

annexe 1

Liste des événements de type PARG issus des différentes bases internationales

PARG OACI

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
09/01/1985	KANSAS CITY,KS - Etats-Unis	Transport public - Service non régulier - Intérieur - Cargo	N357Q - LOCKHEED - 188 ELECTRA Turbopropulseur ALLISON USA - 501 FAMILY	Mortelles	Détruit	Accident M: 3 B: 0
<p>LOC-I: Perte de contrôle en vol</p> <p>THE A/C WAS VECTORED FOR A VOR RWY 03 APP, THEN TO CIRCLE AND LAND ON RWY 36 AT KANSAS CITY A/P. ON FINAL APP THE A/C WAS TOO HIGH AND WAS CLEARED TO CIRCLE LEFT FOR ANOTHER APP. THE PILOT BEGAN CIRCLING LEFT. THE CONTROLLER CAUTIONED THAT HE MIGHT BE LINING UP FOR FAIRFAX A/P. THE PILOT WENT AROUND AND WAS INSTRUCTED TO TURN TO 360 DEG AND CLIMB TO 3000 FT. THE A/C CLIMBED STEEPLY, STALLED AND IMPACTED A WATER TREATMENT PLANT. >NO EVIDENCE OF AIRFRAME OR POWERPLANT PROBLEMS, NOR OF CARGO SHIFTING. >DRN: CVR INDICATES THAT THE CO-PILOT WAS FLYING THE A/C AND THAT THE PILOT TOOK CONTROL DURING THE MISSED APP.</p> <p>Accident</p> <p style="text-align: right;">Data</p>						
Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
18/01/1985	ZHANGZHUANG/JINAN - Chine	Transport public - Service régulier - Intérieur - Passagers	B434 - ANTONOV - AN-24 Turbopropulseur ZZ	Mortelles	Détruit	Accident M: 38 B: 2
<p>LOC-I: Perte de contrôle en vol</p> <p>DURING APP IN DRIZZLE AND FOG THE CREW SWITCHED ON THE LANDING LIGHTS. THE RWY WAS PROBABLY NOT CLEARLY VISIBLE AND THE A/C MADE A MISSED APP DURING WHICH IT CRASHED. >INSTRUCTIONS HAVE BEEN ISSUED REGARDING EXECUTION OF MISSED APP PROCEDURES FOR AN-24.</p> <p>Accident</p> <p style="text-align: right;">Préliminaire</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
12/03/1985	BARTER ISLAND, AK - Etats-Unis	Transport public - Service non régulier - Intérieur - Passagers	N540N - DE HAVILLAND - DHC6-300 Turbo propulseur PRATT & WHITNEY (CANADA) - PT-6 FAMILY	Graves	Importants	Accident M: 0 B: 2
SCF-NP: Défaillance système						
THE A/C CRASHED DURING A MISSED APP TO A TEMPORARY WINTER LANDING STRIP. WEATHER: MARGINAL WITH ICING.						
Accident						
<i>Data</i>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
07/01/1987	MILES CITY, MT - Etats-Unis	Transport public - Service non régulier - Intérieur - Passagers	N57133 - NORTH AMERICAN - COMMANDER 690/1685 Turbo propulseur GARRET AIRESEARCH - TPE 331 FAMILY	Graves	Importants	Accident M: 0 B: 1
ON FINAL APP THE PILOT SELECTED APPROACH AND ALTITUDE HOLD MODES ON THE AUTOPILOT. AT THE MISSED APP POINT, HE STARTED TO MAKE A GO-AROUND BUT A PAX, SEATED IN THE CO-PILOT'S SEAT, ANNOUNCED THAT HE HAD THE RWY IN SIGHT. THE PILOT REDUCED POWER TO DESCEND, BUT THE NOSE OF THE A/C PITCHED UP. THE A/C STALLED AND MUSHED TO THE GROUND. >DRN: THE A/C HIT HARD AND SKIDDED OFF THE RWY.						
Accident						
<i>Data</i>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
09/02/1988	SPRINGFIELD, OH - Etats-Unis	Transport public - Opérations non payantes - Entraînement/contrôle	N823JS - BRITISH AEROSPACE - 31 JETSTREAM Turbo propulseur GARRET AIRESEARCH - TPE 331 FAMILY	Mortelles	Détruit	Accident M: 3 B: 0
LOC-I: Perte de contrôle en vol						

THE A/C WAS ON SHORT FINAL WHEN IT ARRESTED ITS DESCENT, STARTED A CLIMB AND BEGAN TO OSCILLATE IN BOTH YAW AND ROLL. IT THEN PITCHED UP AND ROLLED TO THE RIGHT AND ENTERED A VERTICAL DESCENT. THE A/C HAD COMPLETED ABOUT 270 DEG OF ROLL WHEN IT IMPACTED THE GROUND NORTH OF THE RWY IN A STEEP NOSE DOWN ATTITUDE. >DRN: THE RIGHT ENGINE WAS OPERATING BUT AT REDUCED POWER. THE LEFT ENGINE WAS AT FULL POWER. THERE WAS NO EVIDENCE OF SYSTEM MALFUNCTION. OTHER COMPANY PILOTS INDICATED THAT THE PILOT HAD A HISTORY OF DEMAINGING COCKPIT BEHAVIOUR AND ROUGHNESS WITH STUDENTS. THE CO-PILOT WAS SMALL IN STATURE. HE HAD 100 HRS OF MULTIENGINE TIME AND NO TURBOPROP TIME. THE COMPANY PILOTS REPORTED THE CO-PILOT TRAINEE WAS CONSISTENTLY BEHIND THE A/C IN PRIOR FLIGHTS. >THE FLAPS WERE FOUND IN THE RETRACTED POSITION CONTRARY TO THE A/C HANDBOOK. COMPANY PILOTS FURTHER INDICATED THAT THE PILOT HAD A HISTORY OF REQUIRING LOW ALTITUDE ONE ENGINE GO-AROUNDS AND DELAYING OFFERS OF ASSISTANCE TO STUDENTS.

Data

Accident

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
11/02/1991	MOSCOW - URSS	Transport public - Service régulier - International - Passagers	D-AOAC - AIRBUS - A310 Turboreacteur double flux ZZ	Aucun	Aucun	Incident M: 0 B: 0
LOC-1: Perte de contrôle en vol						
ON REQUEST OF ATC THE PILOT INITIATED GO-AROUND AT 1,400 FT. THE CREW FELT THAT THE A/C PITCH ATTITUDE INCREASED ABNORMALLY AND TRIED TO OVERRIDE THE NOSE-UP TENDENCY BY MOVING THE CONTROL COLUMN FORWARD. THIS CAUSED AUTOPILOT NO.1 TO DISENGAGE. DISENGAGEMENT OF THE AUTOPILOT DISABLED THE AUTOTRIM AND THE STABILIZER REMAINED IN THE FULL NOSE-UP POSITION WHILE THE CONTROL COLUMN WAS MOVED FORWARD >THE A/C PITCHED-UP AND SPEED WAS REDUCED. AT 4,000 FT THE A/C STALLED THEN CLIMBED AND STALLED AGAIN AT 5,700 FT. AT 11,755 FT, AFTER TWO ADDITIONAL STALLS CONTROL WAS REGAINED BY REDUCING THRUST AND MANUAL TRIM. >THE A/C LANDED SAFELY USING MANUAL CONTROL.>LACK OF CREW CO-ORDINATION AND COCKPIT RESOURCE MANAGEMENT CONTRIBUTED TO THE EVENT.						
Incident						

Data

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
15/02/1992	SWANTON,OH - Etats-Unis	Transport public - Service régulier - Intérieur - Cargo	N794AL - MCDONNELL-DOUGLAS - DC-8-63 Turboreacteur double flux PRATT & WHITNEY, USA - JT-12	Mortelles	Détruit	Accident M: 4 B: 0
LOC-1: Perte de contrôle en vol						

THE A/C WAS ON ITS SECOND MISSED APP WHEN CONTROL WAS LOST AND IT CRASHED INTO A FIELD.>DRN: THE CO-PILOT HAD MADE TWO ILS APPS, BUT, FOR UNDETERMINED REASONS, FAILED TO PROPERLY CAPTURE THE ILS LOCALIZER AND/OR GLIDESLOPE. DURING THE SECOND MISSED APP, THE PILOT TOOK CONTROL OF THE A/C, HOWEVER, HE APPARENTLY BECAME SPATIALLY DISORIENTED, AND INADVERTENTLY ALLOWED AN UNUSUAL ATTITUDE TO DEVELOP WITH BANK ANGLES UP TO 80 DEG AND PITCH ANGLES UP TO 25 DEG. THE CO-PILOT ASSUMED CONTROL AND BEGAN LEVELLING THE WINGS AND RAISING THE NOSE OF THE A/C, BUT IMPACT OCCURRED BEFORE RECOVERY WAS COMPLETED. THE OPERABILITY OF THE PILOT'S ATTITUDE DIRECTOR INDICATOR, AT THE TIME CONTROL WAS LOST, IS UNCERTAIN.

Data

Accident

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
26/04/1994	NAGOYA - Japon	Transport public - Service régulier - International - Passagers	B-1816 - AIRBUS - A300-600 Turboréacteur double flux ZZ	Mortelles	Détruit	Accident M: 264 B: 7

LOC-I: Perte de contrôle en vol

THE A/C WAS CLEARED FOR AN ILS APP TO RWY 34 AT NAGOYA A/P AFTER REPORTING AT THE OUTER MARKER. THE CREW REPORTED MAKING A GO-AROUND, AFTER WHICH THE A/C MADE AN ABNORMAL MANOEUVRE. THE A/C IMPACTED NEAR TAXIWAY E ON THE EAST SIDE OF THE THRESHOLD OF RWY 34 AND CAUGHT FIRE.

Accident

Préliminaire

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
29/10/1995	SAN FRANCISCO, CA - Etats-Unis	Transport public - Autre - Autre	N904UA - BOEING - 737-500 Turboréacteur double flux CFM INTERNATIONAL - CFM 56	Aucun	Aucun	Incident M: 0 B: 0

FOLLOWING A TEST FLIGHT THE PILOT WAS GIVEN A GO-AROUND BY APP CONTROL. HE SELECTED THE TAKE-OFF AND GO-AROUND SWITCH AND ENGINE POWER INCREASED. THE A/C BEGAN TO PITCH UP AND DID NOT STOP AT THE GO-AROUND ATTITUDE. PITCH INCREASED TO 45 DEG NOSE-UP AND THE STICK SHAKER ACTIVATED. THE PILOT COULD NOT OVERCOME THE INCREASE IN PITCH. THE A/C STALLED, THE NOSE DROPPED AND THE A/C ROLLED. THE PILOT INCREASED THE ROLL. AS THE NOSE DROPPED THROUGH THE HORIZON AIRSPEED INCREASED AND THE PILOT RECOVERED TO WINGS-LEVEL.

Incident

Préliminaire

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
27/04/1998	NEAR BREMEN - Allemagne	Transport public - Service régulier - International - Passagers	D-AHLN - BOEING - 737-500 Turboréacteur double flux ZZ	Aucun	Aucun	Incident M: 0 B: 0
<p>DURING FINAL APP AN UNSAFE NOSE GEAR INDICATION LED TO A GO-AROUND. DURING CLIMB-OUT BOTH FLIGHT DIRECTORS AND AUTO THRUST WERE ON. AFTER GEAR RETRACTION FLAPS WERE SET AT 15 DEG. A FURTHER FLAP RETRACTION WAS DELAYED BY DISCUSSIONS WITH GROUND CONTROL REGARDING CHANGING THE DEPARTURE PROCEDURE BECAUSE OF THE WEATHER. HIGH THRUST AND LOW A/C WEIGHT RESULTED IN A CLIMB RATE UP TO 4.800 FT/MIN. THE ALTITUDE CAPTURE FOR A 3.000 FT LEVEL OFF WAS AT 1.500 FT AGL WHEN THE TOGA MODE SWITCHED TO MCP SPEED MODE. PITCH ATTITUDE HAD NOW INCREASED TO 24 DEG NOSE UP. THEREAFTER, THE FLIGHT DIRECTOR PITCH BAR COMMANDED A NOSE DOWN, WHICH THE PILOT FOLLOWED BY MANUAL NOSE DOWN TRIM INPUT. THIS LASTED 4 SEC DUE TO THE SLOW REACTION OF THE A/C. THE PILOT WAS NOT AWARE THAT WITH FLAPS AT 15 DEG, THE HORIZONTAL STABILIZER MANUAL TRIM SPEED OPERATES AT A MAXIMUM VALUE OF 0.6 DEG/SEC. THE STABILIZER RAN INTO FULL NOSE DOWN TRIM. THE PITCH ATTITUDE WAS PASSING 10 DEG NOSE-UP WHEN FDR SHOWED A SHORT-TIME NOSE-DOWN ELEVATOR DEFLECTION AND A REDUCTION OF THRUST LEVER ANGLE. THE PILOT SAID THAT HE THEN DISENGAGED THE AUTO THRUST BUT THERE WAS NO SUCH INDICATION FROM THE FDR. WHEN THE PILOT NOTICED THE NOSE DOWN TRIM HE PULLED THE CONTROL WHEEL VERY HARD AND RETAINED FULL CONTROL AFTER SOME SECONDS. THE FOLLOWING WERE RECORDED: PITCH ALTITUDE -24 DEG, ANGLE OF ATTACK -12 DEG, VERTICAL G -0.4. AFTER FIXING THE UNSAFE GEAR INDICATION BY CHANGING TWO BULBS THE A/C LANDED SAFELY.</p>						
Incident						

Data

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
11/12/1998	NEAR SURATTHANI - Thaïlande	Transport public - Service régulier - Intérieur - Passagers	HS-TIA - AIRBUS - A310 Turboréacteur double flux GENERAL ELECTRIC USA - CF6 SERIES	Mortelles	Détruit	Accident M: 101 B: 30
<p>LOC-I: Perte de contrôle en vol F-POST: Incendie/fumée (après impact)</p> <p>ON THE THIRD LANDING ATTEMPT, THE A/C CRASHED INTO A SWAMP. On 11 December 1998 at about 17 : 54 hours, AIRBUS A310-204 belonging to Thai Airways International Public Company Limited, of nationality and registration HS-TIA, departed on flight TG 261 from Bangkok International Airport to Surat Thani Airport. The pilot had requested Surat Thani air traffic control for approach to land on runway 22. After trying for three approaches, the aircraft crashed 700 metres south of Surat Thani Airport at about 19 : 08 hours destroying itself completely. From 146 crew and passengers on board : 101 died, 35 were seriously injured and 10 suffered minor injuries.</p>						
<p>Probable Causes</p> <p>After careful consideration, the Aircraft Accident Investigation Committee of the Kingdom of Thailand ultimately came to the conclusion that the accident occurred</p>						

because the aircraft entered into stall condition which might be caused by the followings :

- 3.2.1 The pilot attempted to approach the airport in lower than minimum visibility with rain.
- 3.2.2 The pilot could not maintain the VOR course as set forth in the approach chart. The aircraft flew left of VOR course on every approach.
- 3.2.3 The pilots suffered from the accumulation of stress and were not aware of the situation until the aircraft entered into the upset condition.
- 3.2.4 The pilots had not been informed of the document concerning the wide-body airplane upset recovery provided by AIRBUS Industrie for using in pilot training.
- 3.2.5 The lighting system and approach chart did not facilitate the low visibility approach.
- 3.2.6 Stall warning and pitch trim systems might not fully function as described in the FCOM and AMM;

Préliminaire

Accident

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
27/06/2000	OVER DUBAI A/P - Emirats Arabes Unis	Transport public - Service régulier - International - Passagers	A6-EKG - AIRBUS - A310 Turboréacteur double flux GENERAL ELECTRIC USA - CF6 SERIES	Aucun	Aucun	Incident M: 0 B: 0
<p>PRN: AT 500 FT AGL ON FINAL APP TO DUBAI A/P, THE TRIMMABLE HORIZONTAL STABILISER (THS) TRIM MOVED TO MAXIMUM DEFLECTION NOSE UP. THE A/C WAS BEING FLOWN MANUALLY BY THE FIRST OFFICER. SHORTLY AFTERWARDS A GO-AROUND WAS MADE DUE TO BEING HIGH AND FAST ON APP. DURING THE GO-AROUND, THE A/C PITCHED UP TO 46 DEG PITCH AND STALLED. DESPITE FULL FORWARD NOSE DOWN ELEVATOR, RECOVERY ACTION WAS MADE BY REDUCING THRUST TO IDLE. THE LOW SPEED PROTECTION SYSTEM OPERATED NORMALLY BUT THE INCREASE IN THRUST RESULTED IN A FURTHER HIGH NOSE ATTITUDE AND STALL FROM WHICH THE CAPTAIN RECOVERED USING SAME RECOVERY ACTION. NO TECHNICAL REASON FOR THE THS MOVEMENT HAS BEEN FOUND.</p>						
Incident						
<i>Préliminaire</i>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
23/08/2000	NEAR BAHRAIN A/P - Bahrein	Transport public - Service régulier - International - Passagers	A40-EK - AIRBUS - A320 Turboréacteur double flux CFM INTERNATIONAL - CFM 56	Mortelles	Détruit	Accident M: 143 B: 0
<p>CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle</p>						

PRN: AT 1 NM FROM TOUCHDOWN AND ALTITUDE 600 FT, THE CREW REQUESTED A LEFT-HAND ORBIT, AND INITIATED A MISSED APP. THE ATC OFFERED A RADAR VECTOR WHICH THE CREW ACCEPTED. THE A/C CROSSED THE RWY ON A NORTH-EASTERLY HEADING WITH A SHALLOW CLIMB TO 1 000 FT. THE MASTER WARNING SOUNDED (FOR EXCEEDING FLAPS SPEED).>>DRN: DURING THE GO-AROUND, THE FLIGHT CREW PROBABLY EXPERIENCED A SPATIAL DISORIENTATION, WHICH LED THE PILOT TO FALSELY PERCEIVE A "PITCH-UP". HE RESPONDED BY MAKING A NOSE-DOWN INPUT, RESULTING IN A DESCENT. THE GPWS VOICE ALARM SOUNDED AND REPEATED EVERY SECOND FOR NINE SECONDS, UNTIL THE A/C IMPACTED THE SHALLOW SEA. >>A COMBINATION OF INDIVIDUAL AND SYSTEMIC ISSUES WERE IDENTIFIED: NON-ADHERENCE TO STANDARD OPERATING PROCEDURES; SPATIAL DISORIENTATION AND INFORMATION OVERLOAD; NON-EFFECTIVE RESPONSE TO GPWS WARNINGS; LACK OF A CRM TRAINING PROGRAMME; INADEQUACIES IN THE A320 FLIGHT CREW TRAINING PROGRAMMES, IN FLIGHT DATA ANALYSIS SYSTEM AND IN THE FLIGHT SAFETY DEPARTMENT; AND SAFETY OVERSIGHT FACTORS BY THE REGULATOR. TWELVE SAFETY RECOMMENDATIONS ADDRESSED TO VARIOUS STATES AND INTERNATIONAL ORGANIZATIONS WERE MADE.

Accident

Data
 OACI - Notification initiale OACI
 OACI - ADREP préliminaire OACI
 OACI - ADREP complet OACI
 OACI - Rapport final OACI

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
11/10/2001	SHAMATTAWA, 1NM N ,MANITOBA - Canada	Transport public - Service non régulier - Intérieur - Passagers	C-GYPA - SWEARINGEN - SA226 TC METRO II Turbopropulseur ZZ	Mortelles	Détruit	Accident M: 2 B: 1

CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle

Perimeter Airlines Flight PAG962, a Fairchild SA226TC (Metroliner), with two pilots and a flight nurse on board, departed Gods Lake Narrows, Manitoba, at approximately 2300 central daylight time, on a MEDEVAC flight to Shamattawa. Approaching Shamattawa, the crew began a descent to the 100 nautical mile minimum safe altitude of 2300 feet above sea level (asl) and, when clear of an overcast cloud layer at about 3000 feet asl, attempted a night, visual approach to Runway 01. The aircraft was too high and too fast on final approach and the crew elected to carry out a missed approach. Approximately 30 seconds after the power was increased, at 2333, the aircraft flew into trees slightly to the left of the runway centreline and about 2600 feet from the departure end of Runway 01. The aircraft was equipped with a cockpit voice recorder (CVR) that indicated the crew were in control of the aircraft; they did not express any concern prior to impact. The aircraft broke apart along a wreckage trail of about 850 feet. Only the cabin aft of the cockpit retained some structural integrity. The captain and first officer were fatally injured on impact. The flight nurse was seriously injured but was able to exit the wreckage of the cabin. A post-crash fire was confined to the wings which had separated from the cabin and cockpit wreckage. Findings as to Causes and Contributing Factors The aircraft was flown into terrain during an overshoot because the required climb angle was not set and maintained to ensure a positive rate of climb. During the go-around, conditions were present for somatogravic illusion, which most likely led to the captain losing situational awareness. The first officer did not monitor the aircraft instruments during a critical stage of flight; it is possible that he was affected by somatogravic illusion and/or distracted by the non-directional beacon to the extent that he lost situational awareness. Other Findings The absence of approach aids likely decreased the crew's ability to fly an approach from which a landing could be executed safely. The company standard operating procedures (SOPs) did not define how positive rate is to be determined.

Accident

Préliminaire

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
22/01/2002	Gardermoen - Norvège	Transport public	TF-FIO - BOEING - 757-200 Turboréacteur double flux	Aucun	Aucun	Incident grave M: B:
<p>ADRM: Aérodrome AMAN: Manoeuvre brusque intentionnelle LALT: Collision/quasi-collision lors d'un vol à faible hauteur LOC-I: Perte de contrôle en vol SCF-NP: Défaillance système USOS: Atterrissage à proximité de la piste CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle</p> <p>DRN: Icelandair B 757 with registration TF-FIO, was approaching ENGM from Keflavik. Close to Solberg NDB, the flight crew became aware that the RWY had been changed from 01R to 01L due to snow clearing. In addition, there were strong tailwinds at 2000-3000 ft up to 45 kts. ILS approach was initially conducted by autopilot, but as the A/C never became properly stabilized on GP, the autopilot was disconnected. The commander flew the A/C manually, and complained about his GP data frequently missing. The F/O did not take any actions to this. His instruments were functioning normally. At 580 ft, approach was still not stabilized (above GP), and PIC initiated missed approach. Pitch was increased to 20 deg., and speed decreasing to its peak of 137 kt. To avoid stalling the A/C the PIC lowered the nose abruptly, to gain more speed. The control column was returned to neutral for a short moment. Then another abrupt nose-down control movement was made, causing a pitch attitude to -49 deg. This dive was not recovered until 321 ft AGL and 251 kt airspeed. During this incidence, aural warnings had been present, like "terrain" and "too low terrain". The recovery of the dive continued with a pitch attitude of approx. +40 deg., and the flight continued normally, but with several abrupt control inputs. Load factors during these abnormal maneuvers were measured to be -0.6 and +3.59 g's. The A/C made a normal landing on the 2. attempt. Conclusions from AIBN: General a. The flight from Keflavik airport to Oslo airport Gardermoen was uneventful until the descent was started. b. The descent and approach was made in strong tailwind. c. The aircraft overshoot of the LLZ initially. d. The aircraft descended on the LLZ unstabilized in height and speed. e. After the Commander started the missed approach, the aircraft entered a dramatic manoeuvre with exceedences in pitch, speed and load factors. f. After the landing, the Commander was concerned primarily regarding the ILS raw data failures and not so much regarding the exceedences. g. The flight continued to Stockholm airport Arlanda and back to Keflavik airport without a thorough technical inspection to be performed. The aircraft had been maintained and was serviceable with no significant defects. The equipment not being operative upon departure Keflavik did not have any effect regarding this incident. b. The raw data information of the ILS on the Commander's flight instruments disappeared intermittently at times during the approach to Gardermoen. c. The mass and balance of the aircraft were within the normal operating limits at the time of the incident. d. The aircraft did not receive any damage during the "upset" in spite of the exceedences of both speed and load factors. As a precaution some components were later replaced. Flight Operations a. A comprehensive Flight Operations Manual, supplemented by Aeroplane Operating Manual, Route Manual and Training Manual controls the different aspects of Flight Operations. b. Crew selection, initial technical- and flight training and recurrent training satisfy the requirements from the authorities. c. The Company was at the time of the incident not utilizing a systematic analysis of flight recorder data of all flights for supervision, control and monitoring of the Company's operational standard. d. A more clear documentation of the philosophy and the policies in the different manuals would be of advantage to personnel at all levels of the Company. The crew a. The crewmembers were properly licensed. b. Working hours and rest periods prior to the incident were within the limits prescribed by regulations. c. The proficiency checks for both pilots were valid. d. Both pilots had gone through the company's technical and operational flight training without waivers. e. Both pilots had received the planned CRM company training. Organisation and management a. Icelandair is organized and managed in accordance with the requirements of JAR-OPS 1 and the Icelandic CAA. b. A more clear documentation of the philosophy and the policies would be of advantage to personnel in the company.</p>						
<p>Incident grave</p> <p>Abnormal maneuvering on approach</p> <p style="text-align: right;">Data OACI - ADREP complet OACI</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
21/07/2007	Melbourne Aerodrome - Australie	Transport public - Service régulier - International - Passagers	VH-VQT - AIRBUS - A320 Turboréacteur double flux	Aucun	Aucun	Incident grave M: B:
<p>OTHR: Autre</p> <p>DRN: On 21 July 2007, an Airbus Industrie A320-232 aircraft was being operated on a scheduled international passenger service between Christchurch, New Zealand and Melbourne, Australia. At the decision height on the instrument approach into Melbourne, the crew conducted a missed approach as they did not have the required visual reference because of fog. The pilot in command did not perform the go-around procedure correctly and, in the process, the crew were unaware of the aircraft's current flight mode. The aircraft descended to within 38 ft of the ground before climbing. The aircraft operator had changed the standard operating procedure for a go-around and, as a result, the crew were not prompted to confirm the aircraft's flight mode status until a number of other procedure items had been completed. As a result of the aircraft not initially climbing, and the crew being distracted by an increased workload and unexpected alerts and warnings, those items were not completed. The operator had not conducted a risk analysis of the change to the procedure and did not satisfy the incident reporting requirements of its safety management system (SMS) or of the Transport Safety Investigation Act 2003. As a result of this occurrence, the aircraft operator changed its go-around procedure to reflect that of the aircraft manufacturer, and its SMS to require a formal risk management process in support of any proposal to change an aircraft operating procedure. In addition, the operator is reviewing its flight training requirements, has invoked a number of changes to its document control procedures, and has revised the incident reporting requirements of its SMS. In addition to the safety action taken by the aircraft operator the aircraft manufacturer has, as a result of the occurrence, enhanced its published go-around procedures to emphasise the critical nature of the flight crew actions during a go-around. PRN: While the crew was conducting a go around the aircraft failed to go into speed reference system (SRS) mode. The investigation is continuing.</p>						
<p>Incident grave</p> <p>Serious Incident 200705576 VH-VQT: Go-around event, Melbourne Aerodrome 21 July 2007</p>						
<p><i>Data</i></p> <p>OACI - Notification initiale OACI OACI - ADREP préliminaire OACI OACI - ADREP complet OACI OACI - Rapport final OACI</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
31/07/2008	Owatonna, Minnesota - Etats-Unis	Transport public - Service non régulier - Intérieur - Passagers	N818MV - BRITISH AEROSPACE - 125 SERIES 800 Turboréacteur double flux	Mortelles	Détruit	Accident M: 8 B:
<p>LOC-I: Perte de contrôle en vol</p> <p>IN: Loss of control and impact following go-around attempt during landing, a/c destroyed.</p>						
<p>Accident</p> <p>Notification initiale OACI - Notification initiale OACI</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
27/11/2008	Au large de Canet-Plage (66) - France	Aviation générale - Autre - Essai/expérimental/contrôle après maintenance	D-AXLA - AIRBUS - A320 Turboréacteur double flux INTERNATIONAL AERO ENGINES (IAE) - V2500 INTERNATIONAL AERO ENGINES (IAE) INTERNATIONAL AERO ENGINES (IAE)	Mortelles	Détruit	Accident M: 7 B:
<p>UNK: Inconnu ou indéterminé LOC-I: Perte de contrôle en vol In: Collision with sea during the approach to RWY 33.</p> <p>Accident Collision avec la mer en approche</p> <p style="text-align: right;"><i>Préliminaire</i> OACI - Notification initiale OACI OACI - ADREP préliminaire OACI</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
13/12/2008	near London Gatwick - Royaume Uni	Transport public - Service régulier - International - Passagers	G-MONK - BOEING - 757-200 Turboréacteur double flux ROLLS-ROYCE RB211-535E4	Aucun	Aucun	Incident grave M: B:
<p>UNK: Inconnu ou indéterminé IN: Stick shaker activated during app to London, Gatwick. The a/c went around and stick shaker activated a second time. The a/c recovered for another app and landed.</p> <p>Incident grave</p> <p style="text-align: right;"><i>Notification initiale</i> OACI - Notification initiale OACI</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
30/06/2009	Approach to Moroni Hahaia - Comores	Transport public - Service régulier - International - Passagers	70-ADJ - AIRBUS - A310 Turboréacteur double flux PRATT & WHITNEY, USA - PW 4000	Mortelles	Détruit	Accident M: 152 B: 1
<p>UNK: Inconnu ou indéterminé</p>						

PRN: At the expected time of arrival to approach fix for rwy 20, the controller called the crew of flight Y626 without obtaining a response. Remains of the plane were found at sea. IN: Crashed on sea. Unofficial From the BBC: Yemen jet crashes in Indian Ocean - A Yemeni airliner with 153 people on board has crashed in the Indian Ocean near the Comoros archipelago. Some bodies have been spotted, a Yemeni aviation official said, and wreckage of the plane located. It is not clear whether there were survivors. The Airbus 310 flight Y626, operated by Yemeni carrier Yemenia Air, was flying from the Yemeni capital Sanaa. It is not clear what caused the crash but officials say there was bad weather in the area at the time. French Transport Minister Dominique Bussereau told French radio the weather rather than the plane itself was the likely problem. "They are saying the plane was making its approach, that it pulled out of the approach and then tried another approach that went wrong," he told French radio. Reports say the plane was due in the Comoros capital Moroni at about 0230 (2230GMT on Monday). Most of the passengers had travelled to Sanaa from Paris or Marseille on a different aircraft. The flight on to Moroni was also thought to have made a stop in Djibouti. There were 147 passengers, including three babies, and 11 crew on board. An airport source told AFP news agency that 66 of the passengers were French, although many are thought to have dual French-Comoran citizenship. This is the second air tragedy this month involving large numbers of French citizens. On 1 June an Air France Airbus 330 travelling from Rio de Janeiro to Paris plunged into the Atlantic, killing all 228 people on board. 'Aborted landing' A search is under way, with the French military assisting with the operation. Officials told AFP that wreckage from the plane, an oil slick and bodies had been spotted in the water a few kilometres from Moroni, on the island of Njazidja (Grande Comore). "The weather conditions were rough; strong wind and high seas," Yemenia official Mohammad al-Sumairi told Reuters news agency. The BBC's Will Ross, in Kenya, says that given the fact the crash happened during the night and in the sea, the chances of finding any survivors are slim. The three Comoros islands are about 300km (190 miles) northwest of Madagascar in the Mozambique channel. A resident near the airport told the BBC about 100 people were trying to get into the airport to find out more information, but without much success. The airline Yemenia is 51% owned by the Yemeni government and 49% by the Saudi government. In 1996, a hijacked Ethiopian airliner came down in the same area - most of the 175 passengers and crew were killed. Unofficial From Aviation Herald: A Yemenia Airbus A310-300, registration 7O-ADJ performing flight Y-626 (dep Jun 29th) from Sana'a (Yemen) to Moroni Hahala (Comores) with 147 passengers and 11 crew, disappeared from radar while on approach to Moroni about 6 minutes prior to estimated arrival at around 1:30am (Jun 29th 22:30Z). The airplane was on the outbound leg of the instrument approach and during the turn back towards the runway, when it disappeared. On Tuesday morning (Jun 30th around 05:00Z) a boat discovered debris of the missing airliner in the Indian Ocean. There are no sign of survivors, several bodies have been sighted. The airline reports 142 passengers and 11 crew. The Comores Foreign Ministry said however, that number was incorrect and 147 passengers were on board. The airplane had departed Sana'a with a delay of 90 minutes at 21:30L.

Accident Crash: A310 near Moroni, impacted ocean

Préliminaire
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OACI - ADREP préliminaire OACI

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
23/09/2009	AD Paris CDG - France	Transport public - Service régulier - International - Passagers	F-GRHU - AIRBUS - A319 Turboréacteur double flux CFM INTERNATIONAL - CFM 56	Aucun	Aucun	Incident grave M: B:
CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle						
PRN: Vol Moscou - Paris CDG. En approche finale piste 27 R de l'aérodrome de Paris CDG, aux minima, le commandant de bord exécute une remise des gaz en raison des conditions météorologiques. La perte d'altitude qui s'ensuit entraîne le déclenchement de l'alarme GPWS "SINK RATE". Le pilote en fonction déconnecte toutes les aides au pilotage et récupère l'avion. Le point bas de la trajectoire est enregistré à 76 pieds.						
Incident grave						
Perte d'altitude en remise de gaz, alarme GPWS						
<i>Préliminaire</i> Bulletin TP OACI - ADREP préliminaire OACI						

PARG SUPPLEMENTAIRES ISSUES DE LA BASE BEA

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
25/02/2009	AD Amsterdam - Pays-Bas	Transport public - Service régulier - International	TC-JGE - BOEING - 737-800 Turboréacteur double flux	Mortelles	Détruit	Accident M: 9 B:

CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle
Vol AD Istanbul (Turquie) - AD Amsterdam (Pays-Bas) En finale pour la piste 18R, l'avion heurte le sol 1 000 mètres environ avant le seuil.
Accident Collision avec le sol en finale **Ciôturé**

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
09/03/2008	Kimpo International Airport - Corée, République de	Transport public	HL7242 - AIRBUS - A300-600	Aucun	Légers	Incident M: B: 11

ARC: Contact anormal avec la piste/le sol LOC-I: Perte de contrôle en vol
Vol Cheju - Séoul/Kimpo. Lors de l'atterrissage en piste 32L, l'avion rebondit. Les destructeurs de portance se déploient. Le commandant de bord (PF) applique la poussée inverse. Jugeant que le rebond est important, il décide d'effectuer une remise de gaz, qu'il initie alors que les inverseurs de poussée sont toujours en transit, que la poussée est toujours sur IDLE et que la vitesse est faible (VLS-20 kts). La queue de l'avion touche la piste. Le deuxième atterrissage s'effectue sans autre problème. Ci-après, sont repris des extraits du rapport publié par l'organisme d'enquête coréen. Executive Summary On March 9, 2008, about 17:23, Korean Air flight 1250 (hereinafter referred to as "flight 1250", A300-600 (Registration HL7242), took off from Jeju International Airport for Gimpo International Airport (hereinafter referred to as "Gimpo Airport"). About 18:07, while attempting to land on runway 32L of Gimpo Airport, flight 1250 happened to be a nose up tendency following a rough landing. The captain thought it a severe bounce and conducted the go-around procedures. However, the aircraft pitch attitude exceeded its geometry limits during the process, causing the aircraft tail to strike the runway surface. Flight 1250 was a regularly scheduled domestic passenger service flight operating under instrument flight rules (IFR). One captain, one first officer, and six flight attendants, and 260 passengers were on board at the time of the incident, but there were no injuries to persons due to this incident. Conclusions Findings Related to Probable Causes The captain judged the nose up tendency of the aircraft after touchdown as a high bounce and conducted the go-around procedures, and during the process, the aircraft tail had struck the runway due to the pitch attitude of aircraft exceeding the aircraft geometry limits. Findings Related to Risk 1. The go-around control was conducted in the condition that the aircraft touched down on runway and the thrust reverser is initiated. 2. The pitch attitude was increased to more than 11.2° before the engine thrust reached to a takeoff performance. 3. The first officer did not provide any advice at all while the captain made the wrong judgments and conducted the improper controls. Other Findings 1. The flight crew of flight 1250 held appropriate licenses to the flight and the aircraft held the valid airworthiness certificate and the operating limitations specification. 2. The flight crew of

flight 1250 took an adequate rest before the flight and it was confirmed that there were no factors which may affect the flight medically. 3. The regulated maintenance was performed on flight 1250 and there were no defects in the airframe or system found before the occurrence of accident. 4. The incident flight landed in the limits of the Landing Weight Center of Gravity Percentage Mean Aerodynamic Chord (LDW C.G % MAC) with the appropriate fuels. 5. For the weather at Gimpo Airport, the visual meteorological condition prevailed at the time when flight 1250 landed and there was no gust or wind exceeding the crosswind limits. 6. Flight 1250 kept the normal approach speed in the final approach phase for landing and did not make hard landing. 7. The pitch attitudes of aircraft that the aircraft tail of A300-600 touches the runway surface are 11.2° for main landing gear with the aircraft weight and 12.8° for main landing gear without the aircraft weight. 8. According to A300-600 POM, the go-around procedures shall be conducted for high bounce exceeding 5 feet during landing. 9. The captain of flight 1250 had experienced the touch & go and the go-around with the simulator during the upgrade training to the captain of A300-600. 10. Due to the strike of aircraft tail with runway, tail skid shoe, drain master, aircraft skin, lower skin skid and rivet, and keel beam support in the both side of inner aircraft tail were damaged. Safety Recommendations Under the findings of the flight 1250 incident, the ARAIB develop safety recommendations to Korean Air as follows: Korean Air 1. Review the plan to reinforce the go-around training in the captain upgrade training program. 2. Conduct the intensive go-around training using the simulator training provided additionally before the operation experience. (AIR 0805-1) 3. Provide the opportunities to experience the go-around in the various points during approach and landing. (AIR 0805-2) 4. Emphasize during training that "a full-stop landing must be completed after reverse thrust is selected." (AIR 0805-3)

Cloturé
Autre - National

Incident Heurt du fuselage lors d'un atterrissage interrompu

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
30/03/2007	AD Abidjan - Côte d'Ivoire	Transport public - Service régulier - International - Passagers	F-GZCC - AIRBUS - A330-200 Turboréacteur double flux GENERAL ELECTRIC USA - CF6 SERIES	Aucun	Aucun	Incident grave M: B:
<p>CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle</p> <p>- Vol Paris CDG - Abidjan. A l'arrivée à Abidjan, l'équipage prépare une procédure ILS pour la piste 21. Il fait nuit, l'environnement est orageux mais le terrain dégagé. Pendant la finale, l'équipage constate un vent arrière significatif. Vers 100 ft, le vent arrière augmente et dépasse 10 noeuds. Le commandant de bord, PF, décide d'interrompre l'approche. L'altitude de remise de gaz rapidement atteinte, le PF agit sur la commande de profondeur pour diminuer l'assiette puis réduit la poussée. La vitesse augmente rapidement et l'indication LVR CLB clignote sur le FMA. Pendant ce temps, d'autres actions à piquer sont enregistrées et l'assiette diminue vers des valeurs négatives. Le vario atteint -4000 pieds/minute. Le PF réagit par une action à cabrer, le PNF intervient également. Des alarmes Sink Rate et Pull Up sont déclenchées par le GPWS. Après analyse de la météo et du vent sur le terrain, l'équipage prépare et réalise une approche classique pour la piste 03. Le reste du vol et l'atterrissage se déroulent normalement.</p>						
<p>Incident grave Alarme GPWS Sink Rate et Pull Up suite à perte d'altitude lors de la remise de gaz.</p> <p>Cloturé Avril 2008</p>						

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
03/05/2006	Mer Noire - Russie, Fédération de	Transport public - Service régulier - International - Passagers	EK-32009 - AIRBUS - A320 Turboréacteur double flux CFM INTERNATIONAL - CFM 56	Mortelles	Détruit	Accident M: 113 B:
<p>CFIT: Collision/quasi-collision avec relief/obstacle sans perte de contrôle</p> <p>Findings 1. The A-320 EK-32009 aircraft was owned by the FUNNEL company (Cayman Islands) and was operated by Armavia. The aircraft had valid registration and airworthiness certificates issued by the Aviation Administration of the Republic of Armenia. 2. Aircraft maintenance was carried out by Sabena Technics (Belgium) specialists in accordance with the agreement with Armavia. Additional work was carried out by Armaviamaintenance personnel. No deficiencies in the maintenance service were revealed that could have influenced the outcome of the last flight. 3. The aircraft, its systems and engines were serviceable on departure from Yerevan. The Investigation Commission did not bring to light any evidence of any aircraft system or engine failure during the last flight. 4. The aircraft's movements were completely determined by changes in the control surfaces and the engine modes. The autopilot was working according to the established work logic. Aerodynamic and thrust performance of the aircraft corresponded to the characteristics of the aircraft type. There were no external influences on the aircraft (wind shear, etc.). 5. The aircraft had a sufficient amount of the correct fuel for safe completion of the flight. The take-off, landing weight and balance of the aircraft did not exceed the limitations specified in the A320 FCOM. 6. There was no disintegration of the aircraft in the air. All aircraft structural damage resulted from the impact with the water. 7. The crew had valid pilot's licenses and medical certificates. Their qualifications and state of health corresponded to the character of the mission performed and allowed safe execution of the flight. According to the documents presented, the professional skill level of the flight crew members was in accordance with Armenian CAA regulations. 8. Armavia does not exercise operational supervision of the A320 aircraft crews' flights by using flight recorder information, which made it impossible to fully evaluate the professional skill level of the flight crew members. 9. According to the data presented, the pre-flight rest of the crew prior to the departure to the Sochi airport consisted of over 24 hours at home. However, the crew's cockpit conversations indicated their fatigue, which could have influenced the outcome of the flight. The flight was performed at night, when the probability of mistakes is especially high. 10. The meteorological and air navigation support for the flight met the requirements of the existing regulatory documents. Air traffic control service personnel, including personnel from the areas of responsibility in Sochi, Yerevan, Tbilisi and Rostov, had valid licenses as civil aviation specialists with the required ratings. 11. At the time of the accident the meteorological conditions were complicated and did not correspond to the meteorological minima of the runway 06 of the Sochi airport due to the «cloud ceiling» parameter. In the time before the accident, the weather conditions at Sochi airport were unstable. The crew was informed of the weather changes by the air traffic controller in a timely manner. Inaccuracies committed by the air traffic controller while reporting the weather were not directly connected with the cause of the aircraft accident, but they influenced the initial decision of the crew to return to the departure aerodrome. 12. The emotional reaction of the crew to the air traffic controller's information about the actual weather changes below the established meteorological minima was negative and could have led to an increase in the psycho-emotional strain of the crew members during the final stage of flight. 13. The approach for a landing on runway 06 was made with the use of ILS in an automatic mode. There was no deviation of the aircraft from the established glide slope profile. All the radio navigation aids at Sochi airport were fully serviceable. 14. The tower controller's instruction to abort the descent and perform a righthand climbing turn to 600 m that was given to the crew after the cloud ceiling decreased below the established minima for RW 06, did not fully comply with the provisions of the controller's operational manual, though it did not directly influence the outcome of the flight. According to the AIP of Russia the controller had a right to refuse the landing. It should be noted that a number of AIP items contradict each other and are ambiguous. 15. According to the Armavia Operations Manual, the crew must initiate the go-around manoeuvre on receiving weather information below the minima, even if the reliable visual contact is established with the runway or with landmarks. 16. At the beginning of the aborted-approach manoeuvre the crew did not comply with the standard go-around procedure stipulated by the FCOM, regarding applying takeoff thrust, retracting flaps by one step and retracting landing gear. The climb in the OPEN CLIMB mode and the right-hand turn in the HDG mode were carried out under autopilot control in the landing configuration with the autofrust working in the speed-hold mode. The landing gear was extended until the end of the flight. The mode in question is not described in the A320 AFM. 17. During flight under autopilot control, the LOW ENERGY WARNING signal was activated. The crew had properly reacted to this warning by setting the thrust levers in the takeoff position in full compliance with the AFM. It must be noted that the crew actions on activation of this warning are specified in the ABNORMAL PROCEDURE section of the A320 QRH. 18. Simultaneously with an increase in engine power the crew (the Captain) switched off the autopilot in the normal manner using the take-over pushbutton on the side stick. Most probably, the cause of the autopilot disengagement was the fact that the aircraft dynamics and attitude during this manoeuvre</p>						

were unexpected by the Captain: pitch angle +21°, roll angle +25°, decrease in speed, the activated «SPEED SPEED SPEED» warning as well as the fact that he could not predict further changes in these parameters. Throughout the rest of the flight the airplane was controlled manually, with the both FDs switched on. 19. After disengagement of the autopilot the Captain was pilot flying. His actions, originally, led to the plane making a stabilized turn to the right with a roll of about 20 degrees, climbing at a rate of 2-3 m/s and accelerating. The stabilized turn proceeded until the magnetic heading attained the value differing from the runway heading by 90 degrees. Subsequently the Captain controlled the plane to descend with a pitch angle up to 12 degrees pitch down and a roll angle up to 40 degrees to the right, which at maximum continuous power resulted in a substantial increase in IAS and the vertical rate of descent, as well as in activation of EGPWS and CRC warnings (excessive speed in flight with high-lift devices extended). The actual reason of such actions by the Captain could not be determined. Probably, such inadequate piloting was caused by the lack of monitoring of such flight parameters as pitch, altitude and roll, at night in difficult weather conditions with a background of fatigue and psycho-emotional stress. 20. After the activation of the EGPWS warning, both pilots made control inputs simultaneously. The take-over button was not pressed by either of the pilots. The control inputs by the Captain and the co-pilot, both in roll and pitch were not coordinated and made in opposite directions. The DUAL INPUT warning was not activated because of its lower priority compared to the EGPWS warning. Before the airplane collided with the water the crew had almost completed retraction of the wing high-lift devices in several steps (the slats were still moving). Neither of the pilots was monitoring the aircraft descent parameters or fulfilled the FCOM requirements for crew actions after EGPWS warning activation, which are stated in the "EMERGENCY PROCEDURE" Section of the A320 QRH. The crew's attention might have been distracted by a long 20-second controller's message regarding a change in the approach procedure, which was recorded by the CVR along with the EGPWS and CRC warnings that were sounding in the background. The controller issued the message in accordance with the controller's operational manual, after the crew contacted him. 21. Experiments on the simulators showed: - Provided that the standard «GO AROUND» and «MISSED APP» procedures prescribed by the FCOM are followed, the aircraft performs the go-around manoeuvre with no difficulties, in both the automatic and director modes. - In the case where the autopilot remains engaged, while the aircraft is performing a manoeuvre similar to that in the accident flight, the autopilot normally completes the go-around procedure, with a maximum pitch angle not exceeding 21.5°, the short-time decrease of speed not exceeding 10-12 kt, with activation of the «SPEED SPEED SPEED» warning, and without activation of the «PULL UP» function. - After activation of the «PULL UP» warning the FCOM recommendations are implemented, for the parameters similar to those in the accident flight (indicated airspeed 270...280 kt, pitch angle -5.5°...-6.5°, roll angle about zero and the wing high-lift devices in the 18°/0° position), the decrease in altitude during aircraft recovery from descent is about 200...230 ft. Conclusion The fatal crash of the "Armavia A-320 EK-32009 was a CFIT accident that happened due to collision with the water while carrying-out a climbing manoeuvre after an aborted approach to Sochi airport at night with weather conditions below the established minima for runway 06. While performing the climb with the autopilot disengaged, the Captain, being in a psychoemotional stress condition, made nose down control inputs due to the loss of pitch and roll awareness. This started the abnormal situation. Subsequently the Captain's inputs in the pitch channel were insufficient to prevent development of the abnormal situation into the catastrophic one. Along with the inadequate control inputs of the Captain, the contributing factors to development of the abnormal situation into the catastrophic one were also the lack of necessary monitoring of the aircraft descent parameters (pitch attitude, altitude, vertical speed) by the co-pilot and the absence of proper reaction by the crew to the EGPWS warning. Shortcomings found during investigation 1. During descent and approach the crew constantly had irrelevant conversations that had nothing to do with the crew operations manual, and therefore violated the requirements of ROLRGA RA-2000, Section 8.3.4.2. The A320 FCTM, which was approved by the Civil Aviation Administration of the Republic of Armenia and according to which Captain G.S. Grigoryan passed his training before starting solo flights with the airline, does not contain the requirement for passing the Upgrade to Captain programme. Captain G.S. Grigoryan did not pass this training. This training programme was made mandatory in the next revision of the FCTM. 3. The Flight Operations Department of Armavia does not comply with the provisions of ROLRGA RA Section 11.2 and ICAO Annex 6 Part 1 Chapter 3, which require airlines to analyze flight operations with the use of the FDR and CVR recordings for aircraft with the certified MTOW exceeding 27 000 kg. 4. In violation of ROLRGA RA-2000 Sections 4.5.33 and 6.1.5. Armavia airline does not keep records on the approaches and landings in complicated weather conditions performed by their Captains. 5. The following deficiencies were identified in air traffic management: - At 21:16 the approach controller of the Sochi aerodrome advised the crew of the trend weather forecast for landing as 150 by 1500 and did not identify the trend as "AT TIMES". This inaccuracy committed by the controller while reporting the weather to the crew was not directly connected with the cause of the aircraft accident, but it influenced the initial decision of the crew to return to the departure aerodrome. - At 22:01:37 the approach controller advised the crew of the observed weather at Sochi aerodrome as at 22:00 and by mistake said the cloud ceiling was "considerable 1800", instead of 180 m, however this did not influence the Captain's decision. - At 22:03:29 the crew did not report, and the holding controller did not request the crew to report the selected system and mode of approach, which does not meet the requirements of the Holding Controller's Operation Manual, Section 4, item 4.2.1, of Sochi aerodrome. - At 22:11:38 the final controller at Sochi aerodrome was informed by the weather observer on the actual weather at Sochi aerodrome with the cloud ceiling at 100 m, which was below the established minima (cloud ceiling 170 m, visibility 2500 m). Based on this information, the final controller instructed the crew: "Abort descent, clouds at 100 m, right-hand climbing turn to 600 meters". The controller's actions did not comply with the requirements of the Civil Flight Operations Guidance 85 Section 6.5.16 and the Final Controller's Operation Manual, items 4.3 and 4.3.1. However, according to the AIP of Russia the controller had a right to forbid the landing. It should be noted that a number of AIP items contradict each other and are

ambiguous. 6. Meteorological support: - The weather forecast for the Sochi aerodrome for the period from 18:00 to 03:00 was not verified with regard to visibility in the "At times" group; - In violation of the Guidance for Meteorological Support in Civil Aviation 95, Sections 4.3.1 and 4.4.1 d) and the instruction for meteorological support at Sochi aerodrome, the observer did not complete the special weather report at 22:11, when the cloud ceiling descended to 100 m, i.e. to a value stipulated in Annex 8 of the Criteria For Issuance of a Special Weather Report; - The recommendation for ATIS broadcast content stipulated in the joint Order No. 62/41 "On approval and implementation of Instruction for ATIS broadcast content in English and Russian languages" of 20.03.2000 issued by the Federal Air Transport Administration and Hydrometeorology and Environment Monitoring Service was not entirely fulfilled. 7. A320 aircraft: - in course of reading out the FDR data, a number of discrepancies were found in the documentation describing the logic of binary signal recordings; - While performing manoeuvres in the landing configuration with the autopilot and autothrust engaged, the LOW ENERGY WARNING may sound, which Airbus considers as an abnormal situation. 5. SAFETY RECOMMENDATIONS 5.1 To aviation administrations of the CIS countries: - To conduct briefings with the flight crews, controllers and technical and engineering personnel to review the circumstances and the causes of the accident. - To ensure fulfilment of the requirements of ICAO Annex 6 Part 1 Chapter 3 for mandatory analysis of performed flight operations based on the CVR and FDR recordings for the aircraft with a certified MTOW exceeding 27000 kg. - To draw the attention of A320 crews to the necessity of immediate response to activation of the EGPWS warning (even if other warnings are on at the same time) in the case of instrument flight, or flight in difficult weather conditions, or flight in the mountains. To introduce the relevant training programmes to practice these actions. To consider the advisability of extending these recommendations to other aircraft types. - To review the necessity of enhancing crew simulator training in the section on flying in Flight Director mode, especially during approach and go-around. - To bring the content of the AIP, as well as the ATC controllers' job descriptions and operations manuals, into compliance with the standards and practices recommended by ICAO, with regard to clearance for approach and landing. 5.2 To aviation administrations of CIS countries jointly with the industrial and scientific and research organizations: - To organize and conduct research into the conditions under which a crew may lose spatial orientation and/or upset aircraft attitude may develop, and to issue practical recommendations to enhance flight safety. In particular, to evaluate the effect of in-flight acceleration illusions. Based on the research, to develop and introduce a specialized course for recurrent training of crews that should contain both classroom and flying training. 5.3 To the Civil Aviation Administration of the Republic of Armenia and Armavia airline administration: - To include in the A320 FCTM the mandatory requirement for trainee Captains to pass the Upgrade to Captain programme. - To keep records on approaches performed in difficult weather conditions by A320 crews, in accordance with the regulatory documents relating to the organization of flight operations in civil aviation of the Republic of Armenia. - To organize FDR and CVR readouts for analysis of A320 flight operations, in order to reveal any errors and deficiencies in crews' piloting technique, and to develop measures for their prevention. - To point out to aircraft crews that irrelevant conversations in the cockpit, especially during the climb and descent phases, are prohibited. 55 - To consider the necessity of enhanced simulator training for A320 crews. - To develop a procedure for storage of A320 operational documentation that would regulate the conditions of keeping the originals and copies of the documents by both Sabena Technics and Armavia airline. 5.4. To the Federal Air Navigation Service of the Russian Federation: - To review the possibility of updating of AIP of the RF and other regulatory documents for the purpose of unification of ATC procedures for issuing instructions for go-arounds to aircraft operated by domestic and foreign airlines, and to incorporate the relevant amendments into the Rules and Phraseology for In-flight Radio Communications and ATC. - To review the possibility of incorporation of the Air Traffic Service procedures in the aerodrome services provided in accordance with ICAO recommendations (Document 4444, Attachment 11) and the Order No. 103/DV-116 of 26.10.95 issued by Department of Air Transport. 5.5. To the Federal Service for Hydrometeorology and Environmental Monitoring: - To review the possibility of purchasing and installing of a new Doppler weather radar at the civil aviation meteorological station in Sochi. - To undertake measures to eliminate the shortcomings in the meteorological support to civil flight operations at Sochi aerodrome brought to light in the course of the investigation. 5.6. To the federal state unitary enterprise "State Corporation for Air Traffic Management": - To restore complete ATIS broadcasting for Sochi aerodrome, including weather data. - To clarify to controllers of the Sochi Air Traffic Support of the groups of BECMG and TEMPO changes in the weather forecasts for the aerodrome and of the two-hour "trend" weather forecasts. 5.7. To Airbus: - To eliminate the discrepancies in the documentation describing the logic of the binary signals recorded by the FDR. - To introduce in the A320 FCOM information clarifying specific features of activation of the OPEN CLIMB mode in various flight conditions. - To introduce in the A320 FCOM a warning about possible activation of the LOW ENERGY WARNING, when the aircraft performs manoeuvres in the landing configuration with considerable changes in pitch and roll angles. - To review the expediency of alteration of the type and/or priority of the EGPWS warning to ensure more reliable pilots' response to its activation. 5.8. To eliminate the shortcomings revealed during investigation of the aviation accident.

Accident Collision avec la mer après remise des gaz

Cloturé
OACI - Rapport final OACI

Date	Lieu	Exploitation	Type d'aéronef	Dommages corporels	Dommages matériels	Total des blessures à bord
24/09/1994	AD Orly (94) - France	Transport public	YR-LCA - AIRBUS - A310 Turboréacteur double flux	Aucun	Aucun	Incident M: B:
LOC-I: Perte de contrôle en vol						
<p>- Vol Bucarest - Orly. Pendant l'approche sur Paris Orly, par bonnes conditions météorologiques, l'avion se met soudainement en montée en prenant une forte assiette longitudinale et décroche. L'équipage parvient à récupérer le contrôle de l'avion et se représente à l'atterrissage. Causes probables Les causes directes des attitudes inusuelles et du décrochage subis par l'avion sont un mouvement du PHR vers la position à plein cabrer et une augmentation rapide de la poussée, manoeuvres toutes deux commandées par le pilote en fonction, à la suite d'une réversion de mode de l'AFS qui n'a pas été comprise. Le couple cabreur a provoqué une prise d'assiette brutale que l'équipage n'a pas pu et ne pouvait pas contenir à la profondeur. Les éléments suivants ont contribué à l'incident : - Une approche trop rapide, due à un début de descente tardif, suivie par un raccourcissement de la procédure standard. - Un travail insuffisant en équipage. - La sélection prématurée de l'altitude de remise des gaz et la prise précipitée de la configuration bec et volets à 20-20, qui ont entraîné l'activation de la protection en vitesse. - La difficulté de compréhension de l'action de l'automanette augmentant la poussée dans sa fonction de protection contre les hautes vitesses.</p>						
<p>Incident Décrochage en approche</p> <p style="text-align: right;">Clôturé Rapport bleu Mars 2000</p>						

DONNEES ISSUES DE LA BASE DU NTSB

National Transportation Safety Board
Washington, DC 20594

Printed on : 8/18/2010 11:42:56 AM

Brief of Accident

Adopted

DCAR85AA009 File No. 311	01/09/1985	KANSAS CITY, KS	Aircraft Reg No. N357Q	Time (Local): 07:01 CST		
Make/Model: Lockheed / 188A	Engine Make/Model: Allison / D-501-D13	Aircraft Damage: Destroyed	Number of Engines: 4	Fatal	Serious	Minor/None
Operating Certificate(s): Flag Carrier/Domestic	Name of Carrier: TPI INTERNATIONAL AIRWAYS, INC	Type of Flight Operation: Non-scheduled; Domestic; Cargo	Reg. Flight Conducted Under: Part 121; Air Carrier	Crew Pass	0	0
Last Depart. Point: DETROIT, MI				Condition of Light: Dawn		
Destination: KANSAS CITY, MO				Weather Info Src: Weather Observation Facility		
Airport Proximity: Off Airport/Airstrip				Basic Weather: Visual Conditions		
				Lowest Ceiling: 1000 Ft. AGL, Overcast		
				Visibility: 5.00 SM		
				Wind Dir/Speed: 080 / 010 Kts		
				Temperature (°C): -4		
				Precip/Obscuration: Fog; No Precipitation		
Pilot-in-Command Age: 54				Flight Time (Hours)		
Certificate(s)/Rating(s) Airline Transport, Multi-engine Land, Single-engine Sea				Total All Aircraft: 14500		
Instrument Ratings Airplane				Last 90 Days: Unk/Nr		
				Total Make/Model: 5000		
				Total Instrument Time: 1450		

DURING ARRIVAL TO THE KANSAS CITY DOWNTOWN ARPT, THE FLT WAS VECTORED FOR A VOR RWY 3 APCH, THEN WAS CLEARED FOR THE APCH & TO CIRCLE & LAND ON RWY 36. ON FINAL APCH, THE ACFT WAS HI & WAS NOT IN A POSITION TO LAND, SO THE FLT WAS CLEARED TO CIRCLE LEFT FOR ANOTHER APCH TO LAND. THE AIRCREW ACKNOWLEDGED & BEGAN CIRCLING LEFT WHICH TOOK THEM IN THE VICINITY OF THE FAIRFAX ARPT. A SHORT TIME LATER, THE ATC CONTROLLER CAUTIONED THAT THE FLT MIGHT BE LINING UP FOR THE FAIRFAX ARPT. SUBSEQUENTLY, THE CREW INITIATED A MISSED APCH & WERE INSTRUCTED TO TURN TO 360 DEG & CLIMB TO 3000 FT. THE ACFT BEGAN A STEEP CLIMB TO 3100 FT, STALLED & ENTERED A STEEP DESCENT. BEFORE THE DESCENT WAS ABORTED, THE ACFT IMPACTED IN A PUBLIC WATER TREATMENT PLANT. CVR RECORDINGS INDICATED THAT THE 1ST OFFICER WAS FLYING THE ACFT DURING THEEN ROUTE DESCENT, VOR APCH & CIRCLING APCH, THEN THE CAPTAIN TOOK CONTROL DURING THE MISSED APCH. AN EXAM OF THE WRECK-AGE REVEALED NO EVIDENCE OF AN AIRFRAME OR POWERPLANT PROBLEM. ALSO, THERE WAS NO EVIDENCE THAT THE CARGO HAD SHIFTED.

Brief of Accident
Adopted 12/16/1993

DCA92MA022 File No. 1042	02/15/1992	SWANTON, OH	Aircraft Reg No. N784AL	Time (Local): 03:28 EST
Make/Model: Douglas / DC-8-63 Engine Make/Model: P&W / JT3D-7 Aircraft Damage: Destroyed Number of Engines: 4 Operating Certificate(s): Cargo Type of Flight Operation: Non-scheduled; Domestic; Cargo Reg. Flight Conducted Under: Part 121: Air Carrier			Fatal Crew 3 Pass 1	Serious 0 0
			Minor/None 0 0	
Last Depart. Point: SEATTLE, WA Destination: TOLEDO, OH Airport Proximity: Off Airport/Airstrip			Condition of Light: Night/Dark Weather Info Src: Weather Observation Facility Basic Weather: Instrument Conditions Lowest Ceiling: 400 Ft. AGL, Overcast Visibility: 2.00 SM Wind Dir/Speed: 090 / 013 Kts Temperature (°C): 1 Precip/Obscuration: Moderate - Rain, Fog	
Pilot-in-Command Age: 59			Flight Time (Hours)	
Certificate(s)/Rating(s) Airline Transport, Commercial; Multi-engine Land; Single-engine Land			Total All Aircraft: 18382 Last 90 Days: Unk/Nr Total Make/Model: 2382 Total Instrument Time: Unk/Nr	
Instrument Ratings Airplane				

THE FIRST OFFICER HAD MADE TWO ILS APPROACHES, BUT, FOR UNDETERMINED REASONS, FAILED TO PROPERLY CAPTURE THE ILS LOCALIZER AND/OR GLIDESLOPE. DURING THE SECOND MISSED APPROACH, THE CAPTAIN ASSUMED CONTROL OF THE AIRPLANE, HOWEVER, HE APPARENTLY BECAME SPATIALLY DISORIENTED, AND INADVERTENTLY ALLOWED AN UNUSUAL ATTITUDE TO DEVELOP WITH BANK ANGLES UP TO 80 DEG AND PITCH ANGLES UP TO 25 DEG. THE FIRST OFFICER ASSUMED CONTROL AND BEGAN LEVELING THE WINGS AND RAISING THE NOSE OF THE AIRPLANE, BUT IMPACT OCCURRED BEFORE THE UNUSUAL ATTITUDE RECOVERY WAS COMPLETED. THE OPERABILITY OF THE CAPTAIN'S ATTITUDE DIRECTOR INDICATOR AT THE TIME CONTROL WAS LOST IS UNCERTAIN.

DONNEES FOURNIES PAR LA FAA

INFORMATIONS ISSUES DE LA BASE DE DONNEES ASIAS

Data Source: ACCIDENT AND INCIDENT DATABASE
Report Number: 20060518009919C
Local Date: 18-MAY-06
Local Time:
City: FAIRBANKS
State: AK
Airport Name: FAIRBANKS INTL
Event Type: INCIDENT - AIR CARRIER
Mid Air Collision: NOT A MIDAIR
Aircraft Damage: MINOR
Aircraft Make: MCDONNELL-DOUGLAS-BOEING
Aircraft Model: MD-80
Aircraft Series: 83
Airframe Hrs:
Operator: ALASKA AIRLINES
Owner: ALASKA AIRLINES INC

(-23) ^PRIVACY DATA OMITTED^ F/O WAS PILOT FLYING, APPROACH BECAME UNSTABLE, AIRCRAFT LINED UP LEFT OF RUNWAY, GO AROUND WAS COMMANDED BY PIC, DURING GO AROUND RIGHT WING STRUCK RUNWAY.

INFORMATIONS ISSUES DE LA BASE DE DONNEES ASRS

Weather Conditions: VMC
Ceiling Single Value (ft): 5000
Light Condition: DAYLIGHT
Acft Make/Model Desc: A300
Acft Operator Desc: AIR CARRIER
Acft Far Part: PART 121
Acft Flight Mission: TEST FLIGHT
Acft Flight Phase: LANDING
Acft Flight Plan: IFR
Acft Nav in Use: FMS OR FMC
Flight Crew Count: 2
Flt Crew Exp (last 90 days): 100
Flt Crew Total Exp: 15000
Flt Crew Exp: 1200

AT SOME POINT AS WELL. I WAS ABOUT TO TAKE THE CTLS BUT DIDN'T BECAUSE HE STARTED TO RESPOND TO THE ACFT. DURING THIS TIME THE STICK SHAKER ACTIVATED. THE ACFT WAS ACCELERATED A BIT BUT THERE WERE MANY PITCH, ROLL, AND PWR ADJUSTMENTS. AS HE BANKED THE ACFT TO THE R TO MAKE A TEARDROP BACK TO THE FINAL FOR RWY XX, AND I TOLD TWR WE WERE NOT ABLE TO LAND ON RWY XX, THIS IS WHEN THE PF ALLOWED THE ACFT TO GET SLOW AGAIN AND, IN THE TURN, THE SHAKER ACTIVATED AGAIN FOR ABOUT 1 SECOND. I CONTINUED TO TELL THE CAPT TO FLY THE AIRPLANE. I ALSO RECOMMENDED THAT HE TURN ON THE AUTOPLT TO REDUCE WORKLOAD. AFTER THIS, THE FLT WAS SMOOTH. AS I WAS ABOUT TO CALL THE FLT ATTENDANTS, THEY CALLED ME AND I TOLD THEM THAT I WAS ABOUT TO MAKE A PA TO THE PAX. THE ACFT WAS CONFIGURED PROPERLY FOR LNDG AND WE MADE A SAFE, UNEVENTFUL LNDG IN ZZZ ON RWY XX. AFTER PARKING, I ASKED THE CAPT WHAT HAPPENED AND HE SAID HE WAS WORRIED ABOUT BUSTING ZZZ1'S AIRSPACE. I MADE IT CLR THAT THE ACFT SHOULD NEVER GET THAT SLOW ON A GAR AND THAT THE PROC SHOULD BE FULLY COMPLETED PRIOR TO COMMENCING ANOTHER APCH. I WALKED TO THE CABIN TO TALK TO THE FLT ATTENDANTS AND MAKE SURE THEY WERE OK. THEY WERE SHAKEN UP AND I BRIEFLY EXPLAINED THE SITUATION BUT ASKED THE FORWARD FLT ATTENDANT TO GO GET THE CAPT SO WE COULD DISCUSS IT. HE TOLD HER IT WAS A STANDARD GAR AND STAYED IN THE COCKPIT. TO MY KNOWLEDGE NO CREW DEBRIEF TOOK PLACE OTHER THAN WHAT I HAD SAID TO THE FLT ATTENDANTS. SUPPLEMENTAL INFO FROM CAN 798193: WE WERE APCHING RWY XX AT ZZZ WHEN WE HAD TO DO A GAR DUE TO AN ACFT ON THE RWY. I (THE CAPT) WAS FLYING. I CALLED FOR SET THRUST FLAPS 8 DEGS AND PUSHED THE THRUST LEVERS FORWARD TO THE TOGO DETENT. I NOW BELIEVE THAT I DID NOT PUSH THE TOGO BUTTON ON THE THRUST LEVERS. WE WERE GIVEN A TURN TO 090 DEGS AND CLRED TO 1500 FT. WE LEVELED AT 1500 FT AND WERE CLRED TO LAND ON RWY XX, HOWEVER, WE WERE ALMOST ABEAM THE END OF THE RWY ONLY ABOUT 1 MI TO THE S. BEFORE I REALIZED HOW CLOSE WE WERE, I PULLED THE PWR BACK TO DSND. I BELIEVE THIS IS WHEN THE ACFT SLOWED UP AND THE SHAKER WENT OFF. WE INFORMED THE TWR THAT WE COULD NOT LAND FROM THIS POS. WE WERE TOLD TO TURN R AND LAND OUT OF THE R-HAND TURN. WE TURNED AS INSTRUCTED AS I BELIEVED THIS WAS TO KEEP US OUT OF ZZZ2 AIRSPACE. THE TURN PUT US OVER THE TOP OF ZZZ1 AND WE THEN RECEIVED VECTORS TO A TEARDROP PATTERN TO RWY XX. IN RETROSPECT, I BELIEVE THAT WHAT THEY MEANT WAS TO CONTINUE ON THE 090 DEG HDG FOR A TEARDROP PATTERN TO RWY XX. I BELIEVE THAT I FAILED TO PUSH TO TOGO BUTTON AND THIS LED TO A DELAY IN TURNING THE AUTOPLT ON. THIS WOULD HAVE REDUCED THE WORKLOAD AND ALLOWED ME TO HAVE MORE TIME FOR A BETTER PERSPECTIVE. THE FO TENSED UP AND COM SUFFERED. THIS WAS AN ANOMALY. I HAVE DONE MANY GARS OVER THE YRS AND THEY ALL WENT VERY WELL. I AM EMBARRASSED AND PERPLEXED THAT THIS WENT TOO FAR FROM THE NORMAL. USUALLY, WHEN I SEE A POSSIBLE GAR SITUATION DEVELOPING, I REVIEW THE PROC BRIEFLY WITH THE PNF TO MAKE SURE THAT WE ARE ON THE SAME PAGE. I REALLY THOUGHT THE ACR WOULD MAKE IT OFF THE RWY THIS TIME SO I DID NOT. PERHAPS IF I HAD, IT WOULD HAVE GONE AS SMOOTH AS USUAL. SUPPLEMENTAL INFO FROM ACN 799432: WE WERE IN OUR BRACING POS READY TO LAND IN ZZZ WHEN WE PULLED UP

Acft Make/Model Desc:	COMMERCIAL FIXED WING
Acft Operator Desc:	AIR CARRIER
Acft Far Part:	PART 121
Acft Flight Mission:	PASSENGER
Acft Flight Phase:	LANDING
Acft Flight Plan:	IFR
Acft Nav in Use:	FMS OR FMC
Flight Crew Count:	2
Flt Crew Exp (last 90 days):	200
Flt Crew Total Exp:	6250
Flt Crew Exp:	4200

WE WERE ON THE ILS INTO BZN, MT. AFTER CROSSING MANNI (FAF) WE SWITCHED TO BZN TOWER AND WERE CLEARED TO LAND. THE AIRCRAFT WAS FLYING ON AUTOPILOT AND THE GS AND COURSE WERE CENTERED ON THE CDI. AT ABOUT 6500 FEET MSL ON GS (1500 FEET AGL) WE RECEIVED AN ERRONEOUS GS INDICATION AND THE GS WENT FULL DEFLECTION UP INSTANTLY. WE WERE IN THE PROCESS OF MAKING FINAL CONFIGURATION CHECKS FOR LANDING AND DIDN'T NOTICE IT RIGHT AWAY. SINCE THE AUTOPILOT WAS STILL ON, IT REACTED BY CHASING THE GS AND PITCHING UP RAPIDLY. THE AIRCRAFT APPROACHED CRITICALLY LOW AIRSPEEDS AT THIS HIGH ANGLE OF ATTACK, ENGAGING THE 'STICK SHAKER' (PRE-STALL WARNING). THIS ALL HAPPENED SO FAST WE WERE BOTH STILL IN AWE WONDERING WHAT WAS GOING ON. THE CAPTAIN IMMEDIATELY ATTEMPTED TO FORCE NOSE-DOWN ATTITUDE TO COME OUT OF OUR PRE-STALL CONDITION. THE AUTOPILOT HAD COMMANDED IN SO MUCH NOSE-UP TRIM THE FORCE WAS HARD TO OVERCOME. THE CAPTAIN INITIATED MISSED APPROACH PROCEDURES AND I FOLLOWED HIS LEAD BY COMMENCING PROCEDURES TO GET THE GEAR AND FLAPS UP. OUR STALL RECOVERY PROCEDURES TELL US TO CLIMB AND CONTINUE CLIMBING UNTIL OUT OF A STALL CONDITION. THE AIRCRAFT WAS NOT STALLED, BUT ON THE SIDE OF SAFETY, WE TREATED THE SITUATION AS SUCH. IN THIS HIGH PITCH ATTITUDE, WITH A LIGHT LOAD AND FULL POWER, THIS AIRCRAFT WILL CLIMB OUT AT 5000 TO 6000 FPM. WITH EVERYTHING THAT WAS GOING ON, WE DIDN'T REALIZE THE MISSED APPROACH ALTITUDE ON THE PUBLISHED CHART OF 8000 FEET MSL WAS NOT SET IN THE AIRCRAFT'S ALTITUDE ALERTER. THIS ALL OCCURRED AT ABOUT 6500 FEET MSL, SO UNDERSTANDABLY WE BLEW RIGHT THROUGH 8000 FEET MSL. ONCE IN CONTACT WITH ZLC, WE ADVISED OF OUR MISSED APPROACH AND WERE ASSIGNED 9000 FEET MSL. BY THIS TIME WE ARRESTED OUR CLIMB AT 10800 FEET MSL AND BEGAN DESCENDING TO 9000 FEET MSL. I BELIEVE THE ALTITUDE WAS DEVIATED FROM ON OUR MISSED APPROACH FOR 2 REASONS: 1) WE WERE IN THE PROCESS OF CLEANING UP THE AIRCRAFT AND GETTING IT IN A SAFE CONFIGURATION FOR A MISSED APPROACH. 2) OUR PROCEDURES DON'T ALLOW US TO SET IN THE MISSED APPROACH ALTITUDE INTO THE ALTITUDE ALERTER UNTIL WITHIN 1000 FEET OF FIELD ELEVATION. AT THE TIME OF THIS ANOMALY WE WERE AT 1500 FEET AGL. HENCE, THE PROPER MISSED APPROACH ALTITUDE WAS NOT SET IN THE ALERTER TO REMIND US TO LEVEL AT 8000 FEET MSL. THE PROPER CORRECTIVE ACTIONS WERE TAKEN IN ORDER TO KEEP THE FLIGHT SAFE. WE DID NOT INTENTIONALLY DEVIATE FROM THE MISSED APPROACH ALTITUDE ON THE PUBLISHED CHART, AND AS SOON AS WE REALIZED THE DEVIATION, WE TOOK EVASIVE ACTION TO CORRECT TO THE ASSIGNED ALTITUDE

Acft Make/Model Desc:	A320
Acft Operator Desc:	AIR CARRIER
Acft Far Part:	PART 121
Acft Flight Mission:	PASSENGER
Acft Flight Phase:	LANDING
Acft Flight Plan:	IFR
Acft Nav in Use:	
Flight Crew Count:	2
Flt Crew Exp (last 90 days):	160
Flt Crew Total Exp:	9875
Flt Crew Exp:	3600

ON THIS LEG I WAS THE PF THE FO WAS THE PNF. WE HAD BEEN CLRED FOR A VISUAL APCH TO RWY 33L AT ZZZ. THE WX WAS GOOD AND I WAS LETTING THE AUTOPLT FLY US INBOUND AND DOWNSLOPE ON THE ILS. AT ABOUT 7-8 MI OUT THE TWR WARNED US THAT A TRUCK AND MEN WERE WORKING QUICKLY TO GET DEBRIS (DEAD ANIMAL) CLRED OFF THE RWY. HE SAID HE DIDN'T KNOW IF THEY WOULD BE DONE IN TIME SO THERE WAS THE CHANCE HE MIGHT HAVE TO ABORT THE APCH. HE ASKED US TO FLY OUR LOWEST APCH SPD POSSIBLE. I DO THIS WITH FULL FLAPS AND GEAR DOWN. AT APPROX 3 MI AND 900 FT AGL, TWR SAID SOMETHING LIKE 'ACR X SORRY BUT THIS ISN'T GONNA WORK, TURN L TO A HDG OF 190.' 3 SECONDS LATER THE CTLR SAID 'AND ACR X CLB AND MAINTAIN 2000 FT.' AT THE VERY INSTANT OF HIS FIRST 6 WORDS I LEVELED THE PLANE BY ENGAGING THE VERT SPD ZERO FCU BUTTON. THE AUTOPLT AND AUTOTHROTTLE WORKED TOGETHER TO STOP THE DOWNSLOPE TRAJECTORY AND BRING UP THE ENGS TO MORE PWR. THEN I COMMENCED THE TURN USING THE AUTOPLT. NEXT I USED THE FCU TO DIAL IN AND ENGAGE AN AUTOPLT CLB TO 2000 FT. THE ENGS ADVANCE AND THE PLANE BEGINS A CLB. ALL AIRLINE PLTS TRAIN FOR GAR'S THAT PASS OVER THE FIELD. THIS WAS VERY MUCH A NON STANDARD MANEUVER. AT A LOW ALT WE WERE BEING BROKEN OFF THE APCH. THOUGH OUR LOW ALT GETS ONE'S ATTN, IT REALLY IS NOT THAT BIG A DEAL AS NOW ALL WE DO IS GO ABOUT FLYING THE AIRPLANE. THE FO SEEMED SPRING LOADED FOR ACTION. HE ASKED ME 'IS THIS A GAR?' AS HIS L-HAND WAS ON THE FLAP LEVER. I SAID 'NO,...WE AREN'T DOING A GAR OVER THE FIELD.' FO 'DO YOU WANT GAR FLAPS?' CAPT 'NO.' A FEW SECONDS GO BY AND I ASK FOR GEAR BY SAYING THE SOP 'POSITIVE RATE, GEAR UP.' FO LIFTS THE GEAR LEVER. NOW WE ARE IN THE CLB AND ABOUT 1100-1200 FT AGL. I SAY THE SOP PHRASE 'GAR FLAPS' WHICH IN THIS PLANE MEANS THAT RETRACT THE FLAPS ONE STEP. IN OUR CURRENT CONFIG THIS WOULD BE FROM FULL FLAPS TO FLAPS 3 DEGS. THE PNF IS TO MAKE THE SOP CALL OUT 'SPD CHKED, FLAPS 1' AFTER LOOKING AT THE ECAM. HE DIDN'T MAKE THIS CALLOUT. I AM GENERALLY LOOKING FORWARD AND WORKING THE FCU TO FLY. IN MY LOWER VISION I SEE THE L SIDE PFD TAPE JUMP UP (IT TIES IN WITH THE FLAP LEVER) AND OUR SPD IS NOW PRESENTING AS QUICKLY APCHING THE AREA OF A STALL. I QUICKLY GRAB THE STICK, SHOVE THE NOSE FORWARD AND THE AUTOPLT KICKS OFF. I GRAB THE THRUST LEVERS AND PUSH THEM FORWARD FOR MORE PWR. I TRY TO LEVEL THE BANK SOME AND PERFORM SOMETHING SIMILAR TO AN UPSET RECOVERY PROC. THE FO WAS THINKING THE SAME THING AS HE HAD ALSO PUSHED THE NOSE FORWARD. (DUAL INPUTS WAS CALLED OUT BY THE WARNING SYS.) MY EYES TAKE 1 SECOND TO LOOK AT THE CENTRAL ENG GAUGES AND I SEE THAT THE FLAPS HAVE BEEN COMMANDED TO THEIR LOWEST DETENT WHICH NOW WILL BE A SETTING OF FLAPS 1+F. THE FO

HAD INAPPROPRIATELY MOVED THE FLAPS FROM THE FULLEST SETTING PAST 2 DETENTS AND F ONE. THIS CAUSES US TO LOSE LIFT ON THE WINGS OF A HVY SWEEP-WING ACFT. THE PLANE IS HERKY-JERKY, THIS ISN'T PRETTY BUT THE ALPHA FLOOR PROTECTION SYS DID NOT ACTIVATE. WE DSND WHAT I GUESS WAS 200-300 FT. I SCOOP IT OUT, WE FLY TO HDG, WE ARE PUT BACK INTO THE LINE UP AND WE LAND. ONCE AT THE GATE THE FO DOESN'T OFFER ANY REFLECTIONS, THOUGHTS, APOLOGIES, OPINIONS UNTIL I INITIATE CONVERSATION ON THE BREAK OUT. IN GENERAL HE JUST COMMENTS THAT 'THAT WHOLE THING WAS SCREWY.' I HAVE SINCE COMMUNICATED WITH HIM AND HE WON'T PARTICIPATE IN CONVERSATION TO REVIEW THE FLYING PARTICULARS OF THE INCIDENT. CONCLUSION: THE FO MOVED THE FLAP LEVER TO AN UNCOMMANDED POS. HE DID NOT MAKE THE SOP CALLOUT WHILE DOING THIS. I HAD TO TAKE AGGRESSIVE ACTION TO AVOID APCHING A STALL REGIME. WHY? I DON'T KNOW. I AM CONTINUING TO PURSUE THE MATTER WITH DEPT HEADS AND THE PLT HIMSELF. POSSIBLY THE FO HAD HIS BRAIN SATURATED WITH THE TYPICAL GAR PROC, BUT EVEN SO HE DID THIS WRONG. ALSO, WE HAVE HAD TO DO MORE THAN THE USUAL NUMBER OF FLAPS 3 DEG TKOFS LATELY AT ZZZ DUE TO CONSTRUCTION ON RWY 28. POSSIBLY HE HAD THAT PROFILE IN HIS BRAIN WHERE WE MOVE THE FLAPS FROM F3 TO F ONE. BUT IF HE WAS THINKING THAT H

Acft Make/Model Desc:	A300
Acft Operator Desc:	AIR CARRIER
Acft Far Part:	PART 121
Acft Flight Mission:	TEST FLIGHT
Acft Flight Phase:	LANDING
Acft Flight Plan:	IFR
Acft Nav in Use:	
Flight Crew Count:	3
Flt Crew Exp (last 90 days):	60
Flt Crew Total Exp:	7000
Flt Crew Exp:	6000

I AM A SO, LINE QUALIFIED ON AN A300-B4. I WAS RECEIVING IOE ON A TEST FLT WITH AN ENGINEERING CREW IN ORDER TO CHK OUT ACFT WHEN THEY ARE OUT OF HVY MAINT. I PREFLTD OUR AIRPLANE. WE DID NUMEROUS FLT TESTS FOR APPROX 2 HRS. WE STARTED AN AUTOPLT GAR AND THE PLTS WERE NOT SATISFIED WITH THE RESULTS. SO WE ATTEMPTED A SECOND AUTO GAR. THE AUTO GAR WAS STARTED AT APPROX 50 FT AGL, VFR ON THE #2 AUTOPLT AND THE COPLT WAS DOING THE MANEUVER. HE PULLED THE TOGA TRIGGERS AND I WATCHED THE THROTTLES ADVANCE, NOTED THE FLT PATH INDICATOR N1 AND GAR. I MONITORED ENG SPOOL UP, WATCHED THE FLAPS RETRACT FROM 25 DEGS TO 15 DEGS AND MONITORED GEAR UP. I HAD VISUAL AND AURAL INDICATION OF TRIM ACFT NOSE UP. AFTER GEAR RETRACTION, A PITCH TRIM LIGHT ILLUMINATED ON THE MODE WARNING PANEL AND I ANNOUNCED IT. AS ACFT CLBED, I MONITORED PRESSURIZATION MOMENTARILY AND THEN LOOKED FOR TFC. I RECALL AIRSPD APPROX 140 KTS AND HIGH ANGLE OF ATTACK ABOVE 2000 FT. THERE WAS NO MENTION FROM ANY PLT OF A PROB. I THINK THE COPLT WAS HAVING PROBS LEVELING OFF AT 3000 FT PRESELECTED ALT. WE WERE

STILL CLBING AND THIS WAS THE FIRST INDICATION HE GAVE, 'I HAVE NO CTL OF THE ACFT' AS HE LOOKED INTO MY EYES. HE ALSO BANGED THE CTL COLUMN FULL FORWARD TO THE STOPS WITH NO ACFT RESPONSE. I NEVER HEARD THE AUTOPLT DISCONNECT NOR DID I HEAR ANYONE ANNOUNCE THEY TRIED. THE COPLT STARTED TO PULL THE THROTTLES BACK. WE HAVE A HIGH ANGLE OF ATTACK, LOW AIRSPD, AND SUPPOSEDLY NO ELEVATOR CTL. I STARTED ADVANCING THROTTLES FORWARD. AIRSPD WAS AROUND 119 KTS, FLAPS 15 DEGS, SLATS 15 DEGS, AT 220000 LBS. WE ALL FIREWALLED THE THROTTLES. I STARTED MOVING THE MANUAL TRIM WHEEL FORWARD AS FAST AS POSSIBLE. I FELT THE NOSE START DOWN AND ASKED IF THE COPLT HAD CTL. HE SAID YES. A LITTLE LATER, I RE-ENGAGED THE PITCH TRIM SWITCHES AND HE COULD THEN TRIM THE ACFT. I THINK THE PLT THOUGHT THE NOSE WOULD DROP IF HE PULLED THE THROTTLES BACK. OUR ANGLE OF ATTACK WAS TOO HIGH AND HE HAD NO ELEVATOR CTL. I THINK DURING THE GAR THE COPLT APPLIED FORWARD PRESSURE ON THE YOKE AND THE AUTOPLT WAS TRIMMING AGAINST HIS COMMAND. HE NEVER CALLED FOR FLT DIRECTOR, HDG, OR ALT ACQUIRE AFTER 500 FT. I THINK THE PROFILE FOR THE GAR WAS DONE IMPROPERLY AND FEEL COM WAS HORRIBLE AND FELT THE PLTS SHOULD HAVE MONITORED THE WHOLE PROCESS A LOT BETTER. THE CAPT NEVER TRIED TO MANIPULATE HIS CTL COLUMN. SOMETHING MAY HAVE BEEN WRONG WITH THE AIRPLANE. WE OVERTEMPED BOTH ENGS AND DECLARED AN EMER AND LANDED THE ACFT. I FEEL THE PLTS GAVE ME VERY LITTLE WARNING ABOUT HOW THE AIRPLANE WAS PERFORMING AND WHEN THEY DID GIVE ME FEEDBACK, I HAD ALMOST NO TIME TO MAKE A DECISION AND REACT. I FEEL IF NOTHING WAS DONE, WE WOULD HAVE STALLED ON DEP AND WE WOULD ALL HAVE DIED. WE WERE SLATS 16 DEGS, FLAPS 15 DEGS, 224000 LBS APPROX. OUR PAPERWORK SHOWS STALL WARNING WOULD HAVE SOUNDED AROUND 108 KTS. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: THE SO WAS ASSIGNED TO RECEIVE SOME OF HIS IOE TRAINING ON A TEST FLT. THE CAPT AND FO ARE LINE PLTS THAT ALSO CONDUCT TEST FLTS FOR THIS COMPANY. THE SO HAD AN IOE CHK AIRMAN WITH HIM. THE RPTR THINKS THAT THE CAPT DID NOT SUPERVISE THE FO OR THE ACFT PROPERLY. HE THINKS THE FO WAS TRYING TO CTL THE ACFT'S HIGH CLB RATE BY PUSHING FORWARD ON THE CTL YOLK WITHOUT DISCONNECTING THE AUTOPLT. HE HEARD AND SAW THE STABILIZER TRIM, TRIM NOSE UP. BOTH THE CAPT AND FO HAVE BEEN REMOVED FROM THE FLT TEST CREW AS A RESULT OF THE INCIDENT. HE ALSO STATED THE CAPT'S AUTOPLT DISCONNECT BUTTON WAS FOUND INTERMITTENT. BOTH ENGS WERE OVERTEMPED AND ONE REQUIRED REPLACEMENT.

Acft Make/Model Desc:	B737-800
Acft Operator Desc:	AIR CARRIER
Acft Far Part:	PART 121
Acft Flight Mission:	PASSENGER
Acft Flight Phase:	LANDING
Acft Flight Plan:	IFR
Acft Nav in Use:	FMS OR FMC
Flight Crew Count:	2
Flt Crew Exp (last 90 days):	171
Flt Crew Total Exp:	24965
Flt Crew Exp:	307

ACFT WAS IN THE FINAL APCH PHASE OF THE APCH TO RWY 8L IN ATL. WE HAD BEEN RADAR VECTORED TO A 17 MI FINAL AT 5000 FT AND 180 KTS. WE WERE THEN ASSIGNED 160 KTS AND CLRED FOR THE ILS RWY 8L APCH. THE 'APCH' MODE WAS SELECTED WITH A SINGLE AUTOPLT ENGAGED AND THE ACFT INTERCEPTED AND TRACKED THE ILS NORMALLY. THE ACFT WAS CONFIGURED FOR A FLAPS 30 DEG LNDG AND NORMAL CHKLISTS WERE ACCOMPLISHED. THE ACFT WAS STABILIZED ON APCH AND SPACING WITH OTHER TFC APPEARED TO BE COMFORTABLY SPACED ON TCASII. XING THE FAF AT 2800 FT, THE TWR CTRLR ISSUED A CLRNC TO CLB TO 4000 FT AND TO TURN L TO 360 DEGS. I DID NOT HEAR CLRLY THE CALL SIGN ON THE CLRNC. I LOOKED TO THE FO AND ASKED HIM TO VERIFY THE CLRNC BEING FOR US. MY HANDS WERE ON THE FLT CTLS AS I WAS 'FOLLOWING' THE AUTOPLT ON THE APCH. AS THE FO VERIFIED THE CLRNC, I SELECTED 'TOGA' MODE OF FLT AUTOMATION AND PROCEEDED WITH THE NORMAL GAR CALLOUTS. SELECTING TOGA AUTOMATICALLY DISCONNECTED THE AUTOPLT AND ESTABLISHED NEARLY FULL PWR ON BOTH ENGS. AS I WAS NOT LOOKING DIRECTLY AT THE FLT INSTS WHEN SELECTING TOGA, THE VERY RAPID INCREASE OF PWR CAUSED THE ACFT PITCH TO INCREASE PAST THE DESIRED ATTITUDE OF 15 DEGS TO AN ATTITUDE OF 20 DEGS, OR POSSIBLY SLIGHTLY HIGHER. ALTHOUGH I INSTINCTIVELY PLACED FORWARD PRESSURE ON THE FLT CTLS TO COUNTER THE RAPID CHANGE IN PITCH, THE PRESSURE WAS INSUFFICIENT TO STOP THE PITCH AT THE DESIRED ATTITUDE. IN AN ATTEMPT TO SMOOTHLY LOWER THE NOSE IN THE INTEREST OF PAX COMFORT, THE ACFT EXPERIENCED A 1 OR 2 SECOND STICK SHAKER WARNING AS WE LEVELED AT 4000 FT. CONTRIBUTING FACTORS: 1) AN UNEXPECTED CONDITION: AN UNEXPECTED GAR AT AN UNEXPECTED PHASE OF FLT, 2) AUTOMATION WHICH CONTRIBUTES TO A LARGE 'SURPRISE FACTOR: LARGE AND RAPID PWR CHANGE IN ENGS WELL BELOW THE WING CREATING AN INSTANT PITCH CHANGE, AND THEN DISCONNECTING THE AUTOPLT. 3) THE SELECTION OF TOGA AT A TIME WHEN CONCENTRATION WAS NOT FIRMLY ESTABLISHED ON FLT INSTS.

Acft Make/Model Desc:	AIRBUS UNDIFFERENTIATED MODEL	INDUSTRIE OR OTHER
Acft Operator Desc:	AIR CARRIER	
Acft Far Part:	PART 121	
Acft Flight Mission:	PASSENGER	
Acft Flight Phase:	LANDING	
Acft Flight Plan:	IFR	
Acft Nav in Use:		
Flight Crew Count:	2	
Flt Crew Exp (last 90 days):	150	
	Flt Crew Total Exp:	10000
	Flt Crew Exp:	1100

ON APCH INTO ZZZ RWY XXR, TURNING DOWNWIND ON THE STAR, THE FMS DUMPED OUR FLT PLAN. WE WERE VFR SO WE CONTINUED THE APCH ON ATC VECTORS. I HARD TUNED THE RWY XXR ILS INTO THE 'RAD/NAV' ON THE FMS. ON FINAL, MY FLT DIRECTOR DID NOT AGREE WITH THE ILS GS, SO I CALLED TO TURN OFF FLT DIRECTORS. WE DID NOT GET SWITCHED OVER TO THE TWR, THEREFORE, WE DID NOT GET A LNDG CLRNC. SO WE DID A GAR. ON THE GAR WE

HAD TO FIND THE CORRECT RADIO FREQ AND THEN GET A HDG AND ALT TO FLY. I BELIEVE IT WAS 360 DEGS AND 3000 FT. WE WERE ALSO CLEANING UP THE ACFT AS WE CLBED TO 3000 FT. I STARTED TO LEVEL AT 3000 FT BUT THE ACFT DID NOT SEEM TO WANT TO STAY LEVEL AT 3000 FT. IT TURNS OUT, ATC HAD GIVEN US 5000 FT AND THE CAPT WAS TRYING TO CLB THE PLANE UP TO 5000 FT AND I WAS TRYING TO LEVEL OFF AT 3000 FT—CANCELING OUT EACH OTHER'S INPUTS. I THOUGHT I HAD A CTL PROB AND ASKED THE CAPT TO DECLARE AN EMER. HE DID. I REALIZED THE CAPT WAS TOUCHING THE CTLS AND ASKED HIM TO STOP SO I COULD GET CTL OF THE AIRPLANE. HE DID. THE CAPT THEN PUT MY FLT DIRECTOR ON AND ALSO TURNED THE AUTOPLT ON. WE CLBED TO 5000 FT. GOT VECTOR TO FINAL, RAN THE CHKLIST, AND FLEW ANOTHER ILS XXR INTO ZZZ FOR LNDG. I DON'T EVEN KNOW WHAT CORRECTIVE ACTION SHOULD BE TAKEN. THIS SHOULD NOT HAPPEN, EVER. ONE PERSON FLIES, THE OTHER DOES NOT.

INFORMATION ISSUES DU NTSB ET FOURNIES PAR LA FAA AU BEA

Data Source: NTSB AVIATION ACCIDENT/INCIDENT DATABASE
 Event Id: 20040819X01260
 Local Date: 07/08/2003
 Category of Operation: SCHEDULED
 Aircraft Type: AIRPLANE
 Aircraft Homebuilt: NO
 Aircraft Damage: DESTROYED
 Phase of Flight: MISSED APPROACH (IFR)
 Aircraft Make: BOEING
 Aircraft Model: 737
 Aircraft Series: 200C
 Operator Doing Business As:
 Operator Name SUDAN AIRWAYS

Injury Summary for Aircraft 1

	Fatal	Serious	Minor	None
Crew	9	0	0	0
Pass	104	1		
Total	115	1	0	0

AIRCRAFT 1 PRELIMINARY REPORT

On July 8, 2003 about 0417 hours local time, Sudan Airways flight 319, a Boeing 737-200 airplane, registry ST-AFK, collided with the ground during a missed approach at Port Sudan Airport, Sudan. Instrument meteorological conditions prevailed. The pilot, copilot, 9 crew members, and 104 passengers were fatally injured. One passenger, a 2-year old child, was seriously injured. The airplane was destroyed, and there was post-crash fire. The departure point was Port Sudan, and the scheduled destination was Khartoum, Sudan. About 15 minutes after takeoff, the pilot reported the loss of power in one engine. The flight returned to Port Sudan and was cleared for the ILS Runway 35 approach. The reported visibility was 2.5 miles in sand. The flightcrew did not sight the runway, and during the missed approach the airplane descended and collided with terrain about 3 miles east of the airport. The aircraft distinegrated during the impact sequence. The wreckage was strewn a distance of about 600 feet, and oriented on a 150 degree magnetic track.