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

April - June 2018

In May 2018, there were two accidents involving powered aircraft, both with fatal consequences. In the first accident, a Reims F172N hit a number of trees near Stolwijk during a proficiency check, after which it crashed into the ground, killing both occupants. In the second accident, a Piper Pawnee crashed shortly after picking up an advertising banner at Breda International Airport, killing the pilot, who was unaccompanied. The Dutch Safety Board has launched an investigation into both crashes.

In the last quarter, two near-collisions between a glider and a parachutist near International Airport Teuge were reported to the Dutch Safety Board. The Dutch Safety Board is of the opinion that making a radio broadcast before parachutists are to be dropped is useful; however, there is no read back, as a result of which it cannot be assumed that everyone has heard the broadcast. Consequently, this kind of agreed procedure is not watertight. It follows that it is important for every pilot in command in or in the vicinity of a drop zone to realise that parachutists could be dropped at that location at any time.

Tjibbe Joustra

Chairman of the Dutch Safety Board


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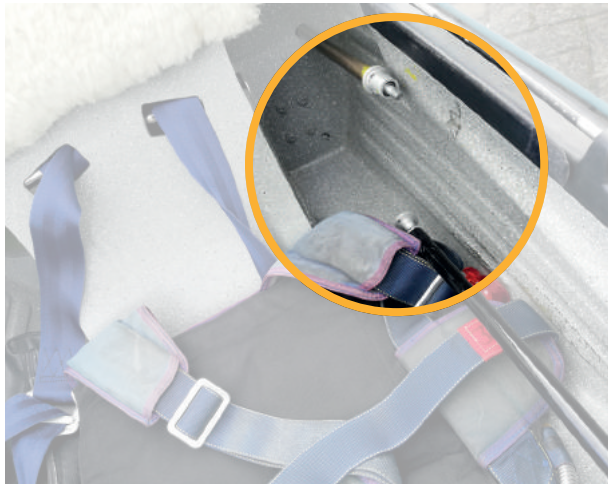
Occurrences into which an investigation has been initiated

Detached air brake handle, LS 4-b, Larserveld, 23 April 2018

During the glider's winch launch, the air brakes unexpectedly opened. It was found that the brake operating lever had slipped out of the lock position. Once the glider was in the air and travelling through mild turbulence, this problem recurred several times. At an altitude of approximately 1,100 metres, with the glider still not far from the airfield, the lever detached with a loud bang, from which point on the pilot had little to no control of the air brakes. With his right hand, the pilot held on to the remaining piece of tube of the operating mechanism, steering the glider with his left hand. After the flight, it was found that the air brake lever connection had become detached from the rest of the mechanism. The landing was conducted without any further problems.

On 7 April 2018, a modification to the air brake lever created by the manufacturer had been installed in the glider in question. On 13 May 2018, the Technical Affairs Committee and the CAMO[1] at the Glider department of the Royal Netherlands Aeronautical Association (KNVvL) informed all technicians and clubs in possession of an LS 4-b of the incident. A provisional finding is that the modification was not installed in complete accordance with the instructions issued by the manufacturer.

Classification: *Incident*
Reference: *2018021*



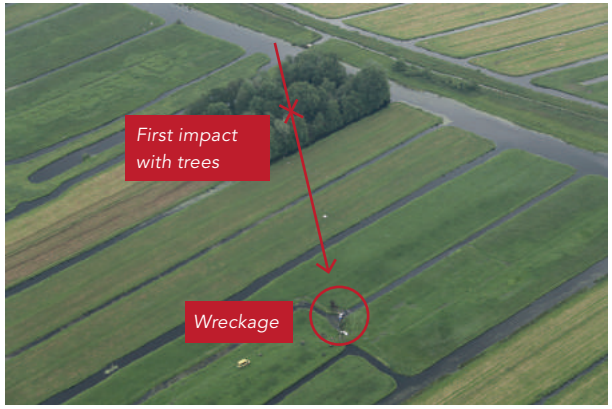
The detached air brake lever. (Photo: Pilot)

1 Continuing Airworthiness Management Organisation.

Crashed, Reims F172N, Stolwijk, 22 May 2018

At around 11:15, the Reims F172N took off from Rotterdam The Hague Airport to perform a proficiency check with an experienced pilot and an examiner on board. Once the aircraft had exited the control zone in a north-easterly direction, it set course for the low-flying area near Gouda. In the low-flying area near Stolwijk, the aircraft hit a number of trees with its left wing, causing it to break off. After a few hundred metres, the aircraft crashed into the ground, killing both occupants and completely destroying the aircraft.

Classification: *Accident*
Reference: *2018038*



Aerial photo of the accident site. (Photo: Police Aviation Division)

Near-collision between two gliders, ASK 21 and Orlican Discus CS, near Terlet, 26 May 2018

A training flight was being conducted in the ASK 21. When the glider conducted a straight flight at an altitude of around 1,500 metres, the FLARM collision warning system issued a warning due to the proximity of a Discus at almost the same altitude which was performing a left turn in a thermal. On board the Discus, the FLARM system also issued a warning, at which point the pilot noticed the ASK 21 and banked and climbed swiftly to maximise the distance between both aircraft.

The safety manager of the club, which is also the owner of the ASK 21, conducted an investigation of the incident. The Dutch Safety Board is currently awaiting the results of this investigation and will include the results in its own investigation.

Classification: *Serious incident*
Reference: *2018047*

Crashed while picking up an advertising banner, Piper Pawnee, Breda International Airport, 31 May 2018

Shortly after picking up an advertising banner at Breda International Airport, a Piper Pawnee aircraft crashed a few dozen metres outside the boundaries of the airport, killing the pilot, who was unaccompanied, on board. The aircraft caught fire and was completely destroyed.

Classification: *Accident*
Reference: *2018045*

Archive photo of the Piper Pawnee. At the time of the crash, the aircraft was equipped with a four-bladed propeller. (Photo: Aviation Safety Network)

Runway excursion, New Piper PA-28-181, Breda International Airport, 15 June 2018

During its landing on runway 07 at Breda International Airport, the aircraft came off the runway, smashed through the airport fencing, crossed a road and finally came to a halt in a lower lying meadow. The pilot, who was unaccompanied, was unhurt. The aircraft was severely damaged, including full detachment of the right wing.

Classification: *Accident*
Reference: *2018053*

The New Piper after the runway excursion.

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

Emergency landing, Fokker F28 Mark 0100, near GANLA (Niger), 10 May 2014

The Fokker 100 was flying from Bratislava (Slovakia) to Kano (Niger) with two pilots on board. Near the GANLA navigation point, air traffic control lost radio contact with the aircraft. Shortly afterwards, the crew performed an emergency landing. Both pilots were unhurt. The aircraft was severely damaged.

The Niger investigative authorities are investigating the accident. In February 2018, they asked the Dutch Safety Board for assistance with this investigation.

Classification: *Accident*
Reference: *2014128*

Defective radio altimeter, Fokker F28 Mark 0100, near Kununurra Airport (Australia), 15 May 2018

The Fokker 100 was conducting a flight from Perth to Kununurra in Australia. During its descent, the pilot in command's radio altimeter failed at an altitude of 10,000 feet, issuing multiple false warnings which were subsequently ignored. A safe landing was made.

The Australian Transport Safety Bureau has started an investigation into this incident, for which the Dutch Safety Board has offered its assistance.

Classification: *Incident*
Reference: *2018050*

Archive photo of a Fokker 100. (Photo: N. Stubbs-Ross)

Wrong flap position selected, Fokker F28 Mark 0100, near Kununurra Airport (Australia), 15 May 2018

The Fokker 100 was conducting a flight from Kununurra to Perth in Australia. During take-off, the pilots noticed that flaps 8 had been selected instead of flaps 15.

The Australian Transport Safety Bureau has started an investigation into this incident, for which the Dutch Safety Board has offered its assistance.

Classification: *Incident*
Reference: *2018051*

Hard landing of a hot-air balloon, Ultramagic N-180, Schwalmtal (Germany), 24 June 2018

The pilot in command of the Dutch-registered hot-air balloon was flying with seven passengers on board. During the hard landing, one of the passengers was seriously injured.

The Bundesstelle für Flugunfalluntersuchung (BFU) has started an investigation into this accident, for which the Dutch Safety Board has offered its assistance.

Classification: *Accident*
Reference: *2018059*

The Ultramagic N-180 just before the landing. (Photo: BFU)

Published reports

Cabin crew injured due to turbulence, Boeing 737-800, PH-HXA, Balearic Sea (Spain), 23 September 2016

The Boeing 737 was performing a scheduled passenger flight from Amsterdam Airport Schiphol to Palma de Mallorca Airport in Spain. On board were two pilots, one purser, three stewardesses and 184 passengers. The pilot in command was pilot flying and the first officer was pilot monitoring.

The flight proceeded as normal until its descent into Palma de Mallorca airport. Shortly before the aircraft crossed the coastline and flew above the Spanish mainland, it entered clouds, at which point the crew used their weather radar to gain information about thunderstorms.

Around 40 seconds before the incident, the first officer spotted a small red spot on his radar screen, indicating a thunderstorm. The red area was directly in front of the aircraft and he therefore suggested evasive action. The pilot in command agreed and steered 30 degrees to the right in two stages. Less than 15 seconds before the incident, he decided to turn on the 'fasten seatbelts' sign. While the aircraft was turning into the selected course, it was subjected to approximately 5 seconds of strong hail coupled with heavy turbulence that lasted for 8–9 seconds.

Once the 'fasten seatbelts' sign had been switched on, the three stewardesses in the kitchenette at the rear of the plane all stood up to check the passengers' seatbelts and perform other safety checks. At this point, the aircraft entered the patch of turbulence, causing all three stewardesses to hit the ceiling and fall back onto the floor, seriously injuring all three of them. Shortly afterwards, the pilot in command informed air traffic control of the incident and requested three ambulances and a doctor to treat the injured stewardesses upon landing and to take them to hospital. The aircraft then landed in Palma de Mallorca without any further problems. Upon landing, no ambulance was present. One ambulance – without a doctor – arrived after 10 minutes and a second ambulance arrived 15 minutes after the first. The third ambulance and the doctor never arrived. None of the passengers were injured during this incident and the aircraft remained undamaged.

Conclusions
The accident occurred as the cabin crew had not been warned about possible turbulence and the 'fasten seatbelts' sign had only been activated shortly before. The stewardesses were not wearing safety belts during the unexpected heavy turbulence as they had stood up to perform their duties.

Additional factors
The late appearance of the thundercloud on the weather radar was probably caused by extremely rapid development of the cloud in combination with its low reflectivity. There are no indications that the RDR-4000 weather radar malfunctioned.

Available, relevant and important weather information did not reach the pilots as the briefing took place long before the flight was prepared and the information had not been updated by the Dispatch department before the flight to Palma de Mallorca got under way.

Although the crew was aware of the general risks of thunderstorms, they somewhat underestimated the possible effects that any turbulence could have on the cabin crew and passengers. The effects of fatigue could have contributed to this.

The airline's procedures for dealing with turbulence are not consistent with the latest insights within the aviation sector. The company manuals do not include instructions for preparing the cabin crew and passengers for unexpected turbulence.

The Dutch Safety Board has recommended that the airline reviews its turbulence procedures, especially with regards to the self-reliance of the cabin crew. In addition, the airline has been advised to ensure flight crews are given the very latest available weather information prior to departure.

The Spanish aviation authorities have been advised to ensure that medical care and facilities suitable for the activities performed at the airport are available to the airports under its command at short notice.

The Dutch Safety Board published the English-language report, accompanied by a Dutch summary, on 20 June 2018. The report can be downloaded from the website of the Dutch Safety Board: https://onderzoeksraad.nl/en/onderzoek/2283/cabin-crew-injured-during-flight-as-a-result-of-turbulence-boeing-737-800-23-september-2016?s=2FE9D39B295FC5271AEA7FECAAA94A0040C848D6

Landing gear collapsed during landing, Bombardier DHC-8-Q402, G-JECP, Amsterdam Airport Schiphol,
23 February 2017

The Bombardier DHC-8-Q402 (Dash 8) was flying from Edinburgh Airport in the United Kingdom to Amsterdam Airport Schiphol. When landing at Schiphol, the right landing gear collapsed almost immediately upon touchdown. The aircraft rolled over to the right, causing the right-hand side of the aircraft, the right wing tip and the right nacelle to impact the runway, causing serious damage to these components. After sliding along the runway for several hundred metres, the aircraft came to a halt. The crew switched off all of the aircraft's systems and all 64 occupants disembarked from the plane unharmed.

Investigation has shown that the right landing gear was not completely locked due to a bent yoke. When the landing gear is not fully locked, substantial forces can cause it to unlock. At the time of the accident, there were strong winds and turbulence. During the landing, the right landing gear touched the ground first, resulting in higher impact. This was enough to unlock the right landing gear and the weight of the aircraft caused it to collapse, leading to the accident.

The Dutch Safety Board published the English-language report, accompanied by a Dutch summary, on 31 May 2018. The report can be downloaded from the website of the Dutch Safety Board: https://onderzoeksraad.nl/en/onderzoek/2322/gear-collapse-during-landing-23-february-2017?s=7B089F02C4BC7AC4E8613B61C118C9EEC075F7B4

The Dash 8 with the collapsed landing gear.

Occurrences that have not been investigated extensively

Damaged during an off-airfield landing, Grob Astir CS, PH-1066, near Wapenveld, 21 July 2017

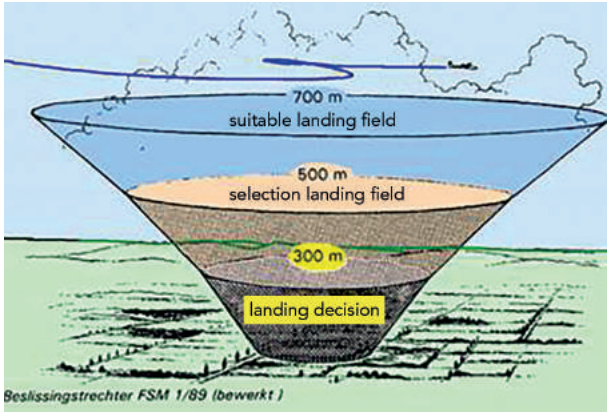
On 21 July 2017, the pilot had scheduled a cross-country flight from Lemelerveld Glider Airfield via Stadtlohn Airport (Germany) to Malden Glider Airfield, from where a return flight back to Lemelerveld would also be conducted. The weather bulletin issued by the Royal Netherlands Meteorological Institute (KNMI) at 10:31 – applicable from 11:00 to 17:00 – reported that a southerly air current was supplying polar maritime air, resulting in unstable airspace up to an altitude of 6,000 to 7,000 feet, possibly extending to up to about 8,000 feet in the north. There was a southerly wind with a speed of 4–7 knots, which was forecasted to shift in a south-easterly direction in the second half of the aforementioned period. Mild thermals were expected, weakened in patches by stratocumulus and possibly interrupted by showers in the north.

At around 12:15, the glider was winched and the pilot began the flight. During the flight, the glider reached a maximum altitude of 1,500 metres. After roughly four hours, during the final stage of the flight, the pilot encountered weaker thermal conditions at a height of over 1,000 metres. The pilot decided to fly back to Lemelerveld via Epe and Heerde. During this leg of the flight, the glider had dropped to an altitude well above 500 metres by the time it reached Wapenveld, where the pilot searched for thermals above an industrial estate. Once the glider had descended to an altitude of 350 metres, the pilot decided that landing out – i.e. an off-airfield landing – was necessary and chose a field in which to land out. He reported flying over the intended landing field twice before circling it twice more to ensure that it did not contain any obstacles. Upon inspection, the field was indeed clear of obstacles. The pilot explained that there are large numbers of high-voltage pylons in this part of the country, which made it more difficult to locate a suitable field with a clear approach to land.

To the east of the meadow selected by the pilot, there are high-voltage pylons running from north to south. The pilot flew a left-hand circuit to perform a landing in a westerly direction. Before the pylons, at an altitude of around 150 metres, he turned into the base leg in order to start the final approach into a headwind at an altitude of roughly 100 metres. The pilot dropped the nose of the glider and fully opened the air brake in order to land in the intended field. Whilst doing so, the aircraft's speed increased to over 100 kilometres per hour. The pilot was unable to touch down at the near end of the field, and subsequently – with the aid of the air brakes and the wheel brake – bring the glider to a halt without overshooting the far end of the field and the bank behind it. During the coasting subsequent to landing, the glider collided with this bank. The glider then ground to a halt on the bank with its nose at an angle of 45 degrees. Measurements conducted by the police's aviation division showed that the distance between the glider's first contact with the ground and the bottom of the bank at the end of the field is 72 metres.

During the landing, the pilot sustained minor neck and back injuries and the glider was severely damaged. The right wing tip broke off, the left wing tip was damaged from a collision with a pole, the tail broke off, the vertical stabiliser detached and cockpit canopy was smashed in several places.

Choice of field
It is vital that the decision to perform an off-airfield landing is made quickly enough to enable sufficient time to select a suitable landing field. The Operational Procedures module of the theory training for the LAPL(S) includes the seven-five-three rule. The figure below shows the 'decision funnel', in which the altitude levels indicate how much leeway the pilot has to look for thermals: opportunities become scarcer as altitude decreases. The shape of the funnel depends on the glider's lift-to-drag ratio and the wind direction. At an altitude of between 700 and 500 metres, a course must be set for an area that may have suitable landing fields. In the section of the funnel between 500 and 300 metres, the landing field must be selected and the landing circuit determined. If no more thermals can be found and the altitude drops below 300 metres, then the definitive decision to execute an off-airfield landing (land out) must be made and the circuit must be flown. The altitudes specified by the seven-five-three rule are not absolute: in practice, they are determined by the available landing opportunities. The most important criteria when choosing a landing field are that it is sufficiently long, it is in the direction of the wind and has a clear approach area.



The decision funnel. (Source: Operational Procedures, D. Corporaal)

The pilot stated that a series of decisions resulted in the accident. Once the thermal began to subside and became less stable, he continued to fly in an area with fewer opportunities for an off-airfield landing (due to the high-voltage pylons, among other factors). When choosing a landing field, the pilot insufficiently considered the length of the field and whether it was free of obstacles. In addition, he stated that he had not flown a 'neat' overland circuit.

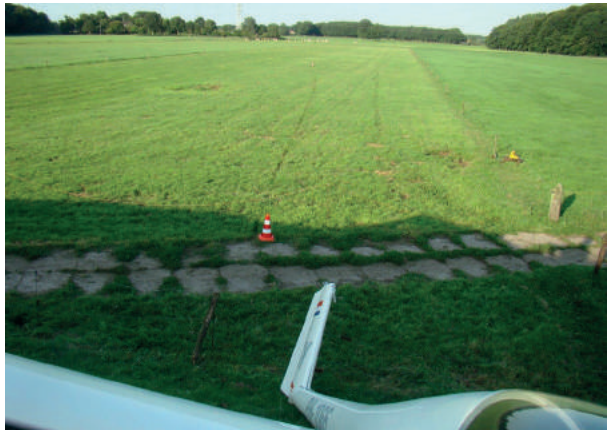
The accident resulted from the pilot flying at too low an altitude in an area with an insufficient number of suitable landing fields and subsequently running out of thermals. Setting course for an area with more possible landing fields while at a higher altitude – as the decision funnel prescribes – allows pilots to select a more favourable landing field if circumstances require them to do so.

The last maintenance check on this glider took place on 2 April 2017. Prior to the flight, the pilot conducted a routine flight check of the glider. There were no indications that the air brakes or wheel brake did not function correctly during the approach or the landing.

The gliding club of which the pilot is a member did not conduct an investigation into the cause of the incident and therefore has not compiled a report. The glider was owned by the pilot. However, the incident was discussed and studied at the club. In the same period, a similar incident took place involving another glider owned by a club member, as well as various 'unsafe' off-airfield landings. For this reason, the club paid attention to the issue of landing out (off-airfield landings) during the daily briefings and during the aviation training it provides to its members.

The pilot held a valid LAPL(S) with ratings for winch launching and aero tow launching, as well as a valid medical certificate (LAPL class), which includes the restriction 'correction for defective near vision'. He had a total of over 950 flight hours (over 1,100 launches), of which 500 hours (over 500 launches) were acquired in the type of glider concerned. The pilot had made a total of 67 cross-country flights, of which around five involved off-airfield landings.

Classification: *Accident*
Reference: *2017071*



The landing field. (Photo: Police Aviation Division)

The Grob Astir CS on the bank. (Photo: Police Aviation Division)

Occurrences that have not been investigated extensively

Near-collision, Rolladen-Schneider LS6-18w, PH-1365 and parachutist, near International Airport Teuge, 26 August 2017

On 26 August 2017, it was busy both in and above International Airport Teuge. In addition to motorised air traffic, gliders and parachutists were also active. The glider had taken off by means of a winch launch, and according to the pilot, he climbed – with the aid of a thermal on the south side of the asphalted runway (above the hangars) – to an altitude of approximately 700 metres above the airport. The pilot reported having to avoid a parachutist, resulting in them missing each other 'by a wing-length'. According to the parachuting centre, the aforementioned situation was not observed from the ground nor was it reported by the parachutist involved. During the regular safety meeting between the gliding club and the parachuting club, it was decided to increase communication concerning the area in which the parachutists are allowed to jump.

Classification: *Serious incident*
Reference: *2017124*

Abandoned aerotow, Scheibe SF 25 C, PH-1544 and ASK 21, PH-1552, Lemelerveld, 22 September 2017

PH-1544, a Scheibe SF 25 C, was deployed as a glider tug and had commenced an aerotow from runway 27 at Lemelerveld glider field. The pilot was on board. PH-1552, an ASK 21, was positioned behind the aircraft on the aero-tow cable. The pilot and a guest were on board PH-1552. The pilot of PH-1552 stated that it was drizzling during take-off. However, the pilot of PH-1544 stated that it was drizzling just before take-off. The glider club applies the rule that aerotowing is not permitted with a wet wing. It is not clear whether the wings were wet during take-off. The pilot of PH-1544 also stated that the weight of the aerotow combination was below the maximum take-off weight during take-off. Runway 27 had an available length of 730 metres. This runway normally has a length of 1,200 metres but the last 470 metres had been ploughed and therefore was unable to be used. The first stage of the take-off procedure proceeded without any problems; the pilot of PH-1552 stated that the speed of the aircraft increased to approximately 65-70 km/h. The ASK 21 manual states that a glider lifts off during an aerotow at a speed of approximately 75 km/h. After around 300 metres the pilot of PH-1552 attempted to lift the aircraft off the ground. The glider lifted off but landed back on the ground. Just before the transverse path (at around 540 metres of the available runway length) the pilot made another attempt to lift off the aircraft. The glider again lifted off the ground but landed back on the ground immediately after the transverse path. Both pilots then decided, more or less at the same time, to disconnect the aerotow cable. The pilot of PH-1544 assessed that there was insufficient space available to bring his aircraft to a standstill before reaching the ploughed section of the runway. He therefore made another attempt to lift off before the ploughed field and in doing so made a turn towards the left. However, the aircraft landed in the ploughed section and the chassis sunk into the soft soil. The aircraft subsequently made a nose dive and the propeller hit the ground. The tail of the motor glider then rebounded and the aircraft came to a standstill on its wheels. The pilot of PH-1552 was steering slightly to the right after he had disconnected the aerotow cable. The glider came to a standstill in front of the ploughed section. All the occupants of both aircraft were uninjured. The Scheibe sustained considerable damage and the ASK 21 sustained no damage.

The pilot of the Scheibe SF 25C held a Light Aircraft Pilot Licence with winch launch, aero launch, self-launch, TMG, aerobatic, FI and FiFi endorsements. He had a total of 6,026 hours of flight time, including 77 hours on the aircraft type concerned. In 2017 he had carried out twelve aerotows.

The pilot of the ASK 21 held a Glider Pilot Licence with towing and winching endorsements. He had a total of 238 hours of glider flight time (848 take-offs) including 115 hours on the glider type concerned.

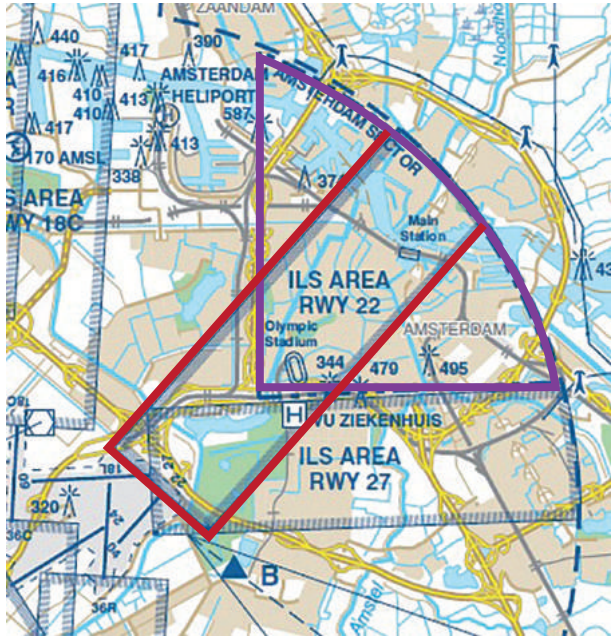
As a result of this incident, the glider club involved drew up its own investigation report. This report is based on the glider club's report and the statements made by the pilots involved. During the investigation by the glider club, the following factors emerged, which may have played a role in the occurrence of the accident:

- As a section of the runway had been ploughed, the available length of the runway was shorter (730 metres instead of 1,200 metres) than required for the take-off of the aerotow combination.
- Airfield condition: marshy, high grass.
- Weather: precipitation shortly before take-off, due to which the wings may have delivered less lift.

Classification: *Accident*
Reference: *2017100*

PH-1544 after the abandoned aerotow. (Photograph: PH-1544 pilot)

Occurrences that have not been investigated extensively



Amsterdam Sector. (Source: AIS the Netherlands)

Airprox, Eurocopter EC135, PH-PXC and Bombardier CL60, D-ATMJ, approach area for runway 22, Amsterdam Airport Schiphol, 9 February 2018

On 9 February 2018, in the approach area (ILS area) of runway 22 at Amsterdam Airport Schiphol, an aircraft executing an approach and a helicopter flying in the approach area passed each other at close quarters.

The helicopter, a Eurocopter EC135, was flying above Amsterdam with clearance from air traffic control in the Amsterdam sector, and subsequently asked air traffic control for clearance to also use the airspace above the Bijlmermeer district. The air traffic controller granted this clearance and the helicopter flew southeast.

Slightly later, the crew of the aircraft – a Bombardier CL60 – contacted the control tower while performing an instrument approach to runway 22. The controller cleared the pilot of this plane to land. The majority of the approach area for runway 22 is in the Amsterdam sector.

While the aircraft was approaching runway 22, the helicopter finished flying above Bijlmermeer and flew back into the Amsterdam sector, bringing it close to the aircraft's flight path. The air traffic controller in the tower saw this on the radar screen and was surprised to see the helicopter flying in the Amsterdam sector again. The air traffic controller in the tower then alerted the helicopter pilot that another aircraft was flying in that area in order to land on runway 22. The helicopter pilot had not been informed in advance about the approaching aircraft and also had not heard the aircraft pilot contact air traffic control on the radio frequency and was therefore surprised to see the aircraft. The helicopter pilot then performed a right turn in order to avoid the aircraft, at which point he was contacted by the air traffic controller in the tower who asked why he was in the Amsterdam sector. The helicopter pilot responded by saying he thought he had clearance and that there had been a misunderstanding.

The pilot of the aircraft had not been notified of the helicopter flying in the area.

No Traffic Alert and Collision Avoidance System (TCAS) warning was generated in either the aircraft or the helicopter.

Investigation showed that the air traffic controller assumed he had only given clearance to fly in the airspace above the Bijlmermeer and that he had not given clearance to return to the Amsterdam sector. The helicopter pilot had clearance to fly in the Amsterdam sector and had also requested clearance to fly in the airspace above the Bijlmermeer district. However, the air traffic controller in the tower had not heard the word 'also'.

The minimum distance between the two flights was 0.7 nautical miles (just under 1.3 kilometres) horizontally and 300 feet (around 100 metres) vertically.

This incident took place on 9 February 2018, but LVNL (Air Traffic Control the Netherlands) only reported it to the Dutch Safety Board on 9 July 2018. The reason for this is that it only became clear during the conclusion of the investigation (by LVNL) that a serious incident had occurred. As a result, the Dutch Safety Board did not conduct its own investigation into the occurrence and the text is based on the results of the LVNL investigation.

Classification: *Serious incident*
Reference: *2018065*

Engine failure following take-off, Aquila A210, G-GAEA, near Breda International Airport, 27 February 2018

The Aquila A210 was carrying out a training flight with two occupants on board. Visibility was over 10 km and the wind was blowing from the direction of 070 at a speed of around 15 knots. Just after take-off, at around 13:35 while flying in an easterly direction at an altitude of approximately 450 feet, the engine's power abruptly declined somewhat for no discernible reason. At around 500 feet, a loud bang was heard and smoke developed in the cockpit. At this point, the instructor immediately took over control of the aircraft.

The crew then opened the windows to allow the smoke to dissipate and the instructor performed a right turn to distance the aircraft from built-up areas. As it quickly became apparent that the low altitude made it impossible to complete a full circuit or perform an emergency landing with a headwind, the decision was made to land in a field with a tailwind. The engine was switched off and the instructor began preparing to land in the field, taking into account the tailwind and higher ground speed during the landing. He attempted to reduce the speed as much as possible. He then landed the aircraft, causing minor damage to the landing gear. Immediately before the incident, the crew had flown a circuit without any problems. After landing, it became clear that a hole had opened up in the side of the engine block *(the crankcase)*.

The Dutch Safety Board conducted no further investigation into the cause of the engine failure.

The owner of the aircraft sent the engine to the manufacturer for investigation, which concluded that a connecting rod had broken.

Classification: *Serious incident*
Reference: *2018013*

Archive photo of G-GAEA. (Photo: Texel Airport)

Occurrences that have not been investigated extensively

Airprox, Piper PA30 Twin Commanche, N8326Y and RPAS, between Werkhoven and Leersum, 17 April 2018

The Piper PA30 was performing a flight from Rotterdam The Hague Airport to Münster Osnabrück Airport (Germany). En route, at Flight Level 80, a drone was observed by the crew at very close proximity, to the right and just above of its own flightpath. The observation was so close, that it was possible to identify make and model of the drone. It appeared to be a DJI Phantom. Groundspeed at the time of observation was about 180 knots. The shortest distance to the Remotely Piloted Aircraft System (RPAS) was around 20 meters. The pilot informed air traffic control immediately.

The captain had a total experience of 8,300 flight hours, of which 700 hours with the relevant type. He holds, among others, an Air Transport Pilot License (ATPL) including a Multi Engine Piston (MEP) rating.

Almost all near-collisions with RPAS, often referred to as drones, cannot be thoroughly investigated by the Dutch Safety Board as neither the operator nor the drone can be located. The same applies to this case.

Classification: *Serious incident*
Reference: *2018023*

Archive photo of N8326Y. (Photo: Transal Aero Services B.V.)

Near-collision, Schleicher ASK 21, PH-1469 and parachutist, near International Airport Teuge, 21 April 2018

A group of four parachutists performed a formation jump above International Airport Teuge. After freefalling for around 35 seconds, the formation split up at an altitude of 4,000 feet. Shortly before one of the parachutists was going to open his parachute, he saw that a glider at an angle below him was making a left turn in his direction. At the time, the parachutist's speed was approximately 200 kilometres per hour and the wind was blowing him towards the glider. The parachutist attempted to perform an evasive manoeuvre. Shortly after the parachute opened, the glider banked above the parachutist.

The glider had been launched at International Airport Teuge and the pilot in command of the glider said that he knew parachute jumps were being performed in the area. This was also indicated by a symbol on the VFR aeronautical chart and Teuge's visual approach chart. He and his fellow occupants were prepared to temporarily leave the drop zone as soon as the 'one minute before dropping' call was issued by the aircraft carrying the parachutists. This call is one of the procedures agreed between the gliding club and the parachuting club. The pilot of the aircraft carrying the parachutists said that the call was issued, although the occupants of the glider did not hear it.

Classification: *Serious incident*
Reference: *2018022*

Archive photo of PH-1469. (Photo: G.J.L. van Orizande)

Loss of control, Denney Acf Kitfox Mk IV, PH-DJM, Lelystad Airport, 18 May 2018

The pilot took off at 14:20 from runway 05 at Lelystad Airport for a flight to Midden-Zeeland Airport. He was the sole occupant. A few moments before the aircraft left the runway, the left wing dropped, the aircraft landed back on the runway, completed a near-180 degree turn and then ground to a halt. The pilot was unhurt, although the aircraft was damaged.

According to a report, the wind direction was at 330 degrees with a speed of 10 knots with gusts up to 14 knots.

Footage recorded from the cockpit shows that during the take-off run, the aircraft starts to veer off the centreline of the runway within a few seconds, lifts off from the runway, displays a variable nose position and then falls to the left. The pilot stated that during the take-off run, the aircraft lifted off too early and at too low a speed. The flight control surfaces were still fairly ineffective. According to the pilot, the incident was caused by a combination of factors:

- Starting and landing in the Kitfox tailwheel aircraft requires specific skill and extra attention, especially in the event of asphalted runways.
- A strong wind was blowing at a right angle to the runway, which distracted attention from the speed (on the meter).

The accident was caused by the pilot failing to sufficiently point the nose downwards during the take-off run (in order to build up speed), which resulted in the aircraft lifting off at too low a speed. Consequently, it veered downwards to the left and the pilot lost control of the aircraft.

The pilot held a valid private pilot licence, a PPL(A) with a SEP(land) rating, and a valid class 2 medical certificate. His total flight experience was 673 hours, 75 of which were acquired in the aircraft type concerned. In the three months prior to the incident, the pilot had flown in the aircraft for 2 hours and 20 minutes. The pilot stated that he had little recent flight experience with this type of aircraft.

Classification: *Accident*
Reference: *2018034*

PH-DJM after the incident. (Photo: Lelystad Airport)

Occurrences that have not been investigated extensively

Gear up landing, Aeromot AMT-200S Super Ximango, G-XYZT, Hilversum Airfield, 20 May 2018

After a briefing on the ground, the pilot in command took off together with a club member (acting as safety pilot) from runway 07 at Hilversum Airfield for a familiarisation flight in the RF-10 Ximango, a side-by-side two-seater aircraft. The club member had experience with this touring motor glider (TMG) type, which is equipped with retractable landing gear that is operated mechanically.

The pilot in command left the circuit and climbed to an altitude of 2,500 feet, where he performed a variety of procedures and actions, including operation of the landing gear. After flying for approximately 30 minutes, they returned to the airfield to perform a series of landings and starts. Runway 07 was in use with a right-hand circuit, and the RF-10 was the only aircraft in the circuit. After every start, the landing gear was retracted, then later placed in the down position on the tailwind leg. On final approach, the pilot checked the two green lights in the cockpit to make sure the landing gear had been extended and locked. During the landing, extra attention was paid to the speed and the performance of a three-point landing. After the fourth start, the decision was made to conclude the flight with a full stop landing. On the final approach, the pilot heard a quiet acoustic signal, though he interpreted it as interference on the radio and continued the approach. The aircraft made a belly landing and the propeller blades broke off. It transpired that the landing gear had not been extended. Nobody on the aircraft was harmed, although the gearbox had to be replaced.

The pilot in command stated that his lack of practice flying an aircraft with retractable landing gear and unfamiliarity with this type of aircraft contributed to the actions that caused the gear up landing. Due to the complexity of the RF-10, which is equipped with instruments with which the pilot in command was not familiar (an Electronic Flight Instrument System and an Engine Monitoring System), his workload was heavier than usual. The acoustic gear warning, which was activated because the landing gear had not been extended, was not recognised as such by the pilot in command. On the final approach, he also failed to notice that the landing gear's warning lights were red and that the handle was in the forward position. As the landing gear was retracted, the glide angle was better than it would have been with extended landing gear: another warning sign that the pilot in command failed to notice. It is remarkable that the safety pilot, who had experience with this type of TMG, did not recognise the warning signals indicating that the landing gear was still retracted.

The pilot in command reported that by the end of the flight, he had mastered the actions required for this type of aircraft, which was new to him. It is possible that this reduced his alertness and subconsciously allowed routines applicable to aircraft with fixed landing gear to predominate his thoughts. These factors laid the foundations for the actions that resulted in the gear up landing. He also said that he may have been slightly knocked out of his routine as it was the last landing following a series of landings and starts.

The pilot in command held a valid Glider Pilot Licence with ratings for towage, winching, self-launching and radiotelephony, as well as a PPL(A) with the ratings SEP/TMG, FI SEP/TMG and FE SEP/TMG. He also had a valid class 2 medical certificate. The pilot had total flight experience of 1,162 hours in TMGs, of which around 3 hours were acquired on the type in question (including the flight in question), 413 hours in gliders (1,427 starts) and 828 hours in powered aircraft.

Based on a similar accident with the same aircraft on 24 May 2017, the safety committee of the flying club that owns G-XYZT has made a number of recommendations to the management of the flying club. Judging by how quickly the aircraft was brought back into operation, it would seem these recommendations had not yet been effectuated. The recommendations particularly focused on the execution of familiarisation and training flights with an instructor and punctual performance of downwind checks.

Furthermore, based on both incidents, the club's instructors concluded that this relatively complex type of aircraft is less suitable to be flown within the structure of a flying club.

Classification: *Accident*
Reference: *2018035*

RF-10 Ximango after the gear up landing. (Photo: Pilot in command)

Occurrences that have not been investigated extensively

Tow bar not removed, Aquila AT01, PH-DHA, De Kooy Airfield, 21 May 2018

The pilot in command had scheduled a local flight with a passenger from De Kooy Airfield. This flight was subject to visual flight rules of Maritime Aviation Site De Kooy *(Maritiem Vliegkamp De Kooy)*. He refuelled the aircraft and performed the walk-around inspection. The pilot assumed that he would have to move the aircraft later. As the pilot was accompanied by a passenger who had never flown before and wanted to experience the entire flight preparation himself and have everything explained, this procedure took longer than usual. Once the walk-around was complete, he boarded the aircraft together with his passenger, carried out the necessary checks, started the engine and began taxiing. After taking off, the pilot heard a tapping noise, and during the climb, he was informed by the tower controllers that the tow bar was still attached to the nose wheel. Following consultation with air traffic control, the pilot – at his own request – conducted a fly-by of the tower at an altitude of around 200 feet so that the tower controllers could examine the situation. The pilot was then informed via the radio that the tow bar was attached to the nose wheel in a horizontal position, pointing backwards. He then completed a circuit and performed a landing, at which point the fire department examined the aircraft on the runway and the tow bar was removed. The aircraft had a scratch on the underside of the fuselage. Both occupants were unhurt.

As the pilot together with his passenger had approached and boarded the aircraft, that no longer had to be moved, from the rear, the tow bar on the nose wheel was not visible to him and he failed to realise it was there at any point thereafter. He also did not notice anything out of the ordinary while taxiing and subsequently took off with the tow bar still attached to the nose wheel.

The pilot in command held a valid LAPL with an SEP(land) rating, and a valid class 2 medical certificate. His total flight experience was 111 hours, 73 hours of which were gained on the aircraft type in question.

The safety manager of the flying club conducted an investigation into this incident. A similar incident had occurred at the club in the past, and the investigation particularly focused on how the same type of incident could happen twice. It was found that a number of the members perform the walk around inspection in the hangar before taxiing the aircraft outside. Furthermore, the walk-arounds are frequently performed long before boarding takes place. Accordingly, the club's safety manager published a recommendation in the club newsletter that the walk-around inspection should be performed shortly before the aircraft is boarded for take-off, and no earlier.

Classification: *Incident*
Reference: *2018037*

The tow bar attached to the nose wheel. (Photo: Police Aviation Division)

Off-airfield landing with severe damage, LAK-17AT, D-KJNK, near Terlet, 4 June 2018

The pilot was taking part in the Open Military Gliding Championships at the Terlet Glider Airfield. On the first day of the competition the pilot made a flight of around 3 hours. The pilot stated that throughout the entire flight he made use of thermals present below small cumulus clouds and that he flew at heights between 300 and 800 metres AMSL. According to him this led to the risk that it would become "normal" to continually fly at low level, and that the decision to make an off-airfield landing would not be taken in good time. Just before the pilot arrived at Terlet for the finish he observed a glider climbing to the east of the glider airfield. He flew in the direction of the glider but did not find a powerful thermal, and he did not see that the glider had deployed and started up his auxiliary engine while making a turn. Meanwhile, the LAK-17AT had lost so much height that the pilot was forced to land in the heathland to the east of Terlet. While the aircraft was still flying, a winglet contacted the ground, causing the glider to rotate around 180 degrees in the air before coming to rest on the ground. The pilot was uninjured. The glider was severely damaged.

The pilot held a valid Glider Pilot Licence and a valid medical certificate. He had a total of around 3,000 hours of experience flying gliders (around 2,928 starts), of which around 290 hours (around 16 starts in the last 90 days) were in the relevant type. Additionally, he had around 1,000 hours of experience with touring motor gliders and airplanes.

Classification: *Accident*
Reference: *2018046*

D-KJNK after the off-airfield landing. (Photo: Pilot)

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 cooperation on nuclear safety, the environmental safety of cannabis grow rooms and level crossing accidents on the railways.

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
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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: Aviation Safety Network
Photo 3: Captain