



DUTCH
SAFETY BOARD

Investigations

Within the Aviation sector, the Dutch Safety Board is required by law to investigate occurrences involving aircraft on or above Dutch territory. In addition, the Board has a statutory duty to investigate occurrences involving Dutch aircraft over open sea. Its investigations are conducted in accordance with the Safety Board Kingdom Act and Regulation (EU) no. 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation. If a description of the events is enough to learn lessons, the Board does not conduct any further investigation.

The Board's activities are mainly aimed at preventing occurrences in future or limiting their consequences. If any structural safety shortcomings are revealed, the Board may formulate recommendations to remove these. The Board's investigations explicitly exclude any culpability or liability aspects.

Quarterly Report Aviation

July-September 2016



In the past quarter, the Dutch Safety Board investigated a fatal accident involving a powered paraglider, a portable glider also known as a paramotor.

While most of its investigations concern large or small fixed-wing aircraft or helicopters, less common types of aircraft also fall under the Board's legal obligation to investigate. This means that (sometimes limited) investigations are carried out in case of accidents or serious incidents. As with any Safety Board investigation, the objective is to learn from incidents so as to prevent them from happening again in the future.

In addition, there have been two separate incidents during the past quarter in which aeroplanes approached the runway from the wrong direction. The risk of near-collisions in aerodrome traffic circuits, such as these, has had the attention of the Dutch Safety Board for some time. The Board previously published an article on this subject in its first quarterly report of 2015.

Tjibbe Joustra,
Chairman, Dutch Safety Board



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Occurrences into which an investigation has been initiated

Damage incurred during flight, SZD-51-1 "Juneor", PH-1006, Larserveld, 15 July 2016

After a flight of more than an hour, the pilot decided to perform several loopings. At that point, the glider was at an altitude of approximately 700 metres. The pilot stated that he increased speed to 180 km/hr and gradually initiated the looping. The first looping went without incident. He then initiated the second looping in the same manner. During the last phase of this looping, when the aircraft was flying horizontally once again, the pilot heard a loud bang behind him. However, the pilot still had full control over the glider, so he flew an alternative circuit before landing safely. A subsequent inspection revealed damage to the left wing spar.

Classification: Accident
Reference: 2016072

Cabin crew injured by turbulence, Boeing 737-800, Balearic Sea (Spain), 23 September 2016

The Boeing 737-800 was flying from Amsterdam Airport Schiphol to Palma de Mallorca (Spain). During the cruise phase of flight, at FL250, over international waters, the aircraft encountered unexpected turbulence. As a result, three members of the cabin crew were seriously injured. After the aircraft had landed, they were taken to hospital.

The Spanish Comisión de Investigación de Accidentes e Incidentes de Aviación Civil (CIAIAC) informed the Dutch Safety Board that it would not be launching an investigation as the accident in question occurred outside the borders of the State of Spain. The Board has informed the CIAIAC that the Dutch Safety Board will investigate the accident.

Classification: Accident
Reference: 2016106



The tear in the left wing spar of PH-1006. (Photo: Flying club)

Occurrences abroad with Dutch involvement that foreign authorities have initiated investigations into

Runway excursion during take-off, Socata TB-9 Tampico, PH-BRT, Magura Cismadie Airport (Romania), 1 July 2016

During the take-off for a local flight from Magura airport (Romania), the single engine, propeller aeroplane failed to leave the ground in time and came into contact with vegetation at the end of the runway. The aeroplane then came to a stop beyond the end of the runway, and suffered serious damage. Of the four occupants (the pilot and three passengers), one of the passengers sustained an injury.

In response to this occurrence, the Romanian Civil Aviation Safety Investigation and Analysis Center (CIAS) launched an investigation. The Dutch Safety Board is providing assistance.

Classification: Accident
Reference: 2016067

Horizontal stabilizer damaged during parachute jump, Cessna C208, PH-JAS, Aviosuperficie Fondone Airport (Italy), 10 July 2016

The Cessna C208 had taken off on a local flight, to drop parachutists. While a parachutist was leaving the aircraft, his main parachute opened prematurely, causing him to be pulled out of the aircraft. As a result, he hit the left horizontal stabilizer and broke a leg. The aircraft landed normally, but a subsequent inspection revealed damage to the left horizontal stabilizer.

In response to this occurrence, the Italian Agenzia Nazionale per la Sicurezza del Volo (ANSV) launched an investigation. The Dutch Safety Board is providing assistance.

Classification: Accident
Reference: 2016077



PH-BRT after the accident. (Photo: CIAS)



Damage to the horizontal stabilizer of PH-JAS. (Photo: ANSV)

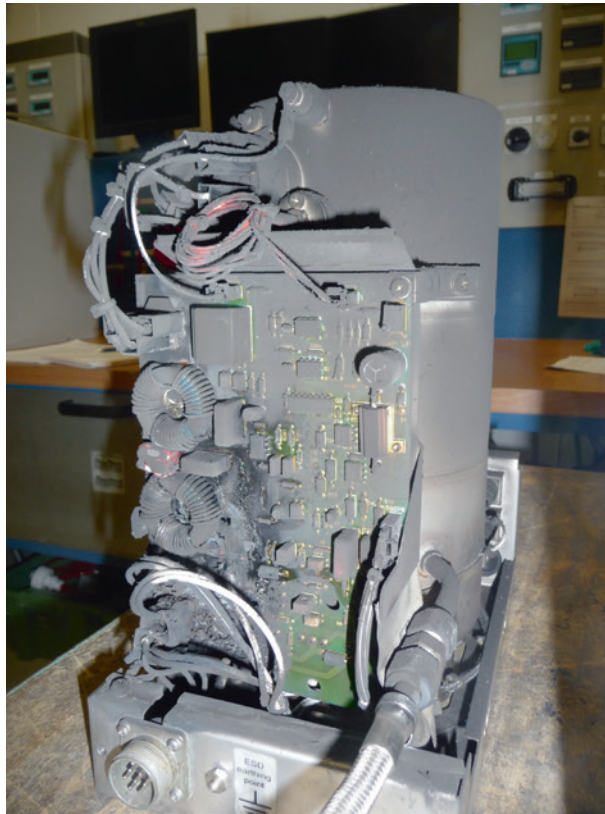
Occurrences abroad with Dutch involvement that foreign authorities have initiated investigations into

Smoke in the galley during a flight, Airbus A320-232, B-22317, en route (Taiwan), 24 July 2016

During the cruise phase of flight, from Taichung (Taiwan) to Macau (China), a crew member saw smoke emerging from part of the rear galley of the Airbus A320. She also smelled something burning. The crew member discovered that the smoke was coming from a water heater and decided to pull the fuses of the water heater and other cooking appliances in order to shut off the power. A halon fire extinguisher was then used at the point from which the smoke was emerging. Following these actions, no more smoke emerged and the flight continued to Macau airport, where the aircraft landed safely.

In response to this occurrence, the Taiwanese Aviation Safety Council launched an investigation. The Dutch Safety Board is providing assistance, as the water heater in question was manufactured in the Netherlands.

Classification: Incident
Reference: 2016080



Damage to the water heater.

Accident during a winch launch, Schempp-Hirth Duo Discus T, PH-1529, Flugplatz Jena-Schöngleina (Germany), 30 July 2016

During a winch launch, airspeed fell quickly at low altitude causing the glider to stall and make a hard landing. The person sitting in front, who was also the pilot, suffered serious back injuries as a result. The person sitting in the rear seat was uninjured. The glider was badly damaged.

In response to this occurrence, the German Bundesstelle für Flugunfalluntersuchung (BFU) launched an investigation. The Dutch Safety Board is providing assistance.

Classification: Accident
Reference: 2016074

PH-1529 after the accident. (Photo: Gliding club)





9Q-CBL after the occurrence. (Photo: BPEA)

Steering problems during ground roll, Fokker F27 Mark 050, 9Q-CBL, Beni Mavivi Airport (Congo), 1 August 2016

During the roll-out after landing, the crew experienced brake problems, after which the aircraft lurched to the left and came to a stop on the runway. None of the occupants were injured. The aircraft suffered damage to the left main landing gear.

In response to this occurrence, the Congolese Bureau Permanent d'Enquêtes d'Accidents/Incidents d'Aviation (BPEA) launched an investigation. The Dutch Safety Board is providing assistance.

Classification: Serious incident
Reference: 2016080

Injury resulting from aborted balloon launch, Kubicek BB30Z, PH VBB, Sint Niklaas (Belgium), 3 September 2016

During the balloon festival in the main square at Sint-Niklaas (Belgium), the launch coordinator gave a hot-air balloon clearance to launch from the bustling market square. The pilot then issued a command to the individuals holding the balloon basket on the ground, instructing them to release the basket. However, one of these individuals failed to let go and rose to a height of three

metres, hanging from the balloon basket. At that point, the hot air balloon was still attached to the ground by a quick release cable. The pilot of the balloon decided not to uncouple this cable. To avoid injury to people in the marketplace, the pilot decided not to descend. A bystander managed to grab hold of the individual who was hanging from the balloon basket. Neither individual suffered any injuries as a result.

The launch coordinator on the ground then issued a 'loss of control' command. This command means that the launch must be aborted and the balloon deflated. The pilot obeyed this command and started to descend. At this point the balloon was being buffeted by the wind, and was swinging backwards and forwards. During the descent, the burner was used several times to prevent the balloon's basket from colliding with bystanders or other balloons. During these manoeuvres, one person on the ground became trapped between the quick release cable (which was still attached to the balloon) and a balloon basket on the ground. He suffered serious injuries as a result. A number of people rushed to the scene. With their help, the balloon was finally deflated and brought to the ground.

The Metro III in a hangar after the occurrence. (Photo: BFU)



In response to this occurrence, the Air Accident Investigation Unit of the Belgian Federal Public Service of Mobility and Transport launched an investigation. The Dutch Safety Board is providing assistance.

Classification: Serious incident
Reference: 2016103

Runway excursion, Swearingen SA227AC Metro III, D-CPSW, Flughafen Köln-Bonn (Germany), 20 September 2016

At the end of a flight from Skopje (Macedonia) to Cologne Bonn Airport, the aircraft experienced a runway excursion after landing, suffering slight damage. Both crew members, who are Dutch nationals, were unharmed.

In response to this occurrence, the German Bundesstelle für Flugunfalluntersuchung (BFU) launched an investigation. The Dutch Safety Board is assisting in translating information from the cockpit voice recorder, as both pilots have Dutch nationality.

Classification: Serious incident
Reference: 2016109

Occurrences abroad with Dutch involvement that foreign authorities have initiated investigations into

Fault in hydraulic system of nose landing gear during approach, Fokker F28 Mk 0100, VH-NHY, Perth Airport (Australia), 23 September 2016

During the approach to Perth Airport (Australia), at the end of a flight from Newman (Australia), the crew detected a fault in the landing gear's hydraulic system. After the landing, a pungent smell filled the cockpit. In response, the captain decided to carry out an evacuation. There were no injuries.

In response to this occurrence, the Australian Transport Safety Bureau (ATSB) launched an investigation. The Dutch Safety Board is providing assistance.

Classification: Incident
Reference: 2016107

Crashed in a mountainous area, Blackshape Prime BS100, PH-4M9, Italian Alps, 30 September 2016

With only the pilot on board, the aircraft had taken off from Trento airport (Italy) and was en route to Elz airport (Germany). During bad weather, the aircraft crashed in the Italian Alps. The pilot was killed.

In response to this incident, the Italian Agenzia Nazionale per la Sicurezza del Volo (ANSV) launched no investigation. According to European Regulation 996/2010, on the investigation and prevention of accidents and incidents in civil aviation, it is not mandatory to carry out safety investigations into accidents involving microlight aircraft.

Classification: Accident
Reference: 2016108



Archive photo PH-4M9. (Photo: Texel Airport)

Published reports

Take-off clearance during runway inspection by bird control, Boeing 737, Amsterdam Airport Schiphol, 12 January 2014

At the time of the occurrence, runway 24 was being used by aircraft departing Amsterdam Airport Schiphol. Bird control had requested permission from air traffic control to carry out a runway inspection along the length of runway 24. He was granted permission to do so. At the same time that bird control was carrying out the runway inspection, a Boeing 747 crossed the runway. Once the Boeing 747 had given notification that it had left the runway, a Boeing 737 was cleared for take-off from runway 24, while bird control – with the consent of air traffic control – was still on the runway. Bird control was monitoring the runway frequency in question, and heard the Boeing 737 being given take-off clearance. He immediately informed the assistant controller (with whom he was in contact) that he was still on runway 24. Shortly thereafter, the Boeing 737 was instructed to abort the take-off. At that point, the Boeing 737 was still

moving quite slowly. Once bird control had reported that he had left runway 24, the Boeing 737 was able to depart.

None of the warning systems in the control tower at the time of the occurrence gave any indication of the number of vehicles or aircraft on a runway. Additional technical facilities are available in the control tower that runway controllers can use to prevent such an incident (which is categorised as a runway incursion). However, there was no official policy stating that it was compulsory for the runway controller to use the available facilities.

The runway incursion occurred because the runway controller gave take-off clearance to a Boeing 737 departing from runway 24, after other traffic had crossed this runway, while bird control, which he had overlooked, was still carrying out a runway inspection with the permission of air traffic control. The air traffic controller's overall picture of the situation on and around the runway was restricted, partly because he had no direct contact with all of the vehicles and aircraft on and around the runway in question. Bird control operates on a different frequency to the one used by air traffic. In this respect, Schiphol's working practices differ from those used at other major European airports.

Furthermore, the 'runway occupied' warning system made no distinction between situations in which one or more vehicles and/or aircraft were present on the runway being used.

In addition, the investigation showed that cooperation between Air Traffic Control the Netherlands and Amsterdam Airport Schiphol in the area of safety is not ideal. The current mandate (which is quite limited) of both the Schiphol Safety Platform and the Runway Safety Team (which is under the former's jurisdiction) was insufficient to prevent the incident under investigation, which is very similar to another incident previously investigated by the Board.

The Dutch Safety Board published its report on 13 April 2016.

<https://www.onderzoeksraad.nl/nl/onderzoek/2018/startklaring-tijdens-baaninspectie-vogelwacht-12-januari-2014>



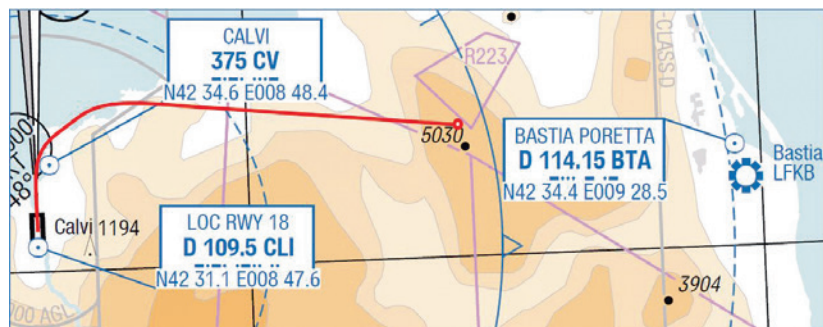
Bird control vehicle.
(Photo: Amsterdam
Airport Schiphol)

Published reports

Crashed in mountainous area, PA28R-201T Turbo Arrow III, N717ND, Corsica (France), 12 July 2014

At 12:40, a single engine, propeller aeroplane took off from Calvi airport, on the French island of Corsica, on a flight to a private airport near Terni (Italy). Three people were on board, one of whom (a passenger) had Dutch nationality. The pilot (who was also the aircraft's owner) and the passenger were travelling from Antwerp, via France and Italy, to Bulgaria. On the advice of an instructor, the pilot also took along a second, more experienced, pilot, who had an IFR rating. Although the owner of the aircraft had undergone 35 hours of IFR training, he did not yet have the rating.

The flight path (red line) of N717ND.
(Photo: BEA)



Calvi air traffic control cleared the aircraft to an altitude of 2,000 feet. On leaving the control zone (CTR), the pilot was instructed to contact the Flight Information Service at Bastia. The pilot did so, and asked if he could climb to 5,000 feet. He received no reply. Thirty seconds later, the pilot repeated his question, adding that there were some clouds around. The air traffic controller asked if the aircraft could climb to 4,500 feet, for the time being. The pilot confirmed this and the aircraft began to climb. At 12:56, the aeroplane flew into terrain at an elevation of 4,200 feet. The three occupants were killed, and the aeroplane was totally destroyed.

An investigation uncovered no technical elements that might account for the accident. The aircraft was equipped with an autopilot, which was found to have been engaged. The aircraft was equipped with integrated avionics designed to display obstacles in colour and to generate warnings in the event of a risk of collision with terrain. However, these are purely visual warnings that can be set by the user.

The wreck was found to contain documents concerning the flight preparations for previous flights, but no documentation was found for the flight from Calvi to Terni. A VFR map was found on board, but no route had been drawn in, nor had the altitude been filled in on the flight plan. However, the possibility that the flight preparations were carried out on a tablet computer that was found on board cannot not be ruled out.

The direct cause of the accident was the pilot's decision to continue the flight into the clouds, without being aware of the height of the terrain. At the site of the accident, visibility was almost zero, and the highest elevation in this area (which is marked on the VFR map) is 5,036 feet.

The underlying factors were:

- Inadequate flight preparation.
- A possible misunderstanding, on the pilot's part, concerning the services provided to him by air traffic control. The nature of the radio communication suggests that the pilot did not realize that he was in contact with a Flight Information Service, which is not normally responsible for terrain clearance.
- The pilot's description of the amount of cloud is insufficient. In fact, this gave the air traffic controller

an incorrect impression of the situation. The controller assumed that N717ND would maintain sufficient distance to terrain and would remain in visual meteorological conditions, since it was a VFR flight. He also indicated that his main preoccupation was separating N717ND from traffic that was on approach to Bastia airport.

- Too little awareness of the height of the terrain by air traffic control.

The French Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation Civile (BEA) published its report in April 2016. This report (which is in French) can be downloaded from the BEA's website: https://www.bea.aero/uploads/tx_elydbrapports/n-nd140712.pdf

Hard landing after aborted winch launch, Scheibe Bergfalke IV, G-EEBD, Flugplatz Gardelegen (Germany), 21 July 2015

The Bergfalke, which had two occupants of Dutch nationality on board, was performing a winch launch, in a westerly direction, at about 17.00. At a height of about ten metres, during the winch launch, the pilot disengaged the winch cable, as he became aware of a reduction in the pull force exerted by the winch cable. Witnesses stated that the Bergfalke subsequently made hard contact with the ground, twice. The glider turned 180° around its vertical axis and came to a stop on the runway with its nose pointing in the opposite direction, about 400 metres away from the point where it was started. The occupants sustained serious injuries, and the glider was damaged.

The underside of the nose was bent, back as far as the main wheel, and ten-centimetres-long tears were visible in both wings, at the edge of the air brake housing. The elevator pushrods and the air brake control mechanism were also damaged.

An inspection of the Busio winch revealed that a loop in the Dyneema winch cable (which was used for the winch launch preceding the accident flight) had become dislodged from the drum. This had blocked the winch's drive shaft, causing the winch to lose pull force. The winch cable used for the accident flight had no defects.



Damage to the nose of the Bergfalke. (Photo: BFU)

The German Bundesstelle für Flugunfalluntersuchung (BFU) published its report on 21 September 2016. The Dutch Safety Board is providing assistance with this investigation. The report can be downloaded from the BFU's website:

http://www.bfu-web.de/EN/Publications/Investigation%20Report/2015/Report_15-0914-CX_Bergfalke_Gardelegen.pdf?__blob=publicationFile

Loss of control during go-around, Cirrus SR22T, N860PC, Amsterdam Airport Schiphol, 2 February 2016

The Cirrus SR22T completed a flight under instrument flight rules (IFR) from Magdeburg Airport (Germany) to Amsterdam Airport Schiphol, carrying out an ILS approach to runway 27 at about 19:15. During the landing, the aircraft bounced several times, after which the pilot initiated a go-around. During the go-around, the pilot lost control of the aircraft at low altitude, causing the left wing and the left main landing gear to contact the runway. The aircraft came to a stop in the grass, to the south of the runway, where it broke in two. The pilot, who was the sole occupant, was not injured.

Before departing from Magdeburg Airport, the pilot checked the weather forecast for the flight. The forecast weather conditions were instrument meteorological

conditions for the first part of the flight and visual meteorological conditions around Amsterdam Airport Schiphol. The forecast weather at Schiphol involved a strong, gusting wind, direction 270, ranging in speed from 16 to 27 knots, with good visibility and no low cloud.

Upon reaching point Pampus, the crew listened to the Automated Terminal Information Service, which reported the same weather conditions. According to the Pilots Operating Handbook, this is within the operational limits of the Cirrus SR22. During the approach to runway 27, the Cirrus was second in the landing order, behind an Embraer 190. It was determined that wake turbulence from the Embraer was unlikely to have been involved in causing the incident.

The ILS approach was flown on autopilot to an altitude of 500 feet and was stable. Just before landing, speed was reduced to normal landing speed and full down flaps was selected. The pilot reduced engine power and brought the nose up. This reduced the speed to a point just above the aircraft's stall speed. As a result, in the final phase of the landing, the aircraft lost height faster than expected and bounced back up again. That event probably coincided with a change in the speed and direction of the wind. The aircraft bounced twice more, after which the pilot decided

to initiate a go-around. During this go-around, the airspeed fell below the stall speed and the pilot made insufficient use of the rudder pedals to compensate for the yawing effect generated by the propeller's prop wash. The pilot then tried a stick displacement in an effort to stop the yawing motion. However, this failed to have the desired effect. The left wing and left main landing gear contacted the runway, and the aircraft eventually came to a stop about 50 metres south of the runway. As a result, the aircraft was irreparably damaged.

The accident resulted from low speed during the go-around, coupled with insufficient rudder input by the pilot, causing him to lose control of the aircraft at low altitude. As a result, the aircraft stalled and crashed.

The Dutch Safety Board published its report on 1 July 2016.

<https://www.onderzoeksraad.nl/en/onderzoek/2214/loss-of-control-during-go-around-2-february-2016>

N860PC after the accident. (Photo: Royal Netherlands Marechaussee)



Loss of cabin pressure, Fokker F28 Mk 0100, VH-NHF, near Newman Airport (Australia), 7 June 2016

The Fokker 100 was completing a domestic flight from Christmas Creek to Perth (Australia). There were five crew members and 28 passengers on board. The flight's scheduled cruising altitude was FL340. During the ascent, as the aircraft passed an altitude of FL200, the flight crew heard a whistling sound. There were no anomalous indications in the cockpit, and this sound stopped after one minute. Some time later, while passing FL305, both the flight crew and cabin crew (who were in the forward galley) heard a loud whooshing sound. The captain, who was in the Pilot Monitoring role on this flight, noticed that the rate of increase in cabin pressure altitude had risen from a standard 200-300 feet per minute to 500 feet per minute. This led him to conclude that more air was being lost from the cabin than could be replaced by the pressure control system. The captain then asked air traffic control for permission to halt the climb at an altitude of FL320. Around that time, the purser reported that the cabin crew felt that the sound was coming from the forward lavatory, but that they were unable to locate a precise source.

A short time later, a 'PACK 1' warning appeared on the Multi-Function Display Unit (MFDU). The procedure in response to this warning requires that air conditioning pack 1 be reset. After it has been switched off, it is necessary to wait two minutes before re-activating this pack, to give it time to cool down. When pack 1 was switched off, the rate of increase in cabin pressure altitude rose to more than 2,000 feet per minute. In response, the captain once again contacted air traffic control, to request a descent to FL250. Initially, however, the aircraft was assigned to FL290, due to airspace restrictions. Before this descent could be initiated, however, an 'Auto-Throttle 1' warning appeared on the MFDU. The captain immediately informed the purser that he was about to issue the 'fasten seatbelts' command and that the oxygen masks would be activated, as he expected the cabin pressure altitude to reach excessive levels. The MFDU continued to display the excessive cabin pressure altitude warning throughout the two-minute waiting period that was involved in the pack 1 reset procedure. The flight crew put their oxygen masks on and saw that the cabin

pressure altitude had already risen to 25,000 feet. The captain issued a 'PAN-PAN' call to air traffic control and was given permission to descend to 10,000 feet. During the descent, the crew continued to follow the procedures for the auto-throttle and pack 1 warnings. When pack 1 was reactivated, the cabin pressure altitude returned to 1500 feet. The crew then decided to divert to Newman airport (Australia).

In tests conducted by a maintenance crew, the piping of pack 2's recirculation system was found to have developed a leak. As a result, Pack 2 was not able to maintain cabin pressure altitude at the correct level. A crack was found in pack 1's plenum duct. This led to an outflow of overly warm air from pack 1. This, in turn, activated the compressor outlet overheat switch, causing pack 1 to switch itself off. The plenum duct developed a crack at FL305, which caused the whooshing sound. As Pack 1 is located beneath the cockpit, near the forward toilet, this seemed to be the source of the problem. The captain stated that the whooshing sound was very similar to the sound that he had heard in flight simulator exercises involving decompression scenarios. The flight crew stated that, having completed practice sessions in flight simulators, involving scenarios of this kind, they had sufficient mental capacity to deal with other complications during the flight.

After the flight, it emerged that the oxygen masks in the toilet had not been activated. A member of the cabin crew discovered a piece of tape stuck to the panel behind which the oxygen masks are stowed, which obstructed the activation of the oxygen masks. The airline in question has launched an investigation to find out how that piece of tape got there. At the time of the incident, no one was in the toilet.

The Australian Transport Safety Bureau (ATSB) published its report on 28 September 2016. The Dutch Safety Board is providing assistance with this investigation. The report can be downloaded from the ATSB's website: <https://www.atsb.gov.au/media/5771530/ao-2016-057-final.pdf>



The crack in the plenum duct. (Photo: ATSB)

Occurrences that were not investigated extensively

Ground loop during landing, Centrair 101A, PH-795, Lemelerveld airport, 13 May 2016

The pilot had completed a local flight, lasting about 10 minutes, after which he joined the circuit pattern. The wind was blowing from a direction of 000-020, at a speed of 12 to 13 knots, and was occasionally gusty. The landing direction was eastwards. On the final approach leg, the glider encountered turbulence. The landing was normal but, during the roll-out, the gusting crosswind caused the pilot to lose control of the aircraft. The wind caused the glider's nose to swing to the left, resulting in a ground loop during which the aircraft turned through 180 degrees and came to a stop with its nose pointing in the opposite direction. During the ground loop, the left aileron was damaged and the tail skid was ripped off. The pilot was uninjured.

The pilot stated that the ground loop was most likely caused by a strong gust of wind, at exactly the moment the aircraft landed or shortly thereafter, which could not be corrected for, even with full rudder.



Damage to the left aileron. (Photo: pilot of PH-795)



G-BJKF after the occurrence on the apron. (Photo: National Police)

The pilot was in possession of a Glider Pilot's License, with a winch rating. He had a total of 267 flight hours (923 flights) in gliders, 10 hours (23 flights) of which involved the type in question.

Classification: Accident
Reference: 2016046

Heavy landing, Socata TB9, G-BJKF, Teuge Airport, 15 July 2016

The pilot and his passenger were conducting a private VFR flight from Lydd Airport to Teuge Airport. The pilot reported that he carried out a normal approach to runway 26 at Teuge Airport with an approach speed of 65 knots and full flaps and all looked normal. The wind was from 230° at 7 knots. During landing he felt a significant bump and noticed a crack appear across the windscreen. The aircraft veered to the left, which he corrected with the rudder. He then taxied to the parking in front of the tower and shut down the aircraft. The pilot was not injured. On exiting the aircraft he noticed damage to the aircraft.

An inspection that was performed revealed a cracked windshield, a torqued left hand main wing spar, structural damage to the left hand wing, loose support bolts of the left hand landing gear and a bended fuselage skin on the left hand and right hand side.

A person from airside operations had witnessed the landing and felt that the aircraft had dropped perhaps about 300 to 400 mm onto the runway. The pilot felt that he experienced loss of lift at the critical point in the landing and stated that his speed was okay at that point. He concluded that he must have misjudged the flare.

The commander possessed a Private Pilot's Licence with a total of 713 flying hours of which 48 hours on the aircraft type involved.

Classification: Accident
Reference: 2016071

Occurrences that were not investigated extensively

Passenger injured during hot air balloon boarding procedure, Cameron A-450LW, PH-TYM, Almelo, 19 July 2016

The pilot of the hot air balloon was preparing to carry out a flight from Almelo to Daarle. While the balloon was being inflated, the sixteen passengers booked on the flight were getting into the balloon's basket. At the moment the balloon's basket began to right itself, the chute's Velcro fastening came undone, causing it to open and halting the inflation of the balloon. As a result, the balloon's basket tipped back onto its side and a passenger, who was boarding at that time, fell out of the balloon's basket. After her fall, she complained of a sore shoulder but still wanted to complete the flight. After the flight, she visited a hospital where it emerged that she had suffered a fractured rib and a pneumothorax.

In response to this occurrence, the company that operates the balloon has introduced the following procedural changes:

- Give passengers clearer boarding instructions, and inform them about the risk that the balloon basket might tip over. The instructions include details of points that passengers can hold onto. Before entering the basket, passengers are also given instructions about the landing position and they are asked to adopt this position during the launch.

- Instruct passengers not to board the balloon until the balloon and the balloon basket are sufficiently stable.
- Abort balloon inflation sooner if the Velcro fastening of the rip panel looks likely to come undone.

The pilot was in possession of a Commercial Ballooning Licence (CPL-FB) and had a total of 2311 flight hours, 20 hours of which involved the type of balloon in question.

Classification: Accident
Reference: 2016084

Runway approach from the wrong direction, Pitts S-1T, N196JR, Lelystad Airport, 19 July 2016

The pilot of the Pitts S-1T was returning to Lelystad Airport at the end of the afternoon, after an aerobatic training flight. Airport operations provided airport information by radio, including details of runway 05, which was the one in use. This information was correctly repeated by the pilot. Soon afterwards, he joined the circuit for a left downwind leg to runway 23. At that moment, a Cessna 172P that was engaged in circuit training was making its seventh landing on runway 05, which was to be followed by a touch and go. Once the Cessna had landed, the instructor saw a biplane on the final approach leg to runway 23 that was approaching them from the opposite direction. The instructor aborted the touch and go and brought the Cessna to a stop on the runway. On the final approach leg, the pilot of the Pitts erroneously reported that he was flying on final to runway 05 but had seen that a Cessna had stopped in the middle of the runway. He also observed other aircraft at the holding position near the head of runway 05. At that point, the pilot of the Pitts realized that he was approaching the runway from the wrong direction. He aborted his approach and shifted his flight path to the northern side of the runway. After re-joining the circuit, he landed safely on runway 05.

According to the pilot of the Pitts, one factor that may have contributed to the occurrence was that there was no wind, as a result he had not oriented himself to land upwind. He also stated that it was almost routine for him to land on runway 23, that the day was very hot, and that he had been doing some extremely aerobatic flying.

The Pilot of the Pitts S-1T was in possession of a Private Pilot's License and had a total of 2860 flight hours, around 500 hours of which involved the type in question.

Classification: Incident
Reference: 2016088

Erroneous altitude information due to failure of transponder, Sukhoi SU-26MX, PH-SMX, near Castricum, 25 July 2016

On his radar screen, an approach controller at Schiphol saw that a Su-26, which was flying south along the coast at an altitude of 900 feet, had started climbing. It then flew for a brief moment into the terminal control area (TMA) of Schiphol, which has a lower limit of 1,500 feet. At the same time, an Airbus A319 – which was flying north at 2,000 feet in the TMA – turned right at Castricum to set up for a southbound approach to Schiphol. According to the radar information, both aircraft appeared to be about to intersect one another at roughly the same altitude (about 2,000 feet). The air traffic controller warned the crews of the two aircraft, and the Su-26 started to descend. The crew of the A319 continued the flight as planned. As the A319 was flying through cloud, the crew did not see the Su-26. They also stated that they had not seen a TCAS warning.

The initial investigation showed that, according to the radar information, the distance between the two aircraft was 0.1 NM horizontally and 0 feet vertically. A follow-up investigation found that the Su-26 had a transponder malfunction. Accordingly, the air traffic control radar system may have assigned the Sukhoi the same altitude as the A319. As a result, the radar system indicated that both aircraft were flying at the same altitude when this was not, in fact, the case. The vertical separation however was smaller than prescribed.

The Su-26 was fitted with a Funkwerk transponder from the TRT800 series. On 17 October 2008 EASA issued an Airworthiness Directive (AD) stating that, in the light of numerous proven failures, different types of Funkwerk transponder should not be used in Transponder Mandatory Zones (TMZ).

On 12 November 200 this AD was changed and the restriction was afterwards only still valid for the TRT600

series. Despite there is evidence that transponders from the TRT800 series still suffer failures. The Dutch Safety Board has alerted EASA about this problem.

Classification: Incident
Reference: 2016081

Crashed, Pap Ros 125 GB, PH-7Y1, Zeewolde, 30 July 2016

At about 14:30, the pilot of a powered paraglider arrived at a site that is used for paragliding. After setting up the paraglider, he took off at about 15:00. During the flight, witnesses saw the pilot descend several times. He did so by flying two to four steep spiral turns, before stopping the decline and gaining altitude again. At one point, starting from an altitude of about 150 metres, he initiated a descent by means of steep right-hand turns. The witnesses reported that, this time, pilot did not break off his descent and that eventually, while still spiralling, he flew into the ground. As a result, the pilot sustained fatal injuries.

According to witnesses, his parachute was fully deployed throughout this flight. The technical investigation found no defects in the parachute, the lines or the engine.

High G-forces can be generated when performing extremely steep turns in a paraglider. Turning at a rate of descent of just 12 m/s is sufficient to generate positive G-forces with a value of 3.2. Steeper turns will generate higher G-forces. At G-forces of this magnitude, there is a real risk of the pilot losing consciousness (G-LOC, Loss Of Consciousness). The accident was very likely caused by the fact that, due to the effect of G-forces, the pilot was no longer able to stop the spiralling descent.

Classification: Accident
Reference: 2016078

Hard landing, Scheibe SF-25C Falke, PH-1314, glider airfield, Biddinghuizen, 14 August 2016

The pilot of the SF25C Falke was planning to carry out several take-offs and landings to re-familiarise himself with the aircraft, as the pilot had been flying nothing except commercial airliners for the previous few months. After the first start, while flying at a standard height, he joined a right hand circuit. While on the base leg, the Touring Motor Glider encountered some thermals, causing it to climb a few metres. When the aircraft turned into the final approach, the pilot shifted the air-brake handle to the position for fully open air brakes. He selected a landing site slightly beyond the target landing field, to compensate for his excessive height. Throughout the approach, the aircraft was stable and maintained a constant approach speed. The aircraft's actual approach speed was higher than the recommended approach speed cited in the aircraft's flight manual. This was recommended by the aircraft's owner, to maintain better control over the aircraft during the approach. However, the flare manoeuvre was initiated too early and too abruptly. As a result, the aircraft's pitch attitude suddenly increased. The pilot corrected the high pitch attitude, then decided to perform a go-around. To free-up his right hand, so that he could move the throttle forward, the pilot took the stick with his left hand, which he had previously used to hold

the air-brake handle. Using his right hand, he selected engine power. In this type of aircraft, when the air-brake handle is released, aerodynamic pressure and a spring system cause the air-brakes to fold down. However, as the go-around was initiated, airspeed had fallen to the point that, as he selected engine power, the pilot felt the aircraft sink and, moments later, it hit the ground hard. This resulted in damage to the propeller and to the main wheel. The pilot was uninjured.

The pilot was in possession of a Commercial Pilot's Licence (CPL) with a TMG rating. He had a total of 483 flight hours, 30 hours (71 flights) of which involved the type in question. In the three months preceding the incident, the pilot had not completed any flights in the type in question.

Classification: Accident
Reference: 2016085



PH-1314 after the occurrence. (Photo: E. Thepen)

Occurrences that were not investigated extensively

Engine problems during take-off, Diamond DA-40D, PH-TDS, Lelystad Airport, 17 August 2016

The single-engine aircraft took off for a VFR flight from runway 05 at Lelystad Airport. Its destination was Amsterdam Airport Schiphol. On board were the pilot and one passenger. The wind direction was 050, and the wind-speed was 7 knots. The take-off proceeded normally, at full power and with the flaps at the 'take-off' (T/O) position. The rate of climb was higher than normal. At an altitude of approximately 150 feet, the power dropped from 95% to 35% on the indicator in a matter of seconds. It was immediately clear to the pilot that he had insufficient power to remain airborne, so he decided to land again immediately. He closed the throttle, set the flaps to the landing position and initiated the emergency landing. It was clear to the pilot that the remaining section of runway was not long enough to land on and to come to a stop before the end of the runway. Runway 23's approach lighting, which is situated beyond the end of runway 05, presented an obstacle. The pilot, therefore, decided to land the aircraft in the grass to the southeast of the runway 23 approach lighting. The aircraft landed at a speed of 60 knots, about 100 metres northeast of taxiway A, which is at right angles to the end of runway 23. During the roll-out, the aircraft briefly became airborne again as it passed over a paved path. The aircraft then came to a stop on the most north-eastern taxiway, which leads to the MLA runway

05/23. This was about 30 metres from the airport's perimeter fence. After landing, the engine continued to idle and subsequently responded normally when the throttle was pushed forward. The pilot taxied back to the apron near the tower, where he parked the aircraft.

This was PH-TDS's third flight, on 17 August 2016. No technical issues were noticed during the previous two flights. At the start of the third flight, there was a loss of power due to an engine failure. This was caused by the fact that it was no longer possible to close the waste gate (valve) fully. As a result, the inlet pressure may have been too low, resulting in insufficient engine power when climbing after take-off.

The pilot was in possession of an Airline Transport Pilot's Licence and had a total of 19,500 flight hours, 29 hours of which involved the type in question.

Classification: *Serious incident*
Reference: *2016087*

Stalled shortly after take-off, B&F FK 9 Mk IV Shortwing, PH-4J1, Hooegeveen airport, 31 August 2016

The microlight aircraft (MLA) had a crew of two. The pilot had little experience of this MLA, and was being checked out by the owner during a flight from Stadskanaal to Hooegeveen and back. The outward flight went without incident. At around 15:15, after preparing for the return flight to Stadskanaal, the MLA started its take-off run from runway 27 of Hooegeveen airport. The pilot reported that



PH-4J1 after the accident. (Photo: Aviation Police)

the MLA was bumping along the grass runway, after which he tried to push the stick forward to gain speed. Next, according to him, the aircraft took off and climbed too quickly. The owner stated that the MLA rotated at too low a speed and too high a pitch attitude. He attempted to regain control, by taking over the stick, but this had no effect. At a low height the aircraft's right wing stalled. The aircraft turned approximately 180 degrees and came to a forceful stop in the opposite direction, on the grass runway. Both occupants were injured. The aircraft was badly damaged.

The pilot possessed a German Sport Pilot's License (SPL), with a Dutch equivalence rating. He had a total of 120 flight hours, 2.5 hours of which involved the type in question.

The owner of the aircraft was in possession of a Recreational Pilot Licence (RPL), with SEP, MLA and RT ratings. He had a total of 335 flight hours, 15 hours on SEP and 320 hours on MLA (220 of which involved the type in question).

Classification: *Accident*
Reference: *2016092*

Bird strike involving a goose, Cessna 208B, PH-SWP, Teuge Airport, 31 August 2016

The Cessna 208 Caravan took off in the morning, from Teuge Airport, with a pilot and six parachutists on board. The purpose of the flight was to drop these parachutists near the airport area. The aircraft was monitored during take-off by the airport's Airside Operations Manager. The latter observed a flock of geese flying across the runway, just after the aircraft became airborne. One of the geese hit the aircraft and dropped onto the runway. The pilot of the Cessna 208B was contacted and informed that he had suffered a bird strike. Airport operations advised him not to put unnecessary strain on the aircraft, as the severity of the damage was still unknown. After dropping the six parachutists, the Cessna landed safely at Teuge and taxied directly to a maintenance hangar. It was found to have suffered damage to the left horizontal stabilizer.



Damage to the horizontal stabilizer. (Photo: Teuge airport)

Airport operations at Teuge airport had conducted a field inspection that very morning. At that time, no geese were observed at or around the airport.

Classification: *Serious incident*
Reference: *2016087*

Runway approach from the wrong direction, Piper PA-28-161 Warrior III, G-OBFS, Lelystad Airport, 11 September 2016

The Piper Warrior, which had three occupants, was completing an overland flight from Ameland to Lelystad.

When the aircraft was five miles west of the airport, the pilot asked Lelystad for airport information. He was informed that runway 05 was in use, with a right hand circuit and a QNH of 1018 hPa. This was read back correctly by the pilot of the Piper Warrior. He then asked if a straight-in approach for runway 05 was available, but this was refused by airport services. He then flew into the circuit area via the normal route. Instead of completing a right hand circuit for runway 05, he mistakenly flew a left hand circuit for runway 23. While the Piper Warrior was on the base leg, a twin-engine Piper PA-34 'Seneca', with a pilot and an examiner on board, turned onto runway 05 for departure. This was reported on the radio as: "Papa Lima Mike is lining up." When the Piper Warrior turned for final this was reported on the radio as: "Golf Foxtrot Sierra, turning final, full stop." This was repeated by Lelystad Radio, as: "Golf Foxtrot Sierra". None of the radio transmissions indicated the runway direction being used. As a result, neither of the pilots could have been aware that they were approaching one another from opposite directions. When the pilot of the Piper Warrior had completed his turn to final, he saw the Piper Seneca taking off from runway 05. At that point, Lelystad Radio told the Piper Warrior that he was approaching the runway from the wrong side and that he had to abort the landing. This was read back immediately, and the Piper Warrior initiated a go-around, leaving the circuit by turning right and heading north.

The pilot indicated that he had been feeling fatigued, and that, as he joined the circuit, he had allowed himself to become distracted by questions from the passengers. In addition, the pilot had little experience at Lelystad Airport and, earlier that day, had made a landing in a westward direction at Ameland Airport. The examiner aboard the Piper Seneca indicated that he did not observe the Piper Warrior until his own aircraft had rotated. At that point in time, the only option would have been to fly beneath the other aircraft. The examiner estimated that the minimum vertical separation was about 200 feet. The pilot of the Piper Warrior estimated the minimum separation at about 500 feet.

Classification: *Serious incident*
Reference: *2016101*

Smoke in the galley, Boeing 737-800, Amsterdam FIR, 20 September 2016

The Boeing 737-800 was en route from Copenhagen (Denmark) to Paris-Orly (France) when, in Dutch airspace, the captain was informed by the purser that smoke was emerging from part of the rear galley. While the exact source was not known, the smoke was concentrated near the water heater and an oven. There was a strong smell of an electrical fire. A halon fire extinguisher was used at the point from which the smoke was emerging.

The flight crew had been listening on the service interphone, so they were already aware of the smoke issue before they received the message from the purser, and had already planned to divert to Amsterdam Airport Schiphol. After being notified by the purser, they made a PAN PAN call to air traffic control and requested a descent and course for Amsterdam Airport Schiphol. During the descent, the flight crew was informed by the purser that the situation was under control. The aircraft landed normally at Amsterdam Airport Schiphol. There were no injuries.

A subsequent inspection showed that the smoke had been caused by a short circuit in the 'door area heater system'. This system was deactivated and its power supply switched off. The flight was subsequently able to continue to Paris-Orly.

Classification: *Serious incident*
Reference: *2016104*

The Dutch Safety Board in four questions

1

What does the Dutch Safety Board do?

When accidents or disasters happen, the Dutch Safety Board investigates how it was possible for them to occur, with the aim of learning lessons for the future and, ultimately, improving safety in the Netherlands. The Safety Board is independent and is free to decide which incidents to investigate. In particular, it focuses on situations in which people's personal safety is dependent on third parties, such as the government or companies. In certain cases the Board is under an obligation to carry out an investigation. Its investigations do not address issues of blame or liability.

Recently the Dutch Safety Board reported about the investigation into the causes of the crash of flight MH17, about the lifting incident in Alphen aan den Rijn and an investigation about medical assistance on the North Sea.

2

What is the Dutch Safety Board?

The Safety Board is an 'independent administrative body' and is authorised by law to investigate incidents in all areas imaginable. In practice the Safety Board currently works in the following areas: aviation, shipping, railways, roads, defence, human and animal health, industry, pipes, cables and networks, construction and services, water and crisis management & emergency services.

3

Who works at the Dutch Safety Board?

The Safety Board consists of three permanent board members. The chairman is Tjibbe Joustra. The board members are the face of the Safety Board with respect to society. They have extensive knowledge of safety issues. They also have wide-ranging managerial and social experience in various roles. The Safety Board's office has around 70 staff, of whom around two-thirds are investigators.

4

How do I contact the Dutch Safety Board?

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Credits

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Photos

Photos in this edition, not provided with a source, are owned by the Dutch Safety Board.

Sources photos frontpage:

photo 1: BPEA

photo 2: Royal Netherlands Marechaussee

photo 3: E. Thepen