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 short-comings 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 2021**

The Dutch Safety Board is currently investigating two serious incidents involving commercial aircraft that had not been in use for some time in connection with the COVID-19 pandemic. In one of these occurrences, a cover of the system used to measure air pressure had not been removed, while in the other a number of pressure lines, that form part of the same air data system, had not been properly connected. In both cases, shortly after takeoff the pilots were presented with incorrect altitude and airspeed information on their standard instruments as a consequence. The flight crews were able to maintain control over the speed and attitude of the aircraft. These ongoing investigations have already prompted the Dutch Safety Board to issue an interim warning to alert airlines and maintenance organisations to the risks associated with returning commercial aircraft back to service.

In the first months of this year, several airproxen were reported, into which investigations were started. This type of occurrence was the most frequently reported to the Safety Board in the past three years. In this quarterly report, you can read about an investigation into an airprox that took place near Rotterdam The Hague Airport. This occurrence involved a business jet and a helicopter.

Jeroen Dijsselbloem
*Chairman of the Dutch Safety Board*


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# Highlighted Airproxes

The type of occurrence that was most often reported to the Dutch Safety Board over the past three years is the airprox (2020, eight occasions; 2019, six occasions; 2018, ten occasions). An airprox is an event in which, in the opinion of a pilot or an air traffic controller, both the separation between aircraft and their relative position and speed were such that the safety of the aircraft in question may have been endangered. The results of investigations into airprox situations have previously been regularly reported on, in earlier issues of the Quarterly Aviation Report.

In the first quarter of 2021, as described in this quarterly report, the Safety Board once again launched a number of investigations into airproxes. So far this year, once again, the airprox is the most commonly occurring type of occurrence reported to the Dutch Safety Board.

The majority of aircraft involved in the reported airprox situations were flying under visual flight rules, in a type of airspace in which the pilot him or herself is responsible for maintaining separation with other aircraft. The majority of aircraft in general aviation are not (yet) equipped with anti-collision systems, that issue a warning in the event of a potential conflict. For the time being, pilots remain broadly dependent on the see-and-avoid principle, that is based on the combination of timely observation of conflicting air traffic and taking appropriate avoiding action. However, due to the physiological limitations of the eye, other human factors, work load and meteorological conditions, such as fog or bright sunlight, above all timely observation is sometimes a problem.

Concentrations of aircraft are highest in the proximity of aviation sites or airports, and it is here that the risk of an airprox is greatest. The risk itself lies in an actual mid-air collision, whereby in most cases control of the aircraft is lost, often with catastrophic consequences. One recent example was a mid-air collision between two Dutch gliders above German territory last year, whereby both pilots lost their lives.

The Dutch Safety Board carried out an investigation into an airprox that occurred in the control zone (CTR) of Rotterdam The Hague Airport, in 2019, between a Cessna 560XL Citation XLS, that was flying under instrument flight rules and an EC135 T2 helicopter, that was flying under special visual flight rules. In this case, air traffic control was responsible for the separation between the two aircraft. Below we provide a description of the occurrence and an analysis.

# Highlighted

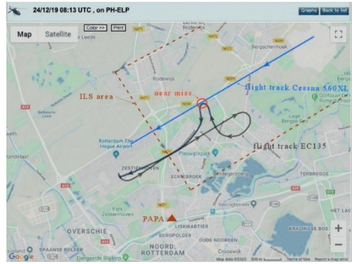
# Airproxes

## Airprox, Cessna 560XL Citation XLS, D-CRON, EC135 T2, PH-ELP, Rotterdam CTR, 24 December 2019

The Helicopter Emergency Medical Services (HEMS) helicopter EC135 T2, operated by ANWB Medical Air Assistance (MAA), departed from Rotterdam The Hague Airport (EHRD) for a flight under special visual flight rules (SVFR) to Muiden. The visibility was 5 kilometres in rain; there were few clouds at 400 feet and broken clouds at 600 feet. A medical emergency operation is a VFR single pilot operation, whereby the tasks are shared between the pilot and the HEMS crew member (HCM).

Meanwhile a Cessna Citation 560XL business jet approached runway 24 on the Instrument Landing System (ILS) in instrument meteorological conditions (IMC) flying under instrument flight rules (IFR). In addition to the departing helicopter, the tower controller only had the Cessna on his frequency. The inbound Cessna was under control of Rotterdam Tower, however the Rotterdam Approach (RAP) radar controller, stationed at Schiphol, is responsible for IFR traffic on the ILS. Both stations are part of Air Traffic Control the Netherlands[1] (LVNL).

The tower controller had coordinated the helicopter take-off clearance with the RAP controller. The flight crew of the Cessna was advised by EHRD tower that a medical emergency helicopter was taking off on the left side of the runway and departing to the east and would not conflict. The EHRD tower controller instructed the helicopter pilot to turn left after take-off, fly directly to its destination and stay clear of the ILS area of runway 24. The pilot confirmed the take-off clearance and responded to stay clear of the runway.




*Route EC135 (black, source: ANWB MAA / Helisafe.aero. UMS EC135[2]) and Cessna 560XL (blue, source: LVNL), 2D-plot. ILS area: red dashed line.*

The tower controller informed the pilot of the helicopter that a business jet was flying inbound on the ILS of runway 24, at a distance of 6 miles, which the pilot confirmed by saying: "stay on this side of the runway". The Cessna was then given landing clearance. Shortly afterwards, due to deteriorating weather conditions, the helicopter pilot decided to return to EHRD and informed the tower. The tower controller instructed the pilot to make a right turn, which was read back. The controller instructed further to fly to reporting point PAPA, while staying clear of the ILS, which was confirmed by the pilot.

1 Luchtverkeersleiding Nederland.

2 Data from the EC135's Usage Monitoring System (UMS) was used for the reconstruction of the route.

The tower controller asked the pilot for his position and he replied that he was still flying left of the ILS. Shortly after, the pilot saw the approach lights of runway 24 and realised that he had turned too far and immediately made a steep turn to the left. At that moment, the Cessna passed the helicopter at the same altitude (300 feet) and less than 100 metres apart. The Cessna's pilot saw the helicopter only at the last minute. Both aircraft made a safe landing and there was no damage nor any injuries.

The helicopter was cleared by the tower controller to stay clear from the ILS area. The read back of the clearance by the pilot was incorrect and incomplete, but was not corrected by the tower controller.

When an aircraft is approaching on the ILS, the ILS area (see figure) must be clear of non-ILS traffic. It is the responsibility of air traffic control to ensure this. The flight was cleared by the tower controller under SVFR conditions. The tower controller must separate such a flight from approaching IFR traffic (in this case the Cessna), as if they were both IFR flights.[3] The standard SVFR departure is via way point PAPA. Radar data shows that almost the entire flight of the EC135 took place well within the boundaries of the ILS area.

At the moment the pilot of the EC135 indicated that he wants to return to the airport, he was given permission to do so by flying a right hand turn. The pilot confirmed "right turn out". After the EC135 took its turn too far, this was observed and discussed by both air traffic controllers. Both controllers noticed (and mentioned) that the EC135 was getting too close to the flight path of the Cessna Citation but they did not take action. According to the published LVNL report about the occurrence, the heading of the helicopter was not clear due to shifting radar plots, and neither the tower controller nor the radar controller could accurately assess the situation.[4]

The RAP radar controller indicated in his statement in the LVNL investigation that he had considered intervention during the development, but in order to avoid stress at the tower he decided not to intervene. This while he also indicated in his statement that it seemed on the radar as if the plots were merged.

From the beginning of the HEMS flight, separation was less than intended by both controllers. During returning to the airport it became clear for air traffic control that the helicopter pilot was not certain about his position anymore. However, intercom and radio communication show that neither the tower controller, nor the approach controller took any action to initiate a go-around of the approaching Cessna. This resulted in the final, very limited remaining separation between the EC135 and the Cessna Citation. The crew of the Cessna had no part in the cause of the occurrence.

3 Source: AIP The Netherlands 2.2 Separation with other traffic. The local air traffic control unit will apply the ICAO minima for separation between IFR and special VFR flights and between special VFR flights, except that between special VFR flights a 500 feet vertical separation will be applied instead of 1,000 feet.

4 https://en.lvnl.nl/safety/overview-occurences/dossiers/20191224-loss-of-separation-rotterdam-geupdatet

*Measures taken by involved organizations*

LVNL and ANWB MAA performed internal investigations. Both organisations improved procedures to prevent reoccurrence. LVNL updated and published the procedures regarding special VFR traffic and announced to ensure awareness of the procedures within LVNL and beyond. The ILS area and the accuracy of the approach radar at low altitude were further clarified. ANWB MAA improved Crew Resource Management procedures and reminded flight crews about the locations of ILS areas on airports that are used by the HEMS crews.

***Classification:*** *Serious incident*
***Reference:*** *2019102*

# Occurrences into which an investigation has been launched

## Airprox, Rolladen-Schneider LS4-a, Glaser-Dirks DG-800 S, Malden glider airfield, 5 August 2020[5]

The moment the LS4 took off by making use of the winch launch method, the DG-800, which had taken off just before, was turning in a thermal above the winch path. Both gliders came in close proximity.

***Classification:*** *Serious incident*
***Reference:*** *2020095*

## Airprox, PZL-Bielsko SZD-51-1 "Junior", Alexander Schleicher ASK 21, Venlo glider airfield, 22 October 2020[6]

The pilot of the Junior made an evasive manoeuvre, just before joining the circuit, to avoid a collision with the ASK 21, which was also joining the circuit. Both gliders continued the circuit and made a safe landing.

***Classification:*** *Serious incident*
***Reference:*** *2020096*

## Lost panel, Boeing 747-406F(ER), Amsterdam FIR, 16 January 2021

The Boeing 747 departed for a cargo flight from Amsterdam Airport Schiphol to Jomo Kenyatta International Airport in Kenya. During the climb to cruising altitude - around 12,000 feet - the pilots heard a noise. After consultation, they decided to continue the flight to the final destination. Upon arrival in Kenya, it was found that a panel on the underside of the aircraft's fuselage had broken off. It is suspected that this panel came loose during the climb and was lost over the Netherlands.

*The location of the lost panel.*

***Classification:*** *Serious incident*
***Reference:*** *2021001*

5 The occurrence was reported to the Dutch Safety Board on 26 April 2021.
6 The occurrence was reported to the Dutch Safety Board on 3 April 2021.

## Crashed, Aerospool s.r.o. Dynamic WT9, Kornhorn, 13 February 2021

The aeroplane had departed from Drachten airfield and crashed during a local flight. The pilot was fatally injured.


*Archive photo of the aircraft concerned. (Source: Texel International Airport)*

***Classification:*** *Accident*
***Reference:*** *2021003*

## Engine failure, Boeing 747-412BCF, Meerssen, 20 February 2021

Shortly after takeoff from Maastricht Aachen Airport, one engine of the cargo aeroplane encountered a failure. The aeroplane lost some parts of the engine above the village of Meerssen. This resulted in two people suffering from minor injuries and, among other things, damage to some cars. The crew then diverted to Liege Airport in Belgium and made a safe landing.

***Classification:*** *Serious incident*
***Reference:*** *2021007*

*The affected engine of the aircraft.*

## Airprox, Piper PA-44-180, Piper PA-28-161, Lelystad Airport, 5 March 2021

The moment the PA-44 turned in to final for runway 05, the PA-28 turned in to final in front of this aircraft. Air traffic control instructed the PA-28 to make a go-around.

***Classification:*** *Serious incident*
***Reference:*** *2021011*

## Airprox, Cirrus SR20, Saab 91 D, north of Medemblik, 6 March 2021

The Cirrus was flying south and descending when it was passed at a short distance by the Saab, which was flying in the opposite direction.

***Classification:*** *Serious incident*
***Reference:*** *2021012*

## Airprox, DG-1000S, HOAC DV 20, Hilversum Airfield, 20 March 2021

The instructor on board the two-seater glider made an evasive manoeuvre near Hilversum Airfield to avoid a collision with a single-engine aircraft. Both aircraft were continuing their flight without further reported irregularities.

***Classification:*** *Serious incident*
***Reference:*** *2021013*

## Airprox, Socata TB 10, Socata TB 10, Groningen Airport Eelde, 24 March 2021

Several aircraft were conducting VFR night training in the circuit of Groningen Airport Eelde. Both the right-hand and left-hand circuit were used. Two aircraft came into close proximity, after which one of the pilots made an evasive manoeuvre. Both aircraft then made a safe landing.

***Classification:*** *Serious incident*
***Reference:*** *2021023*

# Occurrences into which an investigation has been launched

## Flipped over during landing, TL Ultralight TL-3000 Sirius, Middenmeer airfield, 31 March 2021

During landing the TL-3000 Sirius, a *microlight aeroplane*, flipped over and came to a halt upside down. The pilot was unharmed. The aeroplane was substantially damaged.

*The aircraft after landing. (Source: Veiligheidscommissie Middenmeer)*

***Classification:*** *Accident*
***Reference:*** *2021016*

## Airprox, K8C, Discus bT, Terlet glider airfield, 31 March 2021

The K8C took off by making use of the winch launch method. At that time, another glider was crossing the winch path at an estimated altitude between 300 and 400 metres. The pilot of the K8C released the winch cable to avoid a collision and continued the flight.

***Classification:*** *Serious incident*
***Reference:*** *2021024*

# Occurrences abroad with Dutch involvement into which an investigation has been launched by a foreign authority

## Loss of tread from tyre, ATR-72-212A, Palma de Mallorca Airport (Spain), 19 February 2021

During the takeoff from Palma de Mallorca Airport, the tread on the tyre of one wheel on the main landing gear was lost. The crew did not notice the loss of the rubber tread. The aircraft landed without problems at Madrid Airport. Upon examination, it emerged that the aircraft had suffered minor damage.

The Spanish Civil Aviation Accident and Incident Investigation Commission (CIAAIC) launched an investigation following this occurrence. The Dutch Safety Board offered its assistance because the tyre was sent to Goodyear in the Netherlands, for retreading and examination.

***Classification:*** *Serious incident*
***Reference:*** 2021022

# Reports with Dutch involvement, published by foreign investigation authorities

## **Engine failure, Fokker F28 Mk 0100, VH-FWI, 41 km southeast of Geraldton Airport (Australia),** 9 July 2019

During climb at about 13,000 feet, the left engine flamed out. Due to a pre-existing fault with the autothrottle system the pilot was required to manually select climb thrust on the remaining (right) engine. The crew maintained their cleared track to Perth and conducted an approach and landing via the runway 21 instrument landing system, using single engine procedures.

*The Australian Transport Safety Bureau published the report on 4 February 2021.*

## **Runway excursion, British Aerospace Jetstream 32, PH-RCI, Münster-Osnabrück International Airport (Germany),** 8 October 2019

The captain of the Dutch-registered aircraft, with three crew members and one passenger on board, aborted his takeoff run at a speed of approximately 130 knots. The aircraft then left the runway. After approximately 530 metres, the pilot succeeded in returning the aircraft to the runway. The aircraft sustained minor damage. The occupants were unharmed. The runway excursion occurred as a result of the switching on of the gust lock system, which locked the control surfaces, causing the pilots to temporarily lose control of the aircraft.

The German *Bundesstelle für Flugunfalluntersuchung* (BFU) *published the report in February 2021.*

*Traces runway excursion. (Source: BFU)*

## **Depressurisation, Fokker F28 Mk 0100, VH-NHC, 167 km south southest of Geraldton Airport (Australia),** 10 August 2020

While in the cruise, at about FL260 feet, the flight crew received an excessive cabin altitude warning, with no associated faults identified. The flight crew donned their oxygen masks and initiated an emergency descent. The oxygen masks in the cabin were manually deployed by the flight crew. Once the aircraft levelled out at about 9,000 feet, the flight crew advised that oxygen was no longer required. The flight crew then continued to Geraldton for an uneventful landing.

*The Australian Transport Safety Board (ATSB) published the report on 22 January 2021.*

# Occurrences that have not been investigated extensively

## Severe turbulence encounter, Boeing 747-406M, PH-BFR, Guangzhou FIR (China), 3 June 2017

In the late afternoon (Dutch time) of 3 June 2017, a Boeing 747, registered as PH-BFR, departed from Amsterdam Airport Schiphol, the Netherlands, for the scheduled commercial flight to Hong Kong International Airport with 261 passengers and cargo. The crew consisted of three flight crew and ten cabin crew members. The first ten hours of flight were uneventful.

In the late morning (Hong Kong time), at approximately half an hour prior to arrival, the flight crew suddenly saw itself confronted with a developing cumulus cloud ahead on track at close range, which they could no longer fully avoid. As the fasten seatbelt sign was off, not all passengers had fastened their seatbelts and cabin crew members were serving passengers. Whilst the flight crew attempted to avoid the cloud and reduce airspeed to decrease the impact, a severe turbulence encounter occurred.

This resulted in injuries and shock amongst passengers and cabin crew. Two crew members were injured and no longer able to continue their duties. Six passengers were injured. Two passengers being doctors assisted in taking care of the wounded cabin crew members and passengers. Besides bleeding and complaints about the neck, back and pains in limbs, cabin crew members and passengers also suffered from shock, shaking, feelings of panic or were crying. Upon arrival at Hong Kong International airport, a medical team awaited the aircraft to provide first aid. Six passengers and two cabin crew members were taken to the hospital. Seven of them left the hospital the same day and the last passenger the day after.

The Dutch Safety Board initiated an investigation into this serious incident. It was not a turbulence encounter rooted in inadequate meteorological information or inadequate use thereof in known adverse weather areas. In this case it only was an isolated developing cloud, which the crew did not detect on time. The Board has established that the accuracy of the available weather information (e.g. SWC, TAF, METAR) in combination with the use of technical equipment (weather radar) was sufficient to be able to form a mental picture of the expected conditions en route. In addition, analysis has shown that the weather radar system worked normally and the cloud reflected sufficient signal to be able to timely detect the presence of the developing cloud. However, it was found plausible that, when nearing the cloud in IMC, the setting of the weather radar system (antenna tilt position and range on navigation display) masked the dimension and activity (maturity) of the cloud ahead. The above took place in a demanding high workload part of the flight, typical for Hong Kong flights, during the flight crew members window of circadian low.

The investigation, although thorough, has been unacceptably delayed. For this reason the Dutch Safety Board has decided to close the investigation with this short report.

***Classification:*** *Serious incident*
***Reference:*** *2017057*

## Crashed, unmanned aircraft system DJI M210 V1, PH-4PE, Waalhaven, Port of Rotterdam, 4 July 2020

The DJI Matrice 210 (M210) unmanned aircraft system (UAS, drone) was being used in connection with a fire brigade task in Rotterdam's Waalhaven. The objective of this task was to use the drone's cameras to obtain images of a ship with an on-board fire. After completing the task, the pilot flew the UAS back to its takeoff and landing site. At a distance of approximately 250 metres from the landing site, the pilot initiated the UAS's descent. At that point, the UAS was flying at an height of about 50 metres. A few seconds later, the UAS suddenly stopped flying horizontally, then entered a downward spin. The UAS crashed into the water and immediately sank.

Weather data from the Royal Dutch Meteorological Institute (KNMI) shows that, at the time of the occurrence, there was light rain and drizzle in the area. The surface wind speed was 15 to 18 knots, with gusts of up to 28 knots. There was light – and occasionally moderate – turbulence.

The M210 is a UAS with four propellers, each powered by its own motor. Each motor is controlled by an Electronic Speed Controller (ESC). An ESC translates the pilot's input on the Remote Controller (RC) into instructions for the motors. The propellers' speed of rotation is controlled by adjusting the voltage.[7]

*DJI M210 UAS. (Source: Skytools)*

The UAS was not recovered, so the flight data it contained was not available for investigation. However, it was possible to read out the data stored in the RC. This data covers the entire accident flight, however the number of parameters stored is limited. The analysis of this data revealed that, shortly before the UAS crashed, there were several non-conformities in the parameters related to motor number 4 and its associated ESC. For example, non-conformities can be seen in the ESC's signal modulation and in the voltage and current in the motor. The data also revealed an initial decrease in the motor's rotational speed, which subsequently dropped to zero. During the flight, no error messages were displayed on the RC.

The unusual values of parameters related to motor number 4 and its associated ESC and the distinctive movement (a spinning motion) of the UAS during the crash indicate a problem with ESC number 4. In the absence of the UAS and detailed flight data, the exact cause of the propulsion system problem cannot be determined for this accident. According to an analysis carried out by the manufacturer, the available data is insufficient to determine the cause of motor 4's failure. Despite several requests from the Dutch Safety Board, the manufacturer has not produced a detailed analysis of the data from the RC, nor has it validated this data or converted it into a readable format. The Dutch Safety Board has used a third-party program to convert the data for the purposes of its own analysis.

The moist (light rain/drizzle) environmental conditions at the time of the occurrence, in combination with the prevailing wind and turbulence, may have contributed to the failure of the ESC. The reports of safety investigations into other Matrice 200-series UAS occurrences reveal a history of damage to the electronics (such as the ESC) due to moisture penetration.[8] The manufacturer states that the UAS concerned has an IP43[9] protection rating. Accordingly, in the User Manual, the manufacturer states that the UAS may only be flown in light rain ('do not fly when the amount of rainfall exceeds 10mm/day'). However, the manufacturer does not translate the protection rating into operational weather limits. The operator's manual only makes a general reference to the IP43 protection rating. It does not specify operational rainfall limits for the UAS in question.

***Classification:*** *Accident*
***Reference:*** *2020043*

7 By adjusting the speed of the various propellers, the UAS can be made to ascend or descend, and fly forwards, backwards, or sideways.

8 Air Accidents Investigation Branch, AAIB Bulletin 1/2020, January 2020.

9 An IP43 rating means in the case of liquids that it is protected against water sprays up to a maximum of 60 degrees from the vertical.

# Occurrences that have not been investigated extensively

## **Airprox, Rolladen-Schleicher LS 4-b, PH-1484, Cessna 172P, PH-DON, Nistelrode glider airfield,** 22 August 2020

On Saturday 22 August 2020, at around 11.16 hours, the pilot of PH-1484, a Rolladen-Schneider LS 4-b glider took off for a local flight, by wind launch, from runway 29 at Nistelrode glider airfield. During the winch launch, at an altitude of approximately 400 metres, the pilot observed a motorized aircraft approaching from the right. The aircraft was flying at a constant altitude and on a heading such that in the pilot's estimation, his glider and the motorized aircraft were flying on a collision course. He responded immediately by pushing the nose of the glider down, and uncoupling the winch cable. According to the pilot, at that time, the motorized aircraft was positioned directly in front of him, at a distance of approximately 100-150 metres and was flying 30 metres higher. As there was no risk of collision at that moment, the pilot made no further manoeuvres. His intention was to avoid any further dangerous situations. The motorized aircraft flew on, maintaining the same heading and altitude. The glider pilot then continued his flight but as a result of the unexpected manoeuvre, forgot to immediately raise the main landing wheel of the glider; he corrected this later. After a flight of approximately 20 minutes, he made a safe landing at the glider airfield.

Radar images revealed that the flight paths of the two aircraft did indeed cross. PH-DON flew past and in front of PH-1484. PH-1484 crossed the flight path of PH-DON after approximately 16 seconds. Because the transponder in PH-1484 was only activated following the winch launch, the aircraft only appeared on the radar at an altitude of approximately 1,200 feet, several seconds after crossing the flight path of PH-DON. It is therefore not possible to determine the precise separation between the two aircraft at that moment. Taking into account the speed of the two aircraft, the horizontal separation between the two was between 300 and 400 metres. The vertical difference between the aircraft was less than 200 feet. Because the pilot of PH-1484 uncoupled the launch cable early, and initiated a descent, the vertical separation never fell below this value.

The following footnotes should be added to the photograph below:

- The radar altitudes are based on the standard air pressure of 1013.2 hPa. The air pressure at the time was in fact 1014 hPa, so that the altitudes, calculated from sea level, were approximately 27 feet higher than the indicated altitudes.
- The altitude of both aircraft is shown in flight levels, showing the altitude per 100 feet.
- The altitude of the glider is shown in metres in the text, as is normal practice in the glider world.


*Aerial photo showing the headings of both aircraft. (Source: LVNL)*

PH-1484 was equipped with the so-called FLARM system that remained active during the entire flight. This system issues a warning in the event of a threatened collision, but because it only works if other aircraft also use the system, and PH-DON was not equipped with the system, no warning was generated.

The experienced pilot of PH-DON, a Cessna 172P, was carrying out a VFR flight from Hilversum airfield to the airfield at Spa-La Sauvenière in Belgium. He had prepared for the flight among others by marking the intended heading on his flying chart, prior to the flight. He had observed that his route took him almost directly over the Nistelrode glider airfield, and undertook to increase altitude when approaching the glider airfield. After taking off at around 11.00 hours, the pilot reported to the military air traffic control unit Dutch Mil, for flight information. The flight was uneventful, and as he approached the control zone (CTR) at Volkel Air Base, he reported his presence to Dutch Mil. During the weekends, the airspace around Volkel Air Base, that matches the CTR, is a Radio Mandatory Zone (RMZ), which means that all air traffic must call in by radio. Dutch Mil failed to inform the pilot of glider activities at Nistelrode, which is located in the RMZ.

The occurrence took place inside a Radio Mandatory Zone. Permission to fly is not required, and no air traffic control is provided to VFR flights; only flight information on request. In airspace of this type, therefore, no separation is maintained between VFR traffic participants, which makes the pilots themselves responsible for maintaining mutual separation.

The pilot of PH-DON had planned to climb from 1,500 to 1,700 feet, well before approaching the Nistelrode glider airfield. However, it was already too late when he realized that he was practically already flying above the glider airfield. Because he was still flying at an altitude of 1,500 feet, he looked down to check for glider activity. He observed that a glider was being winch launched at that time. Because the glider was flying lower than his aircraft, and because in his opinion, there was no unsafe situation, he took no action. He observed no other gliders.

There was no acute collision hazard requiring an evasive manoeuvre. However, this occurrence is a very undesirable situation, that could and should have been avoided.

During his flight preparations, the pilot of PH-DON had seen that his route would take him over Nistelrode glider airfield. Nonetheless, he did not alter the planned route to avoid the glider airfield. Deliberately overflying a glider airfield must be avoided at all times. Because pilots of VFR flights are personally responsible for maintaining separation, the urgent advice while preparing for and carrying out a flight is to avoid glider flying sites and their immediate vicinity. Glider airfields are marked on flying charts, which makes them easy to recognize. In addition, the use of VFR flight planning and navigation software is an effective tool that permanently and precisely indicates the position of such airfields. Certainly during weekends, in good weather, large volumes of glider traffic can be expected in the vicinity of these airfields.

The Aeronautical Information Publication (AIP) specifies a vertical limit of 2,000 feet, at Nistelrode glider airfield. This is the maximum altitude to which gliders can be winch launched, whereby both the aircraft and the winch cable, that is practically invisible, can result in a hazard for other overflying air traffic. A flying altitude of 1,500 feet, the altitude at which PH-DON was flying, was therefore insufficient. Even the altitude of 1,700 feet which the pilot of PH-DON had initially selected to fly at, was too low to avoid a possible dangerous situation.

***Classification:*** *Incident*
***Reference:*** *2020061*

# The Dutch Safety Board in three questions

## 1

### What does the Dutch Safety Board do?

Living safely, working safely, safety. It seems obvious, but safety cannot be guaranteed. Despite all knowledge and technology, serious accidents happen and disasters sometimes occur. By carrying out investigations and drawing lessons from them, safety can be improved. In the Netherlands the Dutch Safety Board investigates incidents, safety issues and unsafe situations which develop gradually. The objective of these investigations is to improve safety, to learn and to issue recommendations to parties involved.

## 2

### What is the Dutch Safety Board?

The Dutch Safety Board is independent of the Dutch government and other parties and decides for itself which occurences and topics will be investigated.

The Dutch Safety Board is entitled to carry out investigations in virtually all areas. In addition to incidents in aviation, on the railways, in shipping and in the (petro-)chemical industry, the Board also investigates occurrences in the construction sector and healthcare, for example, as wel as military incidents involving the armed forces.

## 3

### Who works at the Dutch Safety Board?

The Board consists of three permanent board members under the chairmanship of Jeroen Dijsselbloem. The board members are the public face of the Dutch Safety Board. They have extensive knowledge of safety issues. They also have extensive administrative and social experience in various roles.

The Safety Board's bureau has around 70 staff, two-thirds of whom are investigators.

Visit the website for more information www.safetyboard.nl.

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## 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.

July 2021

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

Source photos cover:
Foto 2: Veiligheidscommissie Middenmeer
Foto 3: Skytools