

DFS AVIATION OCCURRENCES BRIEF AND 2ND QUARTER REVIEW JUNE 2012

INFORMATION BASED ON 45 PRELIMINARY AIRCRAFT OCCURRENCE REPORTS SUBMITTED DURING JUNE 2012

Rotary Wing

UH-1 - During the engine start up, the crew detected an engine rpm control switch malfunction that unable the crew to increase the engine rpm (6200 to 6600 rpm). The flight was cancelled (*System/component failure or malfunction*).

UH-1 - During hover at 100' AGL, the crew noticed an abnormal engine gas temperature (EGT) indication. The crew decided to return to the home base and requested maintenance assistance. On the ground, the technicians identified a faulty EGT indicator as the cause of the problem (*System/component failure or malfunction*).

UH-1 - On final approach, the crew noticed the audio and RPM warning indicators showing "0" % engine and rotor RPM. The crew checked and verified all other instruments showing normal operation. A normal approach and safe landing were conducted (*System/component failure or malfunction*).

UH-1 - During the engine shut-down, the crew had to perform several attempts in order to succeed in closing the throttle and shut down the engine. The returning flight was cancelled. Technicians detected a misadjustment of the throttle control linkage as the source of the malfunction (*System/component failure or malfunction*).

Bell 212 - While final approach during a night training flight, the crew noticed a structure blocking the Helicopter Landing Site. The crew decided to abort the landing and requested to remove the structure. The helicopter landed uneventfully after structure was removed (*Aerodrome*).

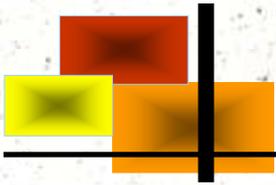
Bell 212 - During a night training flight under Night Vision Goggles and while established in the traffic pattern, the crew realized that the helicopter was targeted by a ranging laser device from a nearby village. The aircraft landed safely (*Other*).

SA-330 - While en route, the flight crew noticed

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Please note the new occurrence category based on ECCAIRS classification. The information published in this report is based on Occurrence Reports submitted and completed by missions by the end of the month and is subject to change. For more information on selected occurrence refer to the Aviation Inspection and Recommendation Module or contact the Aviation Safety Section.



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the # 2 engine gas generator (N₂) indicator went to “zero” but all other engine parameters remained in normal range. The crew decided to return to departure airport and landed safely. On the ground, the ground crew cleaned the instrument plug and the aircraft returned to operational status (*System/component failure or malfunction*).

SA-330 - During the systems check before take off, the crew detected a malfunction in the auto pilot system. The flight was delayed until maintenance verified and corrected the malfunction (*System/component failure or malfunction*).

Mi-8 AMT - During engines start, the left engine failed to start due to an engine fuel pump regulator failure (*Power plant failure or malfunction*).

Mi-8 AMT - During engines start, the crew noticed the alert signal “reserved electrical system failure”. After completing the engine shut down, the technicians detected a blown fuse responsible for engines data operation. (*System/component failure or malfunction*).

Mi-8 AMT - While on engines start up, the crew noticed the " metal chips in engine oil " caution light illuminated. The flight was delay for one hour due to requirement to fix the technical problem identified (*Power plant failure or malfunction*).

Mi-8 MTV - During the post- flight inspection, the ground crew detected an oil leakage in one of the hydraulic dampers (*System/component failure or malfunction*).

Mi-8 MTV - . While engines start, the crew noticed that the engine starter indicator light remained illuminated after reaching 66% engine rpm. The crew decided to cancel the task. Later, ground crew detected an ignition system electri-

cal malfunction (*System/component failure or malfunction*).

Mi-8 MTV - During the preflight, the flight crew detected an oil leakage from the brake system air compressor (*System/component failure or malfunction*).

Mi-8 MTV - 20 minutes after takeoff, the crew noticed the illumination of the left “fire fuel shut-off valve” warning light. The operation of left engine was not affected. The crew decided to divert to the main base and landed uneventfully (*System/component failure or malfunction*).

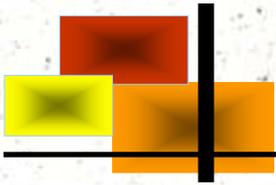
Mi-8 MTV - Before take off and during the aircraft systems check, the crew detected the auto-pilot system malfunction. The flight was cancelled (*System/component failure or malfunction*).

Mi-8 MTV - During engines start, the crew detected the “Chips in Oil, Main Gear Box” warning indicator. The flight was cancelled (*System/component failure or malfunction*).

Mi-8 MTV - During the pre-flight, the ground technicians found cracks in the cockpit glass. The technicians attributed the cracks to the temperature variations (*Other*).

Mi-8 MTV - During climb to cruise altitude, the crew noticed a discrepancy between the right and left engine tachometer indicators. The crew elected to deviate to the nearest landing site. After landing, the flight engineer identified a fuel system malfunction (*Power plant failure or malfunction*).

Mi-26 - Approaching the helicopter, the crew noticed that the front door was open with its padlock broken. The crew inspected the aircraft and detected that one survival kit and some tools had been stolen. They also found the oxygen masks scattered inside the cockpit (*Security related*).



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Mi-26 - During a routine ramp inspection, one emergency door was found on the tarmac next to the aircraft. After the respective operator was alerted, the ground crew conducted an inspection and found several crew equipment, tools, and survival equipment missing. Cargo boxes were also found open (*Security related*).

Mi-26 - Before take-off, the crew detected a hydraulic booster failure. The flight was cancelled (*System/component failure or malfunction*).

Mi-26 - While loading the aircraft, the crew detected a discrepancy in the cargo manifest. As a result of the second weighing process, the total weight of the cargo was 15,060 kg instead of the initially declared 11,760 kg (*Other*).

Fixed Wing

Let 410 - While taxiing for take off, the crew detected a discrepancy on the left engine torque indicator and decided to return to the Tarmac for maintenance assistance. Technicians found a loose electric connection on the instrument as the source of the discrepancy (*System/component failure or malfunction*).

Let 410 - During the pre-flight, the crew detected a fuel leak from the right engine drain system (*System/component failure or malfunction*).

Let-410 - On take-off run, the crew noticed a herd of cows starting to cross the runway just after rotate. Due to the remaining runway, the crew elected to continue the takeoff and overfly the cows (*Runway Incursion by an animal*).

ATR-72 - Before engines start, the left windshield was damaged by a large number of debris pushed by the propellers wash from a commercial aircraft (IL-18D) parked in front (*Ramp: Ground Handling*).

ATR-72 - When the crew arrived to the aircraft, they noticed the main door open with foot prints on the stairs and the door security seal broken. The crew conducted a security inspection before continuing with the flight (*Security related*).

CRJ-200 - Taxiing to the runway, the crew noticed an abnormal temperature indication in the right engine. Crew followed the abnormal procedures check list and decided to return to the parking area (*Power plant failure or malfunction*).

CRJ-200 - While refueling, a level sensor malfunction caused the fuel system computer to fail and in consequence the high pressure fuel bypass was activated venting fuel from the left wing tip (*System/component failure or malfunction*).

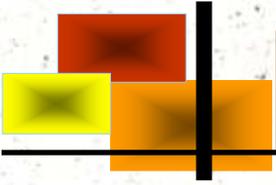
CRJ-200 - During landing, the aircraft experienced a bird strike. The crew inspected the aircraft and found no damage (*Birdstrike*).

CRJ-200 - After embarking, one passenger behaved improperly toward the flight crew when he noticed that one of his bags was off-loaded. The crew decided to deplane the unruly passenger. After the passenger apologized to the crew and deliveration between the crew and MOVCON, the passenger was accepted back onboard the flight (*Other*).

CRJ-200 - On the Apron, the crew noticed the # 1 Engine Oil pressure indicator in "0". The crew decided to return to the parking area for maintenance assistance (*Power plant failure or malfunction*).

CRJ-200 - During engines start up, the crew noticed the # 1 Engine Oil pressure indicator in "0" (repetitive). The crew decided to cancel the task and requested maintenance assistance (*Power plant failure or malfunction*).

CRJ-200 - While taxiing to the parking area and passing behind a Boeing 727, the aircraft engines



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ingested blowing dirt and lumps of grass after the B-727 powered its engines. The next flight was cancelled to give time to maintenance for further engines inspection (*Ramp: Ground Handling*).

DHC-7 - While loading the aircraft, MOVCON staff brought 104 Kg of DGs cargo improperly packaged in plastic bags and without any DG documentation. In addition, the crew reported a strong smell of chlorine coming from the bags. The crew refused to accept the cargo (*Other*).

DHC-7 - During climb to cruise altitude, the "check fire detector" caution light illuminated. The crew decided to return to the departure airport and landed safely (*System/component failure or malfunction*).

DHC-7 - While engines shutdown, the crew noticed an intermittent fire indication on the # 4 engine. As a precaution, the crew pulled the "T" handle, but since no fire was present the fire suppression system was not activated. The crew suspected a faulty connection in the fire loop system. (*System/component failure or malfunction*).

DHC-7 - While commencing the descent, the crew noticed the # 3 engine oil pressure low indication but within limits. Few minutes later the "Low Oil Pressure" light illuminated for engine # 3 and master caution activated. The aircraft landed uneventfully. Post flight maintenance inspection detected a broken hydraulic pump shaft seal (*Power plant failure or malfunction*).

DHC-7 - In the initial climb after take off, the nose gear door did not open during the gear retraction. The aircraft returned to departure airport and landed without further incidents (*System/component failure or malfunction*).

DHC-7 - During enroute climb, the crew noticed a discrepancy in # 1 engine power. Based on the aircraft abnormal procedures checklist, the crew diverted to Home base where it landed safely. Post flight maintenance investigation revealed an engine high bleed control line valve malfunction (*Power plant failure or malfunction*).

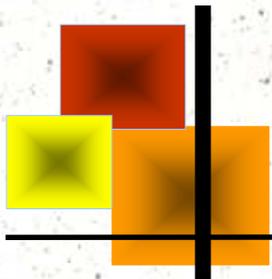
DHC-8 - During the aircraft systems check, the crew found an auto feather system malfunction. The flight was cancelled (*System/component failure or malfunction*).

Boeing 737 - During the preparation for the flight, the aircraft fuselage was dented when ground handling contractor crew were trying to align the stairs to the aircraft's rear door. The stair was brought too close to the fuselage, as such the bumper was not able to protect the aircraft fuselage (*Ramp: Ground Handling*).

Boeing 737 - During takeoff, the crew observed a bird flying against the aircraft and further close to the left board and along it. After landing, the crew found blood stains at aft left part of fuselage. No damages were reported (*Birdstrike*).

C-130 - While en route, the crew noticed the # 1 engine oil quantity started decreasing, followed by the engine "low oil" warning light illumination. The crew decided to shutdown the affected engine and diverted to the main base. The aircraft landed safely without any further damage (*Power plant failure or malfunction*).

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OR AND HR 2ND QUARTER 2012 REVIEW

THIS SUMMARY IS BASED ON THE DATA COMPLETED IN THE INSPECTIONS AND RECOMMENDATIONS MODULE DURING 2nd QUARTER OF 2012. ANY DISCREPANCIES SHOULD BE REPORTED TO THE AVIATION SAFETY SECTION, LSD/DFS.

TOTAL NUMBER OF REPORTS
TOTAL 2Q / TOTAL 2012
OCCURRENCES 107/213
HAZARDS 62/120

HAZARD REPORTS REVIEW

APRIL - MAY - JUNE 2012

Among all HR reported during 2Q (62), common hazards reported are attributed to potential risk observed in: a) deficiencies in the quality of ground services (17), b) conditions of aerodromes and HLS (14), c) security in general (10), d) operations or cabin safety events(5), e) potential risks for runway incursions (3), f) fire safety (2), g) risk for wildlife strikes (1) and h) others (10).

Among the most significant hazards: Ground Services deficiencies related to Movcon and/or contractors not following the established procedures, lack of adequate cargo and/or passenger manifests, lack of weighing machines and poor condition of ground equipment; Aerodromes and HLS hazards involved the presence of obstructions and FOD inside the operational area, lack of proper

runway marking and lighting; and Security in General to events related to hostile threats and the lack of limited access system for people and vehicles.



The marshaller gave parking instructions to the aircraft with left engine directly over FOD (Reported by UNAMID).

OCCURRENCE REPORTS REVIEW

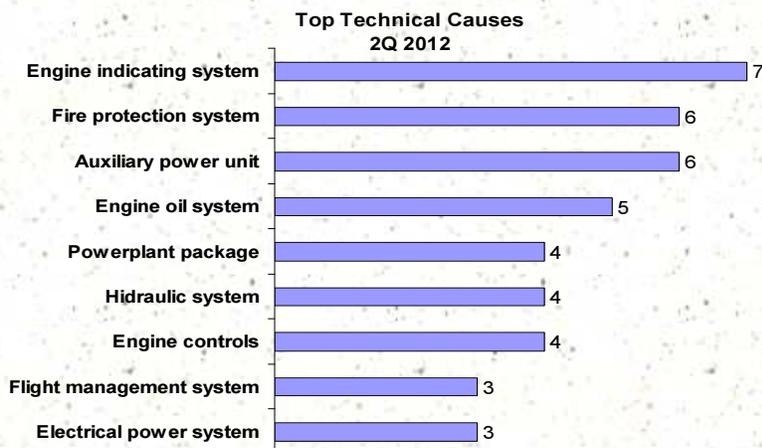
APRIL - MAY - JUNE 2012

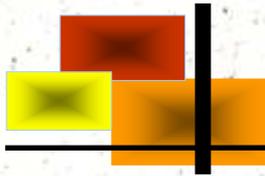
This occurrences review is based on the EC-CAIRS categorization and the nature given to each OR submitted.

During 2nd Quarter 2012; System Components and Power Plant malfunction (73), Other (11), Security Related (5), Runway Incursions (5), are attributed as the leading categories of occurrences in DFS aviation (see page 7).

Technical occurrences are the leading nature of occurrences. Besides Power Plants in general (11), the major sources of the technical occur-

rences are depicted in the following chart:





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Five (5) “Security related” occurrences were reported during the 2Q. Of those, four events were related to aerodrome security in general resulting in unauthorized access to the aircraft and damage to property; and one event involved the lack of adherence to established procedures for carriage of weapons onboard UN aircraft.



When the crew returned to the aircraft two hours later, they found the main door opened and one emergency exit removed. No property nor equipment was missing or damaged (Let 410).

Runway Incursions still represent a safety concern in DFS supported missions. In the 2nd Quarter, UNMISS and UNAMID are the most affected missions with five (5) occurrences reported in the Module. Three events involved the unauthorized presence of vehicle or people inside the runway perimeters and 2 events involved the presence of animals on runways during take off or landings.



While taxiing to the runway between two parked aircraft, the right propeller stroke the left wing tip of the parked aircraft (ATR-72).

Three (3) “Airprox/nearmiss” occurrences were submitted during the 2Q period. All of them were reported by UNAMID and although there are no trends in locations, two took place in the vicinity of airports while in the traffic pattern .

Three (3) Birdstrike took place in the 2Q. All of them took place during initial climb after take off or during the landing roll. This shows that wildlife habitat is inside the airport perimeter.

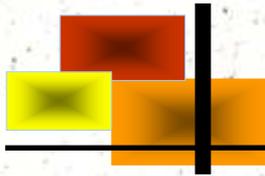


During final approach, helicopter's rotor-wash damaged the roof of a nearby house. Only material damage was reported (Mi-8 MTV).

Eleven (11) occurrences were reported as “Other” during this period. Four of them were cargo related events involving the lack of documentation for Dangerous Goods cargo and inaccurate cargo manifests delivered to the crew. Two events involved the interference to the crew by laser beams from the ground and two reports for cracks in windshields. The rest are isolated events that cannot be grouped together.

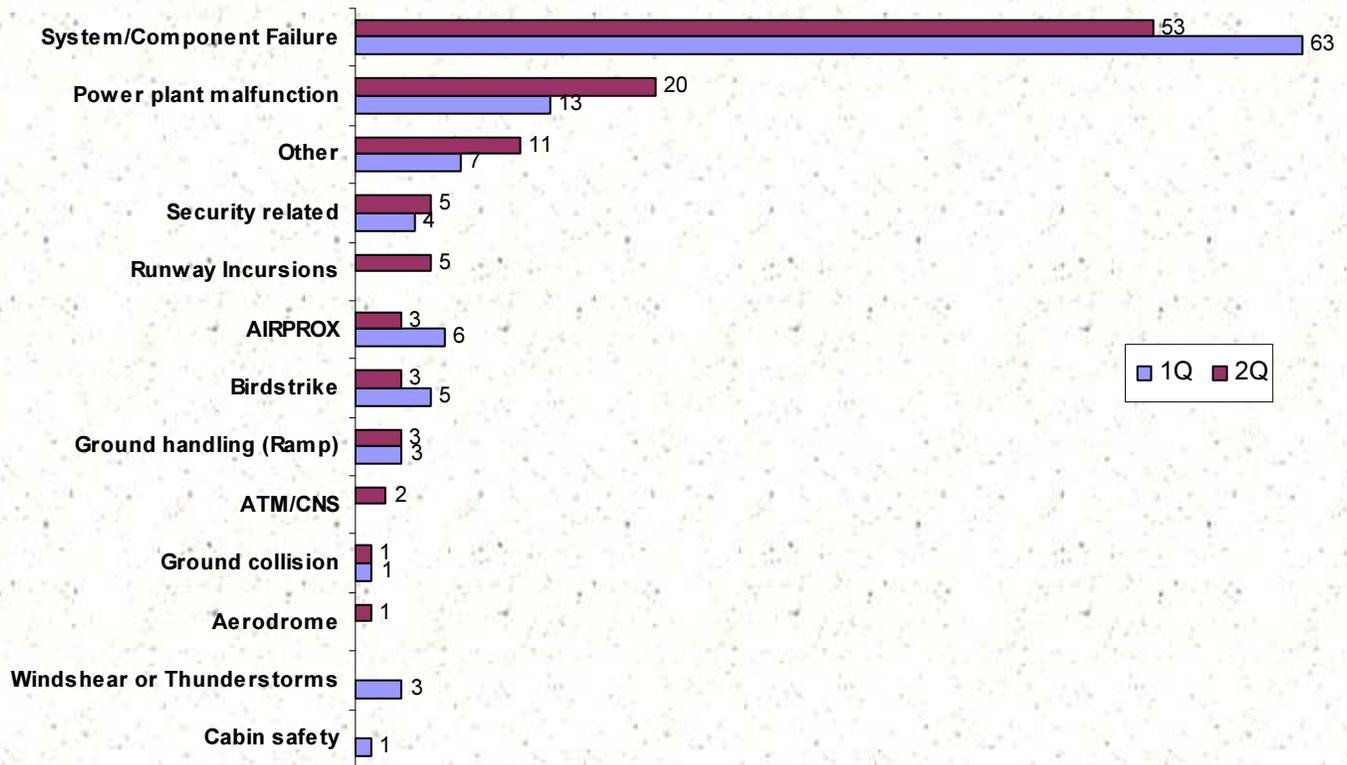


Taxiing on the runway and performing a 90° turn, the left aft main landing gear collapsed (C-130).

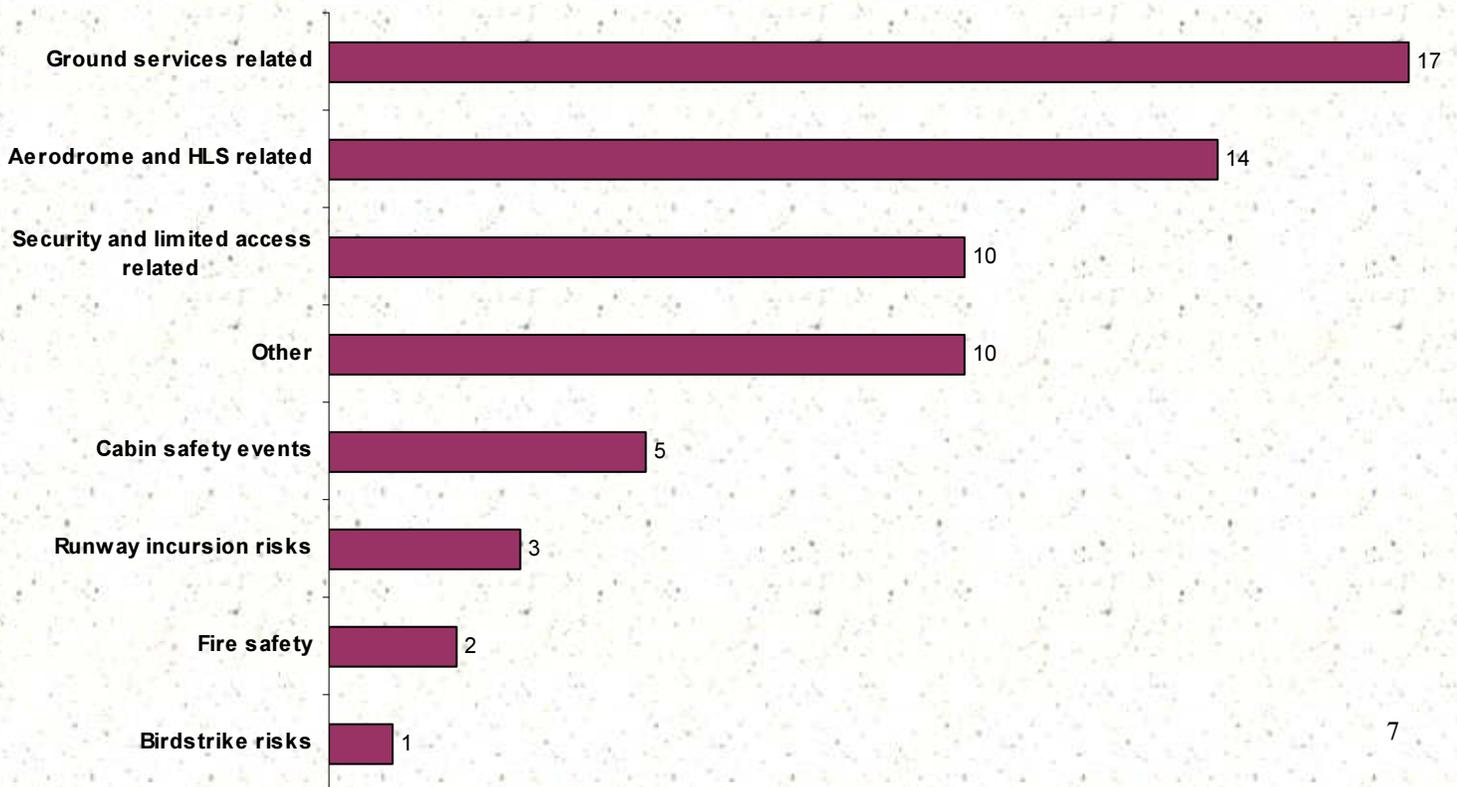


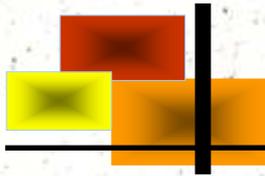

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**Occurrence Reports per Category
1Q vs 2Q 2012**



**Hazard Reports 2012
YTD**





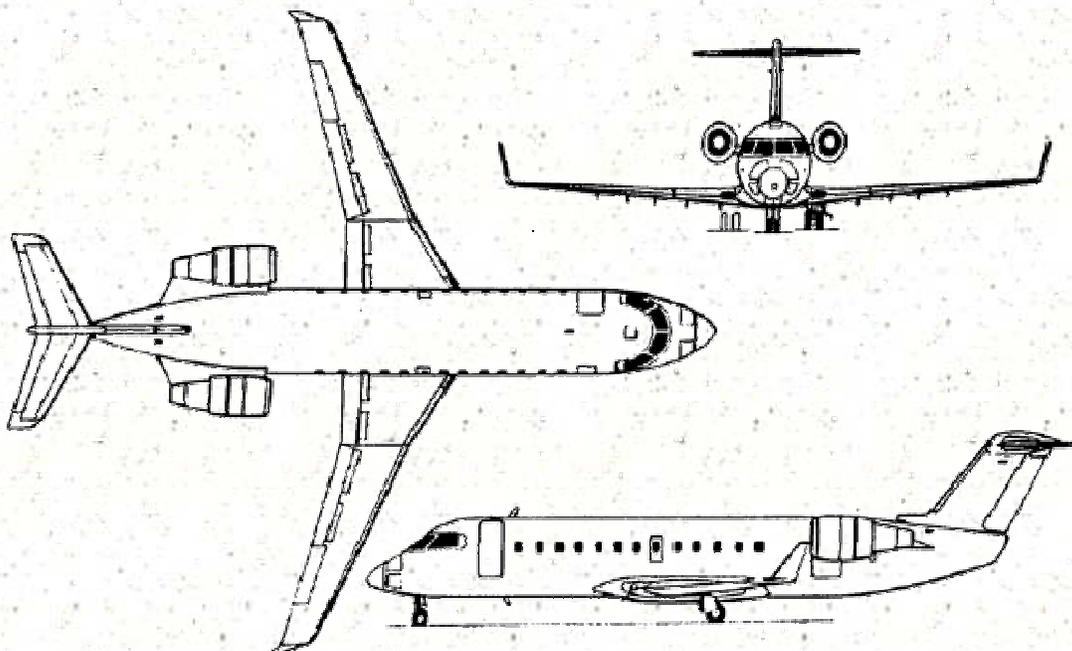
STATUS OF 2011 DFS ACCIDENT INVESTIGATIONS

As you remember, on 4 April 2011, the aircraft type CRJ-100, registration 4L-GAE, call sign UNO-834, operated by Georgian Airways in MONUSCO, impacted with the ground during its final approach, approximately 170 meters to the left of the runway axis. As a result of the impact, the aircraft was destroyed and 32 persons among crew and passengers were fatally injured.

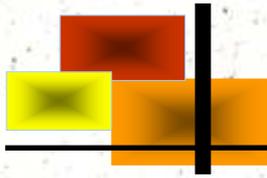
The Accident Investigation Board is lead by the Democratic Republic of Congo Ministry of Transport as the State of Occurrence.

Accredited representatives from Georgian CAA, United States National Transportation Safety Board (NTSB), Canada Transportation Safety Board (TSB) and authorized representatives from DFS are also participating in the investigation.

The final version of the Meeting minutes conducted on February 2012 have been released for the Member States of the Investigation Committee, together with additional analysis conducted by Bombardier experts as requested by the Canada Transportation Board.



Information is presented solely for the purpose of improving aviation safety awareness and accident prevention efforts and may not be used in disciplinary or legal proceedings.



Sleep and Fatigue

Squeezing in More Sleep

Avoiding fatigue is not rocket science, yet we as humans continue to challenge conventional sleep wisdom by drinking too much caffeine, consuming too much refined sugar, not getting enough exercise, and engaging in other sleep-preventing behaviors, all while working long hours often under great stress.

Our jobs have reduced the requirement for extensive physical work, and child's play is now more likely to involve a computer game than a ball field. This vicious cycle drives us to exercise less, eat more, and sleep less—and the cycle continues.

The solution is amazingly simple, yet often difficult to implement: Get more sleep. Humans need about eight hours of sleep in a 24-hour period. It takes about 15 minutes in bed to fall asleep, and your last 15 minutes of sleep is not healthy, restorative sleep.

That means that you should spend eight and a half hours in bed, dedicated to sleeping, each night. Don't allow television, radio, or food in bed. If you miss sleep one night then you must sleep extra the following night to catch up. If you want to avoid fatigue, these simple rules are not negotiable.

If you are uncertain of your sleep duration, then you should try keeping a sleep diary. This may be the first advice you would get from a clinical sleep professional.

Numerous scientific studies have matched the performance of fatigued drivers to the performance of drunk drivers. The next time you are awake for 20 hours straight remind yourself that your performance level is equivalent to that of a legally drunk driver.

Fatigue can affect not only your ability to drive the car, but your decision to drive in the first place. Should you be flying an airplane when you are in that condition? Write the next day's page-one headline in your head, and then lay it down on your pillow to sleep.

Avoid Becoming a Headline

As a pilot, one of the best ways to avoid becoming an Aviation Safety accident statistic is to ask yourself, "If this flight goes badly, what would the Investigation Board report say about me? How would the headline read the next day? 'Sleep-Deprived Pilot Avoids Fatigue Warning Signs and Crashes, Killing All.' If it's bad, maybe you should reconsider flying and take a nap.

When there is an accident, an incident, or a close call, trained investigators seek to determine the cause in an effort to prevent such events from happening again. The best investigations identify not just the obvious cause, but rather the numerous factors in the overall chain of events.