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 sufficient to learn lessons, the Board does not conduct any further investigation.

The Board's activities are mainly aimed at preventing occurrences in the 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 Aviation Report

January - March 2018

In this quarterly report the Dutch Safety Board looks back on the occurrences investigated during the past year. The four most frequently reported types of incidents were all in general aviation: (near-)collision with a drone, emergency landing following engine failure, retracted/broken off nose landing gear and damage following aborted winch launch.

In 2017 the Safety Board published a report on 'Air Traffic Safety at Amsterdam Airport Schiphol'. One of its main conclusions was that there is a clear pattern at Schiphol in which the relevant parties accept new safety risks and then take measures to counteract the negative consequences for safety at the airport.

This report formulated recommendations to a number of Dutch aviation sector authorities. Based on the reactions it received, the Dutch Safety Board concludes that the relevant parties are insufficiently aware that a fundamentally different approach to operations and cooperation is needed to guarantee safety at Schiphol. Also in a few recent occurrences at Schiphol that the Dutch Safety Board has investigated, the findings from the 2017 report seem to play a role. The Dutch Safety Board will continue to closely monitor safety at and around Schiphol.

Tjibbe Joustra
Chairman, Dutch Safety Board


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Identified trends

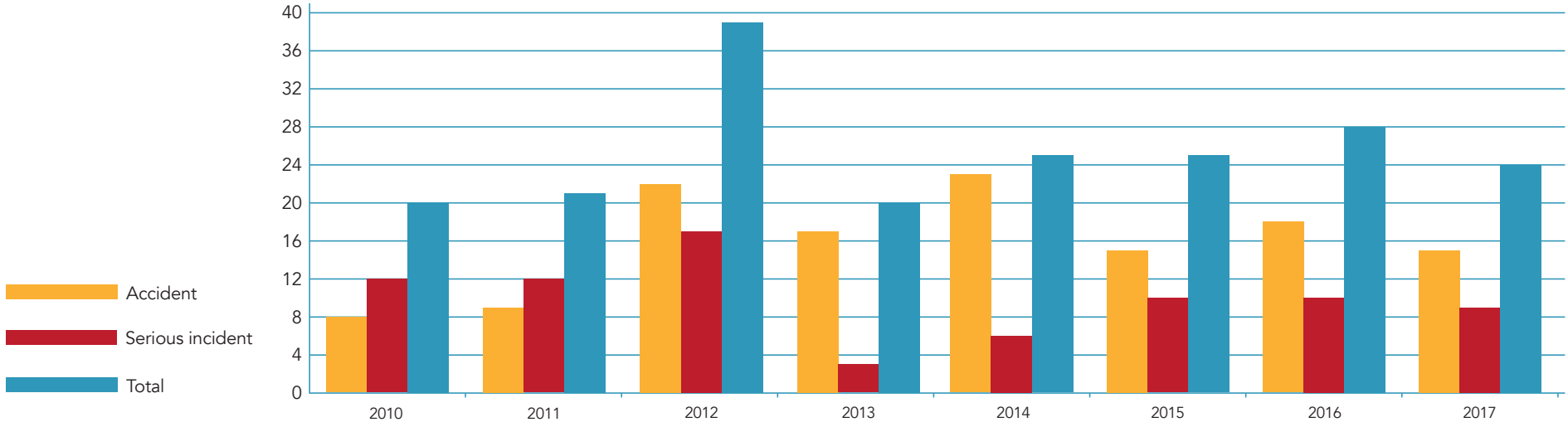
Review of occurrences investigated in 2017

In the past year, fifteen serious incidents and seventeen accidents involving civil aircraft, having taken place in the Netherlands, were reported to the Dutch Safety Board. The Dutch Safety Board is investigating all these occurrences, and a large number of investigations have already been concluded.

The Dutch Safety Board has also assisted foreign investigating authorities on six investigations into occurrences with Dutch involvement that took place abroad in 2017.

In 2017, four people were injured in a heavy landing with a hot air balloon near Zeijerveld and two passengers incurred minor injuries in two separate incidents involving gliders. One Dutch national was involved in a fatal accident abroad and the Dutch Safety Board is assisting the relevant investigation. The accident related to the collision of a single-engine ultralight aircraft with mountainous terrain on Mallorca in Spain.

General aviation aircraft were involved in 24 of the 32 serious incidents and accidents that were reported – the remaining eight occurrences (six serious incidents and two accidents) involved passenger aircraft and a business jet.



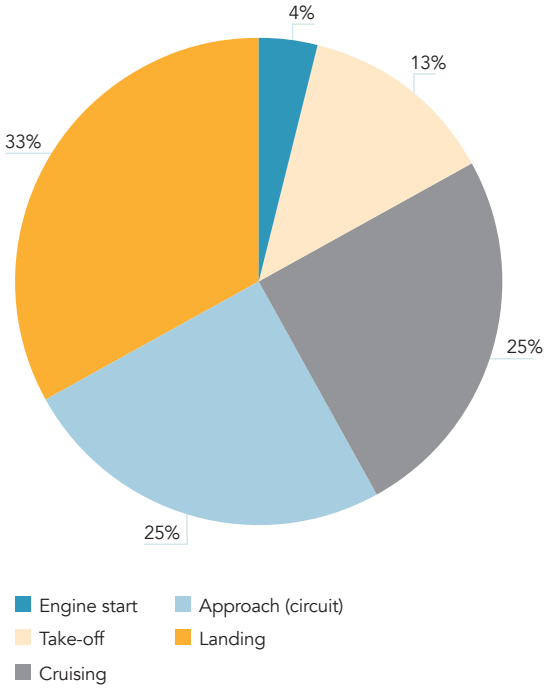
Number of serious incidents and accidents in general aviation reported to the Dutch Safety Board.

Reported occurrences concerning general aviation

This review will focus on the occurrences in the Netherlands in general aviation that were reported to the Dutch Safety Board, given that the vast majority of the reports relates to this category.

Following a slight increase of the number of serious incidents and accidents reported in relation to general aviation in the Netherlands in 2016, this level in 2017 is almost identical to that in 2014 and 2015.

Of the general aviation occurrences that took place in 2017 and were investigated by the Dutch Safety Board, 33% took place during the landing, 25% during the approach and airfield traffic circuit and 25% during cruising. There were no serious incidents or accidents during the taxiing, the climb or descent of aircraft.



The phases of the flight in which occurrences took place in general aviation in 2017.

In 2017, four types of occurrence were reported most frequently. These were (near-)collision with a drone, emergency landing following engine failure, retracted/broken off nose landing gear and damage (to gliders) following aborted winch launch. All other types of occurrence took place less than three times, and for this reason will not be discussed separately in this report.

Collision or near-collision with a drone

In 2017, there were four reports of collisions or near misses with a drone in general aviation. This is therefore the type of occurrence most frequently reported in 2017. Three of the four occurrences took place during cruising and one took place in the airfield traffic circuit. In one case, the pilot of the glider heard a loud bang, but could not ascertain what had hit the aircraft. Based on the damage pattern on the right-hand winglet, it is not unlikely to assume a collision with a drone took place. No traces or remnants of a drone were not found in the winglet, however.

Emergency landing following engine failure

In 2017, there were three reports of emergency landings that were the result of engine failure. In two instances, engine failure occurred while in the circuit, and one instance took place during cruising. No one was injured during these incidents. In all three cases, the emergency landing resulted in damage to the aircraft.

Retracted/broken off nose landing gear

There were three reports of occurrences involving aircraft incurring damage to the nose landing gear. In one instance, the aircraft bounced several times during the crosswind landing, resulting in the nose wheel breaking off. In the second case, the pilot-in-command mistakenly applied forward pressure during take-off when he attempted to close the cockpit hood, which had opened – this resulted in the nose wheel hitting the runway and breaking off. The aircraft did, however, lift off once more. The third occurrence related to a landing with an amphibious aircraft with a retracted nose wheel. The crew was forced to execute the landing in this way because of the nose wheel's failure to extend, due to a problem with the nose gear doors, which had arisen during a water landing followed by a go-around.

Damage following aborted winch launch

There were three reports of occurrences involving a glider incurring damage following an aborted winch launch. In one case, the instructor instructed the pupil to break off the winch launch at a low altitude due to the fact that the hood was not secured and had opened and was loosening from its hinges. The loosened hood resulted in a light injury to the pupil's arm. In the second occurrence, the winch driver was given the instruction to abort the winch launch because the transport wheel was still attached to the tail of the glider. This occurred several seconds after the aircraft was airborne. The occurrence left the pilot with sore back muscles. In the third instance, the pilot uncoupled the winch cable at a low altitude due to the tractive force of the winch diminishing. The pilot and passenger were unharmed.

Definition accident

An occurrence associated with the operation of an aircraft in which:

- A person is fatally or seriously injured.
- The aircraft sustains damage or structural failures which adversely affects the structural strength, performance or flight characteristics of the aircraft and would normally require major repair or replacement of the affected component.
- The aircraft is missing or is completely inaccessible.

Definition serious incident

An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft.

Occurrences into which an investigation has been initiated

Return following cabin crew and passengers becoming unwell, Boeing 767-300ER, Amsterdam Airport Schiphol, 19 January 2018

Roughly an hour after departure of the Boeing 767 from Schiphol Airport, the entire cabin crew and shortly thereafter a number of passengers indicated that they were feeling unwell. In consultation with the airline, the pilot-in-command decided to return to Schiphol Airport. After the aircraft had come to a standstill, a thermal fuse plug melted due to an overheated brake and a tyre deflated. After the aircraft landed, the cabin crew was taken in and examined by the airport medical service and ambulance staff of the Kennemerland region.

The Dutch Safety Board is currently investigating the cause of the cabin crew and passengers becoming unwell (Note: the melting of the thermal fuse plug is a built-in safety feature that will at present not be investigated any further).

Classification: *Serious incident*
Reference: *2018004*

Archive photo Boeing 767. (Photo: B. Suskind)

Non-stabilised approach and EGPWS warning, Embraer ERJ 190-100 STD, Amsterdam Airport Schiphol, 7 February 2018

The Embraer 190 was conducting a flight from Kraków Airport in Poland to Schiphol Airport. The captain was piloting the aircraft, which was coming in from an easterly direction and then made a left turn to start the aircraft's approach to runway 18R. The turn, which was executed at the request of Air Traffic Control, took place at a shorter distance from the runway threshold than usual, but the crew indicated to Air Traffic Control that this was not a concern. At the start of the approach to runway 18R, the crew noticed that the aircraft was flying higher and faster than intended. Despite the measures put in place by the crew to descend quicker and reduce speed, the aircraft had not yet been stabilised at 500 feet. This resulted in a 'SINK RATE' warning from the Enhanced Ground Proximity Warning System. The crew continued its approach despite this warning. The landing was completed without incident.

Classification: *Serious incident*
Reference: *2018008*

Archive photo Embraer 190. (Photo: W. Vignes)

Airprox, Diamond DA-40 NG, PH-EGM, HOAC DV-20 Katana, PH-MFT, above the Flevopolder, 23 February 2018

A Diamond DA-40 flew from Texel International Airport to Lelystad Airport in accordance with visual flight rules. As the only occupant of the aircraft, the pilot flew along the North Sea coast and, once situated south-west of the Schiphol control zone (CTR), flew in an easterly direction. He subsequently flew through class G airspace at an altitude of 1000 feet, with the sun at his back, maintaining a north-easterly course in the direction of Lelystad Airport's compulsory reporting point, Bravo. At the same time, from the opposite direction and approximately at the same altitude, a HOAC DV-20 Katana was approaching from Oostwold Airport. The pilot and passenger were en route to the Hilversum Airfield.

The pilot of the DA-40 received an audio warning from his Traffic Avoidance System (TAS) above the Flevopolder, with only several minutes of flight left to point Bravo. The TAS indicated the position of the DV-20 Katana on the Primary Flight Display (PFD). After the pilot actually obtained a visual of the DV-20, he executed a manoeuvre to evade the other aircraft. The pilot of the DA-40 estimated the distance between the two aircraft to be roughly 10 metres. The pilot of the DV-20 stated that, looking into the sun, he had not observed any other aircraft.

Classification: *Serious incident*
Reference: *2018015*

Archive photo PH-EGM. (Photo: H. Wadman, ABPic)

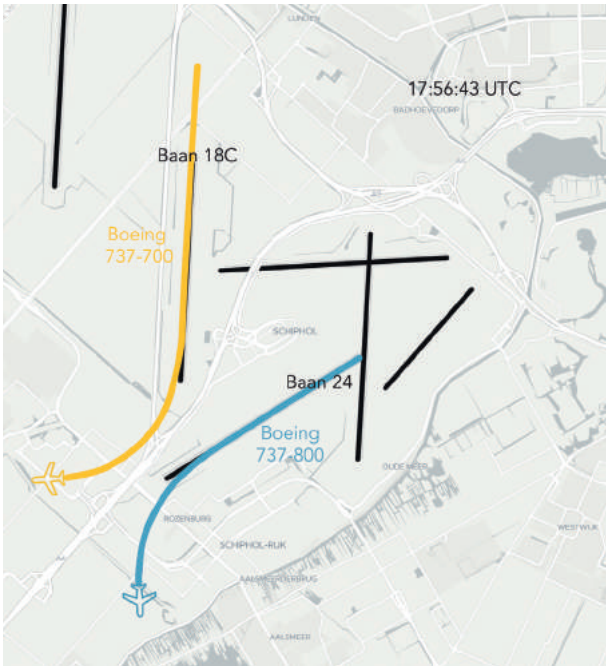
Archive photo PH-MFT. (Photo: G. van der Schaaf)

Occurrences into which an investigation has been initiated

Loss of separation between two aircraft, Boeing 737-800, Boeing 737-700, Amsterdam Airport Schiphol,
29 March 2018

A Boeing 737-700, which was engaged in executing a landing at runway 18C at Schiphol Airport, performed a last minute go-around. The crew immediately reported this to Air Traffic Control. Shortly before this, a Boeing 737-800 had received permission for take-off from runway 24. Due to the fact that the extensions of both runway intersect one another, this resulted in a potentially hazardous situation. The air traffic controller recognised this and instructed the Boeing 737-700 performing the go-around to turn right as quickly as possible. After take-off, the crew of the Boeing 737-800 was instructed to perform a left turn at a heading of 180. The pilots of both aircraft made visual contact with one another. Later on, the crew of the Boeing 737-700 was instructed to maintain a heading of 270. The Boeing 737-800 continued its flight and the Boeing 737-700 landed on runway 18C shortly thereafter without incident.

Classification: *Serious incident*
Reference: *2018017*



Schematic representation of flight paths.

Occurrences abroad with Dutch involvement into which an investigation was initiated by foreign authorities

Runway excursion following landing with retracted left main landing gear, Fokker F28 Mark 0100, EP-FQF, Mashad Airport (Iran), 16 February 2018

On approach to runway 31R at Mashad Airport in Iran, there was no indication in the cockpit that the left main landing gear had extended and was secured. In response, the crew decided to perform a go-around. While in their holding pattern, they subsequently attempted to extend the landing gear, at which they were unsuccessful. Eventually, the crew decided to land with the left main landing gear retracted. Shortly after the landing, the aircraft tilted onto its left wing and came to a halt next to the runway. The crew initiated an evacuation. None of the occupants were injured.

The Iranian Aircraft Accident Investigation Board (AAIB) has initiated an investigation into the accident. The Dutch Safety Board is providing assistance.

Classification: *Accident*
Reference: *2018009*

Published reports

Insufficient thrust setting for take-off, Boeing 737-800, PH-HZD, Groningen Airport Eelde, 18 September 2014, **Boeing 737-800, PH-HSG, Lisbon Airport (Portugal),** 3 December 2015

The first occurrence took place in Groningen Airport Eelde on 18 September 2014. A Boeing 737-800 departed at 3.07 PM to conduct a flight to Rotterdam The Hague Airport. During the take-off run, the pilots noticed that the aircraft was accelerating less than expected. They continued the take-off run and the aircraft needed almost all of the runway to get airborne. The rest of the flight was uneventful. The aircraft landed at Rotterdam The Hague Airport at 3.53 PM. There was no damage to the aircraft and the crew and passengers were unharmed.

The second occurrence took place at Lisbon Airport in Portugal on 3 December 2015. A Boeing 737-800 departed to conduct a flight to Schiphol Airport at 7.27 PM. During take-off, shortly before rotation, the pilots noticed that the remaining length of runway at that point was shorter than expected. The aircraft lifted off roughly 430 metres before the end of the runway. The rest of the flight was uneventful. There was no damage to the aircraft and the crew and passengers were unharmed.

In both cases, involving the same airline, insufficient engine thrust had been selected for take-off. This was because incorrect data had been used to calculate the engine thrust to be selected. Due to the fact that this incorrect data had also been used to calculate the take-off speeds, the take-off speeds themselves were likewise incorrect. In both incidents, there was a failure to comply with the prescribed safety margins that apply to commercial aircraft. In both cases, the insufficient engine thrust resulted in a longer take-off run than usual, meaning that there was a possibility of insufficient runway length to be able to abort at the end of the runway using the (incorrectly) calculated decision speeds.

The Dutch Safety Board published the English-language report, accompanied by a Dutch summary, on 13 March 2018. The report is available for download from the website of the Dutch Safety Board: https://www.onderzoeksraad.nl/nl/onderzoek/2072/onvoldoende-vermogen-ingesteld-voor-de-start-18-september-2014?s=40C936CF0ED2640D41F2957C68B8DF0E6B68B08F

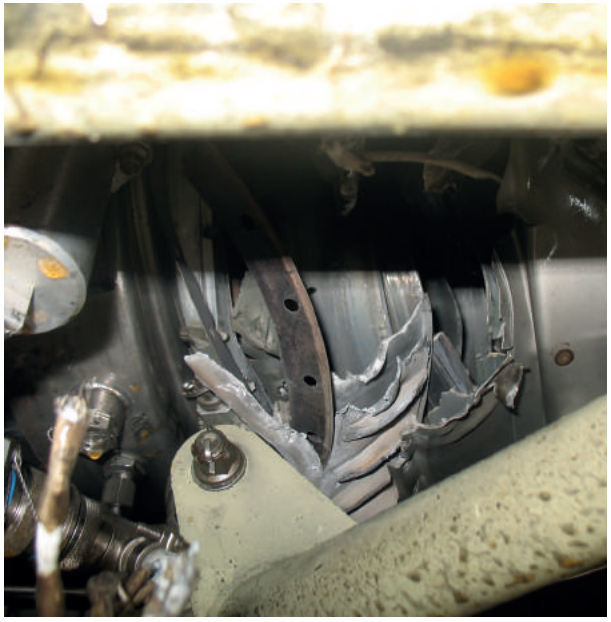
Explosion of APU during de-icing, Fokker F28 Mark 0100, HB-JVE, Nuremberg (Germany), 20 January 2015

Prior to the flight from Albrecht Dürer Airport Nürnberg in Germany to Zürich Kloten Airport in Switzerland, the Fokker 100 was de-iced. The employee conducting the de-icing procedure heard the rpm of the *auxiliary power unit* (APU) increase, whereupon he stopped de-icing. At that moment, there was an explosion and the employee took shelter in his safety cage. Immediately after that, there was an even bigger explosion, at which point the APU shut itself down. During these events, a service hatch on the underside of the aircraft had opened up, out of which a flame jet of approx. 2 metres escaped. The hatch was damaged.

The explosions could be heard inside the cabin of the aircraft. An APU error warning appeared in the cockpit. The aircraft crew stated that the aircraft shook. A broken piece of the APU pierced the pressure bulkhead at the rear of the cabin and for a short while smoke entered the cabin. The passengers were subsequently instructed to make their way to the smoke-free front section of the cabin, after which they disembarked and were taken to the terminal on buses.

An investigation revealed that the de-icing fluid had seeped into the APU, resulting in a significant increase in the turbine speed.

The German Federal Bureau of Aircraft Accident Investigation (BFU) published the report of the investigation on 9 February 2018. The Dutch Safety Board assisted in the investigation. The report can be downloaded from the BFU website: https://www.bfu-web.de/EN/Publications/Investigation%20Report/2015/Report_15-0059-AX_Fokker100_Nurnberg.pdf?__blob=publicationFile



The damaged APU. (Photo: BFU)

Runway incursion, Embraer ERJ 190-100 STD, PH-EXB, Dornier 328, HB-AEO, Bâle-Mulhouse Airport (France),
7 March 2016

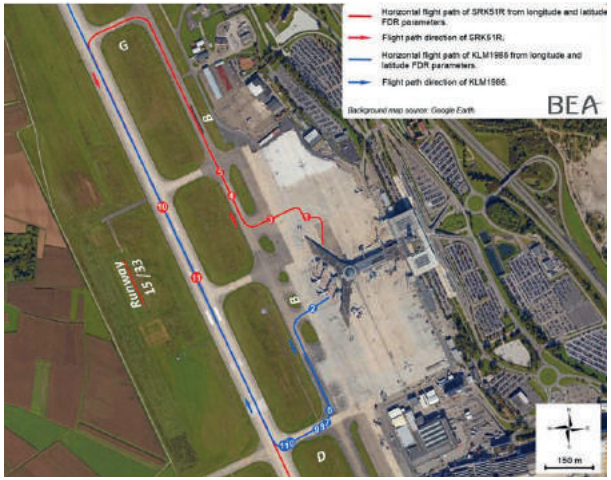
The Dornier 328 was lined up on runway 15 at Bâle-Mulhouse Airport in France and the crew was preparing for departure. At the same time, a Dutch-registered Embraer 190 was taxiing to the beginning of runway 44 via an intersection in order to take off in the opposite direction. Air Traffic Control instructed the crew of the Embraer to hold position and hold off entering the runway. The Embraer subsequently taxied onto the runway. The Dornier, which had by then begun take-off, flew over the Embraer at a low altitude.

According to the report drawn up by the French investigatory authority BEA, the incident was caused by the cockpit crew of the Embraer misunderstanding the instructions of Air Traffic Control and Air Traffic Control's failure to notice that the Embraer's cockpit crew read back the instruction incorrectly.

The report also cited the following contributing factors:

- incorrect perception on the part of the cockpit crew regarding the runway in use;
- time pressure and distractions in the cockpit;
- the Embraer's short taxi route to the runway, which left little time to construct a thorough picture of the airside situation;
- the simultaneous handling by air traffic control of a flight under visual meteorological conditions and another flight under instrument meteorological conditions, both taking off from runway 33.

The French Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation civile (BEA) published its report on 29 March 2018. The Dutch Safety Board assisted in the investigation. The report is available for download on the BEA website: https://www.bea.aero/en/investigation-reports/notified-events/detail/event/incident-grave-dun-dornier-328-immatricule-hb-aeo-et-dun-embraer-190-immatricule-ph-exb-survenu-le/



Horizontal flight paths Embraer 190 (blue) and Dornier 328 (red). (Photo: BEA)

Published reports

Low fuel quantity, Boeing 737-700, PH-XRZ, Barcelona Airport (Spain), 17 April 2016

During the initial approach to Barcelona Airport in Spain, the Boeing 737-700, inbound from Schiphol Airport, performed a go-around at runway 25R after the crew noted a sudden change in wind direction and intensity. That change made Air Traffic Control decide to put runways 07L and 07R in use.

Immediately after they engaged the go-around, the crew reported they were at risk of a fuel shortage and requested landing priority. Air Traffic Control asked the crew to declare a fuel emergency (MAYDAY) if this was necessary. After the crew had declared a fuel emergency, it was given vector instructions for a final approach to runway 07L, where the aircraft landed without further incident. When it reached the parking stand, the aircraft still had 1080 kg of fuel on board, next to the final reserve of 1001 kg of fuel that was stated.

Air Traffic Control was subsequently forced to reroute the other traffic to runway 07L as well. Another aircraft that was behind the Boeing 737-700 was allowed to continue its approach to runway 25R. The objective was to increase separation between the aircraft, but this resulted in a situation where the two aircraft were approaching one another from opposite directions. Eventually, the other aircraft also conducted a go-around, where both crews reported they had visual confirmation of the other traffic. The minimum distance between the aeroplanes was 2 NM horizontally and 100 feet vertically.

The Spanish investigation authorities attributed the incident to incorrect planning of fuel consumption by the crew of the Boeing 737-700 and to the following additional factors:

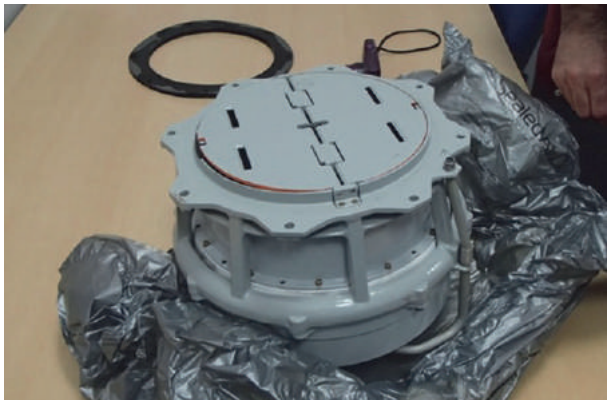
- changing of the runway configuration due to the sudden wind change.
- incorrect coordination between the various Air Traffic Control services at the airport, which resulted in two aircraft flying in each other's direction.

The Spanish CIAIAC published its report on 31 January 2018. The Dutch Safety Board assisted in the investigation. The report is available for download from the CIAIAC website: https://www.fomento.gob.es/NR/rdonlyres/1B44E1C2-264A-4BAA-BE84-A34BFCE416DF/146853/2016_012_IN_ENG.pdf

Decompression of the cabin followed by an emergency descent and landing at Amsterdam Airport Schiphol, Boeing 767-300, G-POWD, en route from London Stansted Airport (United Kingdom) to Rzeszow-Jasionka Airport (Poland), 19 March 2017

Shortly after the aeroplane had reached cruising altitude of FL370, an altitude warning sounded for the cabin and the red CABIN ALTITUDE warning lamp began flashing in the cockpit. The crew carried out the decompression checklist before conducting the emergency descent and diverting to Schiphol Airport.

Following an investigation, it was established that the cabin had not been able to pressurise correctly due to a faulty positive pressure relief valve (PPRV). Both PPRVs had been replaced by refurbished valves when the plane had previously undergone maintenance shortly before. Testing and disassembly of the faulty valve did not yield any definitive answer regarding the reason for the failure of the valve. The possibility of dirt residues having been inside the valve during the flight could not be excluded.



Faulty positive pressure relief valve (PPRV). (Photo: AAIB)

The British Air Accidents Investigation Branch (AAIB) published its report on 8 February 2018. The Dutch Safety Board assisted in the investigation. The report is available for download on the AAIB website: https://www.gov.uk/aaib-reports/aaib-investigation-to-boeing-767-36n-g-powd

Emergency landing following malfunction of electrical power system; Piper PA28-161 Cherokee, G-WARA, near Mezosas (Hungary), 23 May 2017

The Piper Cherokee, owned by a Dutch national, was carrying out a flight from Oradea International Airport in Romania to Brno–Turany Airport in the Czech Republic with the pilot and one passenger on board. During the flight, the plane's electrical power system stopped working. The pilot was forced to make an emergency landing in a field. Neither of the occupants on board were injured in the process. The plane incurred damage to the propeller, nose landing gear and engine suspension.

G-WARA after the emergency landing. (Photo: TSB)

The first investigation carried out by the Hungarian investigatory authority (TSB) indicated that the pilot had been aware of the fact that the battery of the plane was defective. Prior to departure, he had started the aircraft engine using an external power source. The TSB subsequently decided that this incident warranted no further investigation or action from the TSB, and on 28 February 2018, it informed the Dutch Safety Board that it had suspended its investigation.

Occurrences that have not been investigated extensively

Damage incurred due to emergency landing following engine failure, Kitplanes for Africa Safari VLA, PH-JOO,Stadskanaal, 13 August 2017

The aircraft
PH-JOO is a homebuilt aircraft, with a tailwheel, that has space for two occupants and is powered by a Rotax 914 turbo engine.

The fuel system of the aircraft comprises a header tank, located under the instrument panel and two wing tanks. The header tanks provides the engine with fuel and is fed by the wing tanks. Its total fuel capacity is 125 litres: 5 litres in the header tank and 2 x 60 litres in the wing tanks. The occupants are not able to read the fuel level of the header tank when in flight. The fuel levels of the wing tanks can be monitored via windows in the tanks that can be read from the cockpit.

The original fuel system had five fuel selectors that allowed cross feed between both wing tanks. In early 2017, however, the manufacturer of the system proposed a modification to the system by way of a Service Bulletin, reducing the number of selectors from five to three: two fuel valves in the wings and a main fuel selector in the central console. In June 2017, PH-JOO was modified in this way.

Archive photo PH-JOO. (Photo: A.J.W. Siedsma)

The flight
The aircraft took off from Oostwold Airport at 2.02 PM with the Stadskanaal Airfield as its destination in order to refuel on Mogas (car petrol). The pilot and one passenger were on board the aircraft. The planned flight time was 15 minutes. Visibility was greater than 10 km, there was cloud cover of 3/8 and there was wind from 270 degrees with a wind speed of 4 knots.

According to the statement provided by the pilot, the right wing tank contained 30 litres of fuel, the left wing tank contained 10 litres and the header tank contained 5 litres prior to take-off. The pilot selected the right-hand wing tank, as it contained more fuel than the left-hand wing tank.

Upon approach to Stadskanaal Airfield, the pilot entered the circuit of runway 24 at a circuit altitude of 500 feet above ground. On the tailwind leg, he configured the aircraft for landing, whereby the fuel selector of the fuel tanks must be set to 'both'. Shortly after that selection, the engine malfunctioned. The pilot immediately checked the fuel levels in the wing tanks, and there appeared to be a sufficient amount of fuel left in both the right-hand and left-hand wing tank. As a precautionary measure, the pilot engaged the reserve fuel pump, radioed the airport authority that he was having engine trouble and requested priority landing. The engine subsequently failed entirely. Given the remaining altitude and distance to the airfield, the pilot decided to make an emergency landing in a field of wheat.

The landing was heavy and, shortly after contact with the ground, the aircraft slid sideways. Within a few seconds, the heavily damaged aircraft came to a halt, ending up on its right side, thus blocking the door on the passenger's side. The pilot ensured that the passenger left the aircraft via the left-hand side, after which he informed the airport authority, deactivated the electrical system and cut off the fuel supply. He subsequently deactivated the Emergency Locator Transmitter (ELT) and left the aircraft.
As soon as the airport manager of Stadskanaal Airfield had seen the aircraft disappear behind the trees, he initiated the airfield's emergency procedures.

The pilot had 1150 hours of flight experience, of which 572 hours flying tailwheel aircraft. In the previous three months, he had spent 63 hours flying the relevant type of aircraft. >

Investigation & analysis
Shortly after the accident, the aircraft manufacturer transferred the data stored on the on-board computer (iEFIS). This data could then be used to analyse the situation before, during and after the engine failure. The data showed that, following an initial descent, the aircraft was no longer in descent and was flying roughly 1 metre above the ground in the final 20 seconds of the flight. Thereafter, the aircraft stalled and hit the ground with a gravitational acceleration of 3.9 g.

Furthermore, the flight data shows that approximately 4.8 litres of fuel had been used during the flight, which roughly matches the content of the header tank. Upon closer examination, the fuel valves in the wings appeared to be closed. It is not known when these valves were closed. There is no warning system that alerts the pilot to a fault regarding the fuel supply from the wing tanks to the header tank. The on-board computer only indicates fuel consumption per hour and calculates the total remaining amount of fuel available.

Conclusion
The accident was caused by a fuel shortage. The engine was only being supplied with fuel by the header tank, but the header tank was not being fed by the wing tanks during the flight, due to the fact that the fuel valves of these tanks were closed.

As a result of this accident, the manufacturer will be issuing a Service Bulletin that will contain the following elements:

- a sensor that records the fuel level in the header tank, with a warning lamp and an audible alarm on the instrument panel in the event of a fuel shortage;
- securing the fuel valves on the wings in an open position;
- including a check of the wing fuel valves during the pre-flight checklist.

Classification: *Accident*
Reference: *2017085*

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

Occurrences that have not been investigated extensively

Near-collision in the circuit, Robin Apex DR400, PH-VSQ, Ultravia Aero Pelican PL, PH-VKL, Breda International Airport,
25 February 2018

Around 3.15 PM, PH-VSQ and PH-VKL both flew into the air traffic circuit area of Breda International Airport. It was a sunny day with visibility of over 10 km. PH-VSQ was flying at an altitude of roughly 200 feet for the final approach of the landing on runway 07 when the pilot noticed another aircraft below him. He immediately selected more thrust in order to halt the descent of his own aircraft. When he observed the other aircraft continuing its landing, he performed a go-around and banked to the right. At that very moment, he heard from the airport authority officer radio that two aircraft were on final approach.

The pilot of PH-VKL had also heard the airport authority's radio message, but assumed that this did not apply to him, as he had 'number 1' priority on 'final' to runway 07. Only during his landing did he notice another aircraft flying overhead. Both pilots stated that they had reported their positions within the circuit area by way of a downwind and final call. >

Archive photo PH-VKL. (Photo: Texel Airport)

Analysis
The statements and reconstruction have shown that PH-VSQ was flying behind PH-VKL on downwind. The pilot of PH-VKL stated that he had been flying a long downwind leg due to an aircraft that was flying in front of him. He wished to land and, by extending the downwind leg, would create enough distance between him and the other aircraft to perform the landing with the required separation. The pilot of PH-VSQ, who was flying behind PH-VKL on downwind, apparently turned from downwind to base sooner, thus placing him in front of PH-VKL. The pilot of PH-VSQ stated that he had not seen any other aircraft in front of him on downwind and, as such, thought he would be able to turn into final without incident. Due to the speed and altitude difference, PH-VKL was able to gain on PH-VSQ and end up below this aircraft. The reason that both pilots only saw each other at a later stage was in part caused by the fact that PH-VSQ is a low-wing aircraft, which means that the pilot's visibility was hampered by the wings. Both pilots stated that they had not heard the position reports of the other aircraft.

The occurrence was caused by the fact that both pilots, despite good visibility and position reports, did not see one another. It is possible that the position of the sun impacted conditions, given that both pilots were looking into the sun to a certain degree on downwind. The timely evasive manoeuvre of the pilot of PH-VSQ upon observing the other aircraft below him prevented an accident from occurring.

Classification: *Serious incident*
Reference: *2018014*

Archive photo PH-VSQ. (Photo: Texel Airport)

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 environmental safety of cannabis grow rooms, collision with the weir near Grave by a benzene tanker and the safety at the Chemelot industrial complex.

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?

For more information see the website at www.safetyboard.nl
Telephone: +31 70 - 333 70 00

Postal address
Dutch Safety Board
P.O. Box 95404
2509 CK The Hague
The Netherlands

Visiting address
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2514 AE The Hague
The Netherlands

DUTCH
SAFETY BOARD

Colofon

This is a publication of the Dutch Safety Board. This report is published in the Dutch and English languages. If there is a difference in interpretation between the Dutch and English versions, the Dutch text will prevail.

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

Source photo frontpage:
Photo 1: B. Suskind
Photo 2: TSB
Photo 3: Texel Airport