,000 FT on the climb altitude portion of the clearance. There was no real response to that other than ATC’s reestablishing current altitude assigned of 10,000 FT. There was no other traffic conflict in the area and apparently low air traffic volume in the region. There was no request for us to make a telephone call after the flight and we were later transferred to other ATC frequencies down the line with no further events.

There are human factors regarding the day's schedule that are material. The altitude event occurred at twelve hours and thirty minutes (12:30) of duty already served in that work day. We were on the fifth of five (5) legs assigned at the beginning of the work day and approaching midnight local time. Providing a highly varied and dynamic flying service, the first leg in the day started well into a two-hour scheduled slide; and on our fifth leg--containing the events that are the subject of this report--our passengers were late, as is common and part of the corporate service we provide. However, it all takes its toll. We concluded the day at thirteen hours and thirty-six minutes of duty, while still enroute to a hotel not local in nature. As a crew we both believed that I had read back 11,000 FT and that I was not corrected if indeed we had been cleared to 10,000 FT. Indeed, 10,000 FT was our filed cruise altitude. When in any doubt of a clearance altitude I would query the controller per SOPs. There were multiple anomalies of communication radio management, crew communication, and apparently not being corrected by ATC on altitude readback. Time was compressed and the normal query was not made in time. It is my professional opinion that for our part it was not the lack of a desire to do a good and professional job,
but the onset of fatigue as a result of the day’s schedule that was the overriding factor in the events occurring that are the subject of this report.

**Synopsis**

CE680 Captain reports a communication mixup departing SDM late at night after a long duty day. Several radio communications to ATC are attempted and apparently completed using the CTAF while listening on the ATC frequency. The crew believes the assigned altitude is 11,000 FT and ATC stating 10,000 FT, resulting in an altitude deviation.
Time / Day
Date: 201308
Local Time Of Day: 1801-2400

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Relative Position.Distance.Nautical Miles: 2
Altitude.AGL.Single Value: 300

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

Aircraft
Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Air Taxi
Make Model Name: Diamond Aircraft Undifferentiated or Other Model
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Route In Use: Visual Approach
Airspace.Class C: ZZZ

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: Multiengine
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 2421
Experience.Flight Crew.Type: 407
ASRS Report Number.Accession Number: 1112901
Human Factors: Fatigue

Person: 2
Reference: 2
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Narrative: 1

On an empty leg to pick up a medical team and patient late at night, I inadvertently landed on the wrong runway. I was pilot flying at the time, and when we heard enroute from Approach Control the runway in use, I thought I heard 17R. So from then on I was fixated on the right side. The Captain (pilot not flying), did not hear 17R, but correctly heard 17L, so started setting up for that runway, backing up the instruments to track the localizer and glideslope, even though it would be a visual approach. We both were tired, and felt rushed as usual, so the Captain did the approach briefing instead of me. As we got within approximately 10 NM of the airport we saw the beacon, and called the airport in sight. The Controller then cleared us for the visual to 17L, but I again thought I heard 17 Right. I continued descending for the right side, and even though I noticed that the glideslope and localizer were acting funny, I was too tired to register what the issue was. The Captain was also exhausted, having been up all day long as well, so when I mentioned the issue, he agreed that something was strange with the instruments, but was not able to figure it out. Since our aircraft has a history of Instrument issues, we didn't worry about it further. As I continued towards the runway, we switched to Tower, who cleared us to land on 17L. I again did not notice the Left, and still continued lining up for 17R. When I was within 2 NM of the threshold to 17R, the Controller apparently realized our error and quickly cleared us to land on 17R. We read back the clearance, and that is when it dawned on the Captain and I that something was wrong. I continued and landed without incident, and taxied to the FBO, without further mention of an issue from the Tower or Ground Control.

Luckily there was no other traffic in the area, both on the ground and in the air. Obviously this situation could have been much worse, we were simply lucky that our fatigue did not cause a worse issue. This is the first major issue I have experienced, and consider it to be because of the inherent fatigue that is caused from a 24 hour on call schedule of the air ambulance industry. I have lost track of the number of times I have been fatigued, but have chosen to fly anyways because I am locked into an extremely punitive monetary contract with my air ambulance company. I was told by my Chief Pilot that if I called in
fatigued, it would be ok once, but more than that, and I would be looking for another job. I cannot afford the monetary hit I would take if I quit, but I am way past my personal line of safety. Being called out at 9-10 pm for an all-nighter and flying until 10-11 am (after having been up all day) causes instant fatigue. This type of schedule must not be allowed to continue before something much worse happens.

**Narrative: 2**

Having the airport in sight the Approach Controller had cleared us for a visual approach to 17L. I had programmed the ILS 17L into the box and we had discussed the approach setup with the Copilot who was flying. In this aircraft you can’t set up the captains side for the approach until you are on vector headings or it confuses the navigation/autopilot system. So after going to vectors, you must dial in the frequency, course heading and make some changes in the GPS to activate the approach. I had been heads down doing this and as I looked up the Copilot was rolling out on final. We were both wondering why we were getting erroneous errors from the glide slope and the localizer was to the left. About the time this all made sense, the Tower Controller told us we were cleared to land on 17R. We landed and in the discussion later, the Copilot told me he knew he was landing on 17R, that’s what he thought we had been cleared for, yet I remember going over and restating, ILS set for 17L, and cleared for 17L. There was no other traffic in the area, so it posed no conflict with other traffic. The airport runway lighting was almost invisible, until you were lined up with them, making it more difficult to see the entire airport. I attribute this primarily on my part to fatigue. I was very tired, as we often are on this job. The flight crews are typically scheduled on call for 24 hrs for 5 days straight, (or more) and you never know when you can rest. You could be up all day, and when you are going to be get called for a 14 hour trip. It's not unusual to be up for 25 to 30 hours getting back from a trip.

**Synopsis**

Air Ambulance crew reports being cleared for the visual approach to Runway 17L but the flying First Officer believes that 17R is the clearance and continues to believe so until short final when the Tower changes the clearance to 17R. Extreme fatigue was cited as a factor by both pilots.
ACN: 1110489 (45 of 50)

Time / Day
Date: 201310
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 17000

Environment
Weather Elements / Visibility: Icing
Weather Elements / Visibility: Rain
Weather Elements / Visibility: Turbulence
Light: Dawn
Ceiling.Single Value: 13000

Aircraft
Reference: X
ATC / Advisory.Center: ZZZ
Aircraft Operator: Air Taxi
Make Model Name: King Air C90 E90
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Flight Phase: Climb
Route In Use: Direct
Airspace.Class A: ZZZ

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Taxi
Function.Flight Crew: Single Pilot
Function.Flight Crew: Captain
Qualification.Flight Crew: Multiengine
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Air Transport Pilot (ATP)
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 9000
Experience.Flight Crew.Last 90 Days: 25
Experience.Flight Crew.Type: 3500
ASRS Report Number.Accession Number: 1110489
Human Factors: Distraction
Human Factors: Fatigue
Human Factors: Situational Awareness
Human Factors: Workload
Human Factors: Communication Breakdown
Communication Breakdown. Party 1: ATC
Communication Breakdown. Party 2: Flight Crew

Events
Anomaly. Deviation - Altitude: Overshoot
Anomaly. Deviation - Procedural: Clearance
Detector. Person: Air Traffic Control
Were Passengers Involved In Event: N
When Detected: In-flight
Result. Air Traffic Control: Issued New Clearance

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

Narrative: 1

Upon reaching 16,000 FT level off was initiated. The altitude alerter had been wrongly set to 17,000 FT. At that point rather than check with ATC, the plane was allowed to continue up to 17,000 FT, 1,000 FT high. There was no traffic in the area. ATC asked if 17,000 FT worked. After we replied "yes," the flight was continued at 17,000 FT.

This was a last minute unscheduled medical flight at the end of several shifts in a row. The week preceding involved commercial flights out of state to transfer an aircraft from Boise to Moline. It also involved early and late flights with last minute schedule changes. There were repeated changes from day to night [operations] and no certainty of when time off would occur. While [legal] duty rest was always met, due to circadian rhythm upset, sleep was not always possible or productive.

Air medical may need tighter definitions of when duty starts. Also there could be limits set on how often day to night shift changes can occur during a given time span along with what constitutes Part 91 after a 14 hour day then a trip back to base? Some pilots are subject to 24 hour 7 day a week call with duty starting when called and Part 91 when the patient is not on board, leading to shifts in excess of 18 hours.

Synopsis
Fatigue, as a result of erratic scheduling practices, may have contributed to an altitude deviation for a single pilot King Air ambulance Captain.
Time / Day
Date: 201305
Local Time Of Day: 0001-0600

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.AGL.Single Value: 800

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

Aircraft
Reference: X
ATC / Advisory.CTAF: ZZZ
Aircraft Operator: Air Taxi
Make Model Name: EC 135
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Ferry
Flight Phase: Cruise
Route In Use: Direct
Airspace.Class G: 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: Instrument
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Flight Instructor
Experience.Flight Crew.Total: 3200
Experience.Flight Crew.Last 90 Days: 40
Experience.Flight Crew.Type: 326
ASRS Report Number.Accession Number: 1103644
Human Factors: Fatigue

Events
Anomaly.Other
Detector.Person: Flight Crew
Were Passengers Involved In Event: Y
When Detected: In-flight
Result: General: None Reported / Taken

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

Narrative: 1

While on the Part 91 leg (repositioning flight), I was the PIC of [Company] EC135. This was the second "mission" of the evening in which I had flown 6+ hours and did not have a rest period between. At this time [Company] had no line pilots and I was the Chief Pilot. The Director of Operations had advised me that we were on a 24/7 on-call basis approved with our POI. I was instructed that if a call would be taken I had to have 10 hours rest before the next flight or I had to accomplish multiples of flights within 14 hours and then take a 10 hour required rest period under FAR part 135 rules; however a refueling or repositioning leg was to fall under FAR part 91 rules. While on my "off" time I was required to train new-hire pilots from the hours of XA:00 am to XH:00 pm. On the day prior to the occurrence I was prepping new pilot records in preparation for their arrival. I was asked to do this on my time "off" and not "sign in" until a flight was activated. That evening we were activated for one flight that was accomplished and unremarkable, followed by a second flight that was accomplished under FAR part 135 with no issue. We were on the Part 91 leg repositioning the aircraft back to base. This flight had clear VMC weather and no ceiling. The flight originated during the hours of the night and during the Part 91 leg had become daylight. It was during this leg while the autopilot was engaged for a direct GPS route at approximately 800 FT AGL that I found myself fatigued during flight. I typically carry an energy drink in my flight suit; however I had taken it earlier during the first flight of that night. I noticed that I was fatigued and would open the pilot's side window and would vent air onto my face to remain alert.

I realize that flying while fatigued is a safety risk. I should have landed the aircraft at the closest airport and taken a rest period before continuing to fly home. I believe that helicopter EMS should only be flown under part 135 rules every leg. I also feel that in order to prevent fatigue in the future no MedEvac operation should be allowed to operate with a single pilot on a 24/7 on-call basis. I also feel Medical crewmembers should be essential in ensuring that a pilot is not fatigued. Asking questions, interacting, becoming a part of the crew versus sleeping themselves in the cockpit.

Synopsis
EMS Helicopter pilot contends that his company's policy of operating under both FAR Part 91 and Part 135 subverts crew rest requirements and leads to crew fatigue.
ACN: 1099042 (47 of 50)

Time / Day
Date: 201307
Local Time Of Day: 1801-2400

Place
Locale Reference.Airport: TEB.Airport
State Reference: NJ
Altitude.MSL.Single Value: 1700

Environment
Flight Conditions: VMC
Weather Elements / Visibility. Visibility: 5
Light: Daylight
Ceiling.Single Value: 4000

Aircraft
Reference: X
ATC / Advisory.TRACON: N90
Aircraft Operator: Corporate
Make Model Name: Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Passenger
Flight Phase: Climb
Route In Use.SID: RUUDY 4 RNAV
Airspace.Class B: EWR

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 Not Flying
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Total: 10900
Experience.Flight Crew.Last 90 Days: 80
Experience.Flight Crew.Type: 1600
ASRS Report Number.Accession Number: 1099042
Human Factors: Situational Awareness
Human Factors: Fatigue
Human Factors: Confusion

Person: 2
Reference: 2
Location Of Person.Aircraft: X
I was Captain, sitting right seat as the pilot not flying. I briefed the RUUDY 4 RNAV departure to the pilot flying. He disagreed with me concerning the initial altitude to which I had set our autopilot. He felt that we were required to maintain at or below 1,500 FT MSL to WENTZ, and to cross WENTZ at 1,500 FT MSL, so that the initial autopilot altitude to be set in the box should have been 1,500 FT. I felt that the altitude restriction of 2,000 FT MSL or as directed by ATC was the governing restriction. Ultimately, although he was still not certain, the pilot flying deferred to me and we set 2,000 FT MSL as the initial altitude hold for the autopilot. After takeoff, we attempted to comply with the noise abatement procedure for TEB. We were climbing steeply. We had climbed to 1,500 FT MSL about one mile before we reached WENTZ and continued our climb. When we reached approximately 1,700 FT MSL, ATC called and advised that we have stopped our climb at 1,500 FT. The pilot flying immediately took the yoke and began a descent, but our momentum carried us to about 2,000 FT before we actually started back down.

In thinking about why I may have been confused about a procedure that I have flown correctly many, many times before, I believe that I was fatigued and hungry (possibly hypoglycemic). I awoke at about XA00 to catch an airline flight which was scheduled to depart at XE06. The flight was delayed and actually did not depart until approximately XJ40. We arrived at LGA at approximately XN00. We then had to take a taxicab to TEB, which took about an hour. We then had to change the flight plan, pre-flight the aircraft, load passengers, brief and depart. Our actual departure was a little more than 15 hours after I had awakened. Also, I had only had a small sandwich for breakfast at XD00, and a small part of a sandwich at approximately XP00, as my total food intake for the day.
Other members of our flight department, and I, have, on numerous occasions advised our owner that we wish to avoid fatigue in these situations, and he has consistently refused to airline us up the day prior to his planned trips and to put us up in a hotel. He has only authorized same day airline, usually by the least-expensive carrier. In the past, this has not resulted in any significant problems. But, it seems that this time, it may have. Because the pilot not flying was younger than I, with less total time, and because I was the "Captain", I feel that he deferred to me, even though he knew I was not correct. Neither of us thought to call ATC to resolve the confusion. This may be due to the fact that we were both fatigued and anxious to get home. I intend to go with my other pilots for additional refresher training in CRM to make sure that my other pilots feel comfortable countermanding any incorrect actions I may take. In addition, I intend to speak with my owner to insist that he provide us with necessary crew rest procedures to avoid fatigue. It is quite difficult, especially in a Part 91 situation, for a crew member to walk away from a flight, or from a job, if the owner refuses to adhere to safety considerations. It would be helpful if, under such situations, where the owner is advised of an unsafe condition, and refuses to address it, the FAA would file a notice of civil penalty against the owner, so that the owner, and not just the crew, has a stake in the outcome.

**Narrative: 2**

I was sitting left seat as the pilot flying. I am a Captain, but a more-senior Captain was sitting right seat as the pilot not flying. We were briefing the RUUDY 4 RNAV departure. I disagreed with the pilot not flying concerning the initial altitude to which he had set our autopilot. I felt that we were required to maintain at or below 1,500 FT MSL to WENTZ, and to cross WENTZ at 1,500 FT MSL, so that the initial autopilot altitude to be set in the box should have been 1,500 FT. The pilot not flying felt that the altitude restriction of 2,000 FT MSL or as directed by ATC was the governing restriction. Ultimately, although I was still not certain, I deferred to my more-senior Captain and we set 2,000 FT MSL as the initial altitude hold for the autopilot.

After takeoff, we attempted to comply with the noise abatement procedure for TEB. We were climbing steeply. We had climbed to 1,500 FT MSL about one mile before we reached WENTZ and continued our climb. When we reached approximately 1,700 FT MSL, ATC called and advised that we were supposed to have stopped our climb at 1,500 FT. I immediately took the yoke and began a descent, but our momentum carried us to about 2,000 FT before we actually started back down.

I awoke at about XA00 to catch an airline flight which was scheduled to depart at XE06. The flight was delayed and actually did not depart until approximately XJ40. We arrived at LGA at approximately XN00. We then had to take a taxicab to TEB, which took about an hour. We then had to change the flight plan, pre-flight the aircraft, load passengers, brief and depart. I feel that this may have made me less likely to have argued with the more-senior Captain about the interpretation of the approach plate. It also may have contributed to my reluctance to spend the time and the energy speaking with ATC to try to resolve the dispute about the proper interpretation of the SID, even though I felt strongly that my interpretation was correct.

Even though I know from my CRM training that I need to countermand a more-senior member of the flight crew if I am certain that he or she is incorrect, I feel that I was hesitant to do so in this case due to my respect for the more-senior Captain and my fatigued state.

**Synopsis**
Corporate jet flight crew reports a disagreement over the proper altitudes to fly on the RUUDY 4 departure from TEB, with the junior Captain deferring to the senior Captain. WENTZ is crossed above 1,500 FT climbing to 2,000 FT and noted by ATC.
Time / Day
Date: 201306
Local Time Of Day: 1201-1800

Place
Locale Reference.ATC Facility: ZZZ.ARTCC
State Reference: US
Altitude.MSL.Single Value: 16000

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Center: ZZZ
Aircraft Operator: Corporate
Make Model Name: Citation Excel (C560XL)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Flight Phase: Climb
Airspace.Class E: ZZZ

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

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Corporate
Function.Flight Crew: Pilot Not Flying
Function.Flight Crew: Captain
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1096325
Human Factors: Distraction
Human Factors: Fatigue

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 Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)

ASRS Report Number: Accession Number: 1096438

Events

Anomaly: Aircraft Equipment Problem: Critical
Detector: Person: Flight Crew
When Detected: In-flight
Result: General: Declared Emergency
Result: Flight Crew: Returned To Departure Airport

Assessments

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

Narrative: 1

The aircraft that I was in command of had a MEL for the cabin door light which had been written up by me. I read the operational procedures of the MEL at the time it was written up (approximately 1.5 hrs before takeoff.) We took off as scheduled and flew initially an assigned heading of 090 degrees. We were given various step climbs and were eventually cleared to 16,000 FT. As we passed through approximately 15,000 FT the CAB ALT annunciator came on with the Master Warning. Required memory items were completed and passenger was informed to keep their seat belts on and that we had to return to [the departure airport] due to pressurization problem. We asked ATC for a lower altitude and a heading and started our descent and turn. The flight went uneventful back to [the departure airport.] I was distracted and might have missed item number 2 on the operational procedures which could be the reason for the CAB ALT annunciator. Obviously I should have been more focused on the operational procedures. Distraction and a possibility of fatigue that I didn't recognize could have played a factor as well.

Narrative: 2

We were at 15,500 FT we got a CAB ALT and master warning. We performed memory items and asked for a turn and a descent. We ran the checklist and continued back to [the departure airport.] They gave us direct to [the departure airport] and we landed with no problems. MEL'd the ACM after landing.

Synopsis

CE-560XL flight crew experienced a Cabin Altitude warning during climb at 15,000 FT. They declared an emergency and returned to their departure airport.
ACN: 1092489 (49 of 50)

Time / Day
Date: 201306
Local Time Of Day: 0601-1200

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

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.TRACON: ZZZ
Aircraft Operator: Air Taxi
Make Model Name: Caravan 208B
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Cargo / Freight
Flight Phase: Climb
Route In Use: Direct
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
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Multiengine
Qualification.Flight Crew: Air Transport Pilot (ATP)
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Flight Instructor
Experience.Flight Crew.Total: 2450
Experience.Flight Crew.Last 90 Days: 110
Experience.Flight Crew.Type: 55
ASRS Report Number.Accession Number: 1092489
Human Factors: Fatigue
Human Factors: Situational Awareness
Human Factors: Workload
Human Factors: Communication Breakdown
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: ATC

Events
Anomaly.ATC Issue: All Types
Anomaly.Conflict: Airborne Conflict
Anomaly.Deviation - Altitude: Overshoot
Anomaly.Deviation - Procedural: Clearance
Detector.Person: Air Traffic Control
Miss Distance.Horizontal: 7000
Miss Distance.Vertical: 1000
When Detected: In-flight
Result.Flight Crew: Returned To Clearance
Result.Flight Crew: Took Evasive Action

Assessments

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

Narrative: 1

I was climbing with the autopilot, instructed to climb to 10,000 FT when the Approach Controller started nearly yelling at me to descend instantly. When I looked at my altimeter it read 10,200 FT and so I quickly descended to 10,000 FT. He continued to yell, repeatedly telling me to descend to 10,000 FT, even though I informed him multiple times that that's exactly where I was, and he then told me there was traffic descending above me. He accused me of being at 10,500 FT and climbing when I seemed confused as to his demeanor. I'm not sure if he was exaggerating or if the transponder in the airplane was sending faulty information, but I am very sure I was nowhere near 10,500 FT. I was likely still in a slow climb, but with a fully loaded C208B (Caravan) I doubt my climb rate could have been very much.

Again, I'm not sure what he saw on his screen, but I know I was only 200 FT high, not 500. A definite factor here is fatigue. I was fatigued to the point of losing situational awareness and not knowing whether I had reached 10,000 FT because of the schedule I fly 6 days a week, 14 hour days, and flights every morning at 6:30 am local time. I realize the FAA allows 9 hours rest for scheduled Part 135 operations, but I would STRONGLY consider raising that limit. It may be safe for some pilots, but every person has different needs, and instances like this make me realize how dangerous extended schedules that don't allow for much actual sleep can be.

Synopsis

A C208B pilot reported fatigue from long duty days, six days a week and momentarily climbing 200 FT about the 10,000 FT altitude assigned before an Approach Controller urgently demanded a descent.
**Time / Day**

Date : 201304  
Local Time Of Day : 1201-1800

**Place**

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

**Environment**

Flight Conditions : VMC  
Light : Daylight

**Aircraft**

Reference : X  
Aircraft Operator : Air Taxi  
Make Model Name : SA-227 AC Metro III  
Crew Size.Number Of Crew : 1  
Operating Under FAR Part : Part 135  
Flight Plan : IFR  
Mission : Cargo / Freight  
Flight Phase : Parked  
Maintenance Status.Maintenance Deferred : Y  
Maintenance Status.Released For Service : Y  
Maintenance Status.Maintenance Type : Unscheduled Maintenance  
Maintenance Status.Maintenance Items Involved : Inspection

**Component : 1**

Aircraft Component : Cargo Door  
Manufacturer : Fairchild (Swearingen)  
Aircraft Reference : X

**Component : 2**

Aircraft Component : Door Warning System  
Manufacturer : Fairchild (Swearingen)  
Aircraft Reference : X  
Problem : Malfunctioning

**Component : 3**

Aircraft Component : Minimum Equipment List (MEL)  
Manufacturer : Fairchild (Swearingen)  
Aircraft Reference : X

**Person**

Reference : 1  
Location Of Person : Gate / Ramp / Line  
Location In Aircraft : Flight Deck  
Reporter Organization : Air Taxi
April 2013, I called Maintenance at my airline to report a Cargo Door light on the panel that would not go out. After talking to Maintenance and checking that the bayonets were in place on the cargo door they issued me a MEL for the door under the assumption that because the bayonets were in place the light was not properly working. This was repaired after a few days when I pressured the mechanics to repair it or I would refuse to fly the aircraft on the next flight. [Approximately] twelve days later, I had the same problem and was given another MEL from a Mechanic who claimed to have discussed it with the Director of Maintenance (DOM). While legal, I felt this MEL should not be available as the design of the cargo door requires that it be properly secured or it could possibly take off the tail. Pressure was placed on me by the mechanics to fly an aircraft that I deemed unairworthy and unfortunately between the pressure and the overall fatigue of the cargo schedule I departed with a legal, yet stupid, cargo door MEL.

Callback: 1

Reporter stated the cargo door is approximately 4.5 feet x 4.5 feet and located just aft of the left wing. There are two warning lights for the cargo door. One light on the forward Annunciator panel that reads 'Cargo' and a second light indicating 'Door Unsafe', located behind the co-pilot's yoke. The 'Door Unsafe' light is difficult to see in flight.

Reporter stated both lights had been placed on an MEL deferral. One of the MEL procedures requires verification that the bayonet type door locks are in the locked position. Pilots have to crawl over the loaded freight inside the fuselage to view the bayonet latches with a flashlight. There are at least ten locking latches visible on the inside, but none visible on the outside of the aircraft. The inside handle for the cargo door
can be removed, exposing only a [door cranking] stem. The handle lever has a nearby pouch for storage.

Reporter stated that a common problem on all Metro's is the Door Warning lights tend to flicker and stay 'On', sometimes in flight or while taxiing over rough terrain. If the lights don't go out, they have to return to the gate. His concern is in-flight turbulence and shifting freight against the door causing the door latches to unlock and the outward opening door to depart the aircraft, striking the very close Horizontal Stabilizer.

Reporter stated he discussed the MEL deferral with their Director Of Maintenance (DOM) who told him the Cargo Door Warning Lights MEL would be removed from their MEL List because he, as DOM, also did not believe such a deferral was safe a practice. They fly single pilot operations.

**Synopsis**
A pilot describes why he believes the current MEL practice of deferring both Cargo Door Warning Lights on their Fairchild SA-227 aircraft is an unsafe practice. They fly single pilot operations.