

Safety Investigation Report

Ref. AAIU-2015-07
Issue date: 16 October 2017
Status: Final

SYNOPSIS

| | |
|--------------------------------|---|
| Classification: | Serious Incident |
| Level of investigation: | Standard |
| Date and time: | 11 July 2015 at 12:20 UTC |
| Aircraft: | 1) Avions Pierre Robin DR400-180R 2) Burkhart Grob Flugzeugbau GMBH G103 Twin II |
| Owner: | The association "Les Ailes Namuroises SCRL" |
| Accident location: | Airfield of Namur/Suarlée (EBNM) |
| Type of flight: | General aviation - Glider towing |
| Phase: | Landing |
| Persons on board: | One pilot |
| Injuries: | None |

Abstract

During glider towing operations, a Robin DR-400 towing airplane landed with the towing cable extended. The cable hit a parked sailplane (Grob Twin II) and caused damage to the tail section.

Cause(s)

Direct cause

The failure of the pilot to visually check the full retraction of the tow cable after releasing the sailplane.

Indirect cause(s)

- The pilot's decision to land on a runway and/or safety areas partially occupied by sailplanes involving a deviated flight path in final.
- The airfield internal rules of procedure of both the airfield and the sailplane club mentioning that landing on an occupied runway is acceptable.

Contributing factor(s):

- The BCAA's approval of the airfield without assessing the internal rules of procedure of the airfield.

FACTUAL INFORMATION

History of the flight

The pilot stated that after releasing a glider at an altitude of 500 m, he operated the electrical winch of the towing cable and immediately after checked the rear-view mirror placed on the wing that the cable was actually retracting, but didn't verify afterwards that the cable was fully retracted.

In downwind, the pilot called the glider operations supervisor about the best way not to lose time for the next refuelling. During this conversation, no mention was made of the still extended launch cable.

The aircraft came back in final for landing on the runway 24R, also known as the "glider runway". The pilot elected to land on this runway instead of the parallel 24L runway, known as the "aeroplane runway" because another aeroplane was already in final of 24L, in front of him.

On the airfield, a group of several gliders was standing close to the runway 24R threshold, inside the runway end strip¹ and 'Runway End Safety Area' (RESA)², on the right side of the runway axis. A Grob G103 Twin II was also standing on the left side of the 24R runway axis, at a distance well before the runway threshold and likely outside the RESA of both runways 24R and 24L.

The pilot stated he managed to fly low in final to perform a short landing. He tried to avoid flying above both the Grob G103 Twin II and the other sailplanes waiting to be towed.

When the airplane was in final, the glider operations supervisor saw that the towing cable was still extended. He, as well as the airfield commander, tried to notify the pilot by radio. The pilot afterwards stated that the radio emission was quite busy and that he did not hear any radio call.

The towing cable hit the Grob Twin II glider, causing structural damage to the tail section.

¹ Definition of Runway strip: A defined area including the runway and stopway, if provided, intended to reduce the risk of damage to aircraft running off a runway; and to protect aircraft flying over it during take-off or landing operations.

² Definition of Runway End Safety Area' (RESA): An area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

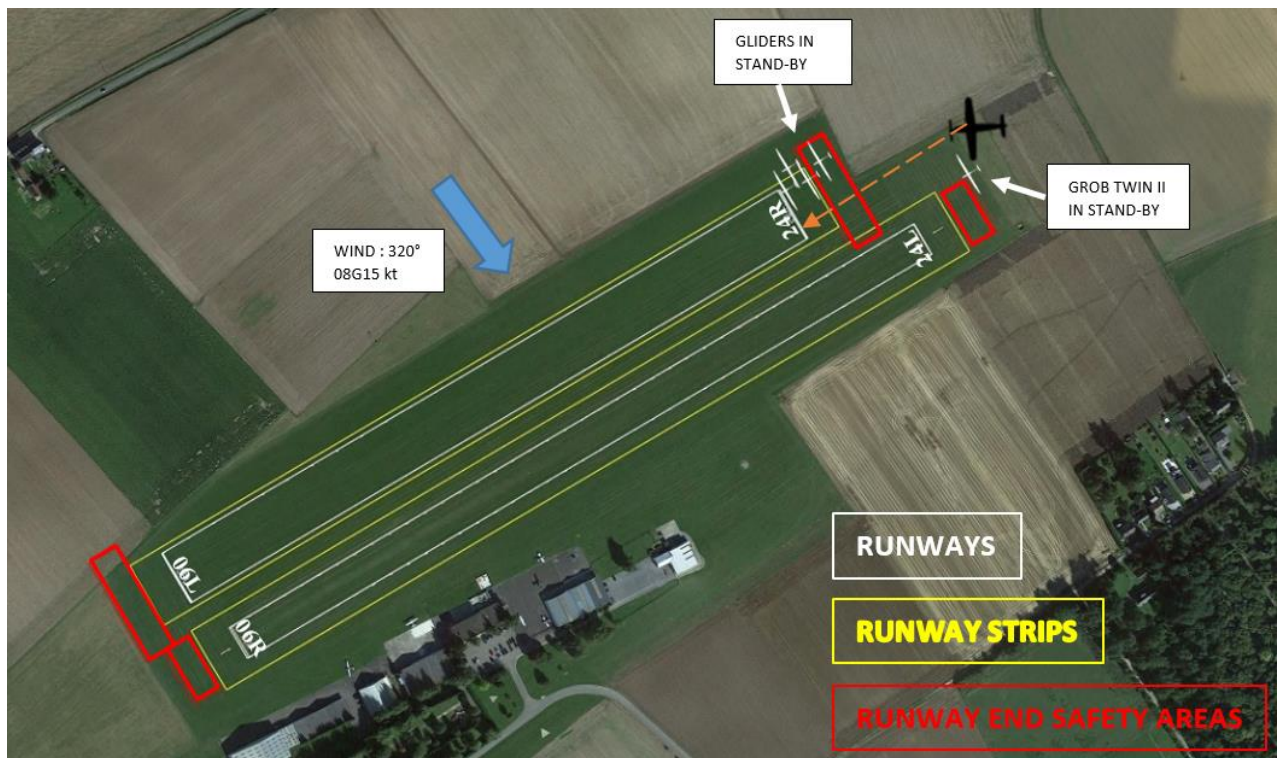


Figure 1: Aerial view showing the gliders standing on the ground (in white) and the towing aeroplane (in black) in crabbed approach, slightly left of the centreline.

Pilot information

Belgian, male, 41 years-old. Holder of a Private pilot licence first issued in June 2000. Rating SEP (land) with sailplane towing endorsement. Holder of a glider pilot licence first issued in October 1991.

Total flight experience (PIC): 690 FH

Meteorological information

Wind: 320 degrees, 08 kt Gust 15 kt, Temperature: 27 °C, QNH: 1016 hPa

Airfield information

EBNM Namur airfield is located 7 km west-northwest of Namur. Geographical coordinates are 50°29'17" N – 4°46'08" E and elevation is 594 ft (181 m).

The airfield is equipped with two grass 24/06 bi-directional runways. The dimensions of runway 06L/24R (primary runway for gliders and the towing aeroplane) is 630 m x 50 m while 06R/24L (primary runway for motorized aircraft) has the following dimensions 695 m x 31 m. Both runways with orientation 24 have a right-hand circuit.

The use of the aerodrome is subject to prior permission from the operator. A mix of aircraft (aeroplanes, helicopters and gliders) are operating from the airfield and parachuting activities in VMC are authorized. Basic Information is provided on 118.000 MHz ("Namur Radio") and radio equipment is mandatory in each aircraft. The internal rules of procedure has a chapter about radio communications stating, amongst others, that no personal conversation is allowed on the radio.

This standard restriction prevents overloading of the frequency by information not necessary for flight safety and possible pilot distraction.

The runway strip borders (in yellow on figure 1) have an identical width of 60 meters for each runway and the end strips extend 30 meters beyond each runway end.

The Runway End Safety Areas RESAs in red on figure 1 extend 30 meters further to each end strip and its width is, according to BCAA Circular GDF-04, twice the runways' width i.e. 100 meters for 24R/06L and 62 meters for 24L/06R.

Regulation pertaining to the approval of an aerodrome

In Belgium, the applicable regulation to approve the operation in VMC of a civilian airfield without Air Traffic Control is BCAA Circular GDF-04 Edition 5, dated 3 November 2009. This circular, largely based on ICAO Annex 14 (Volume 1), describes in detail the technical conditions an airfield must comply with.

During the process of initial approval of an aerodrome, the applicant must provide an application file to the BCAA, describing all important information, the facilities and equipment, the operational procedures to be used and the organisation and management of the airfield. Amongst others, this file must also include a copy of the internal rules of procedure of the aerodrome.

Before delivering the authorization letter, BCAA thoroughly examines the provided documents and performs on-site inspection(s) to verify that all the technical conditions as laid down in Circular GDF-04 are fulfilled. However, the operational conditions described in the internal rules of procedure of the aerodrome are not examined by BCAA.

The approval of the aerodrome is unlimited in time, but BCAA stated that they perform recurrent on-site inspection of the aerodrome and file verification at least once every 5 years.

Aeroplane

Identification:

Manufacturer: Avions Pierre Robin – Centre-Est-Aeronautique

Model: DR 400/180R

Serial number: 1117

The Robin DR400 is a wooden low wing monoplane. It has a tricycle undercarriage, and can carry four people.

The DR400 aeroplanes have the 'cranked wing' configuration, in which the dihedral angle of the outer wing is much greater than the inboard.

The DR 400/180R version is powered by a 180 HP Lycoming O-360-A3A engine and is specifically equipped for towing sailplane.

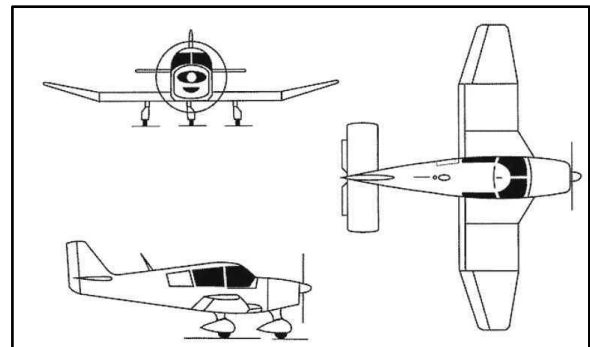


Figure 2: Drawing of DR400 aeroplane

The towing equipment

In addition to the originally installed towing hook, a retractable tow cable winch can be either installed by the aircraft manufacturer or by an independent manufacturer, as a retrofit kit.

The incident aeroplane was equipped with a retrofit kit manufactured in Germany and identified 'Feuerstein system'. This equipment, or a very similar one, is now manufactured and marketed by the company 'Tost'.

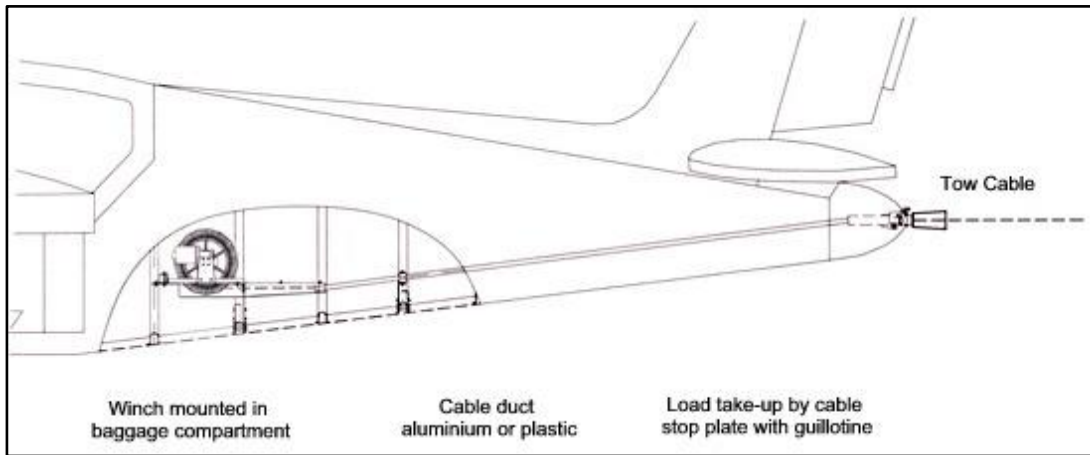


Figure 3: drawing of the setting up of the retractable tow cable winch.

Electrical switch unit:

The retractable cable is controlled by means of a toggle switch fitted with a status light. The switch unit (switch, circuit breaker and cable set for standard 12 V on-board voltage) is mounted on the instrument panel in the pilot's line of sight.

Once the glider has been released, the electrical switch is activated by the pilot to start the cable retraction. The operation can be checked with a rear-view mirror. After the cable has been fully retracted, a red marking on the cable's end is visible.

The toggle switch incorporates an auto switch-off function automatically activated when the cable has run to end position and in case of motor overload.

Flight Manual

Reportedly, the airplane was provided to the owner with a flight manual including a supplement prepared by 'Flugservice Feuerstein' and covering the installed tow cable winch system. Both the airplane flight manual and the flight manual supplement are written in German.

Regulation (EC) N° 216/2008 states that the Flight Manual must be available to the crew and kept up to date for each aircraft. As no legal text was found specifying something else, the updating of the Flight Manual is deemed to be the responsibility of the owner or the operator of the aircraft. Moreover, PART-M AMC M.A.201(h)(1)(6) doesn't include the updating of the Flight Manual in the list of tasks that the operator can subcontract.

This suggests that the owner or the operator is primarily responsible for making available the appropriate flight manual to the pilots, including possible supplements, and updating it regularly.

The procedure for retraction of the cable:

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| <p>German :</p> <p>Nach dem Ausklinken des Segelflugzeuges kann per Tastendruck das Schleppseil eingezogen werden. Dauer etwa 60 - 70 Sekunden, je nach Geschwindigkeit. Im Rückspiegel auf der Tragfläche kann das Einziehen des Schleppseiles kurz beobachtet werden.</p> <p>Es wird empfohlen, mit voll ausgefahrenen Landeklappen, bei einer Drehzahl von ca. 1700 bis 2000 Umdrehungen und einer Fahrtmesseranzeige von etwa 170 km/h abzustiegen. Diese erfliegenen Werte wirken sich günstig auf die Zylinderkopftemperatur aus und der Abstieg ist lärmfrei!</p> <p>Die Landung kann jetzt direkt erfolgen. Sollte das Seil nicht, oder nicht ganz einfahren, so kann bei ausreichender Platzlänge mit Seil gelandet werden. Nur in Notfällen oder bei Hindernissen müsste aus Sicherheitsgründen das Schleppseil gekappt werden.</p> | <p>Translation :</p> <p>After the sailplane had been released, the push button will be operated for retracting the tow cable. Duration about 60 – 70 seconds, depending on the speed. A short glance into the mirror will show whether the redmarked end part has been fully wound-up, i.e. the cable is completely retracted.</p> <p>It is recommended to descend with fully extended flaps at a RPM of approx 1700 to 2000 and a speed indicator display about 170 km/h. These flow n values have a favourable effect on the cylinder head temperature and on the descent noise.</p> <p>Now landing can occur directly. If it was not possible to retract the cable completely or not at all, landing would be allowed with landing cable when the runway is of sufficient length. Only in an emergency or in case of obstacles the tow cable should be cut for safety reasons.</p> |
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Figure 4: Flight manual supplement regarding the operation of the ‘Flugservice Feuerstein’ tow cable winch

The supplement gives instructions on what to do in case of malfunction:

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|---|--|
| <p>German :</p> <p><u>Störungen:</u></p> <p>Es kann vorkommen, dass sich im Seil Kringel bilden. Das Seil kann dann nur bis zu dieser Stelle eingefahren werden. Landung wie oben beschrieben und Kringel sofort beseitigen. Eine Kringelbildung kann verhindert werden, wenn das Ausklinken des Segelflugzeuges nicht unter starker Seilspannung erfolgt. Zur besseren Einführung dieser Schleppmethode erst etwas Leistung wegnehmen und dann erst Zeichen zum Ausklinken geben.</p> | <p>Translation:</p> <p><u>Malfunctions:</u></p> <p>It may happen that the tow cable curls. In this case it will only be possible to retract the tow cable up to this point. The push button will automatically switch off.</p> <p>Land as described and remove curls.</p> <p>The curls can be prevented when the sailplane will be released as the tow cable is not too much tightened or when the sailplane will be zoomed shortly before the release.</p> <p>For a better introduction in this towing method, the engine power should be reduced first and then the sign for releasing should be given.</p> |
|---|--|

Figure 5: Flight manual supplement regarding possible tow cable winch malfunctions

The investigators were told that the flight manual of the airplane, being written in German, was not actually used by the pilots, as most of them don’t understand German.

There was an original French version of “Avions Robin” flight manual on board (Edition 12 - Sept. 1986). This manual describes the (not installed) Robin type cable winch operation and nothing was stated about the ‘Feuerstein system’ that was actually installed.

The association “Les Ailes Namuroises”

The DR 400 airplane was owned and operated by “Les Ailes Namuroises SCRL”, a cooperative association whose main purpose would be to make a towing aeroplane available, including pilots, to both sailplane clubs located at the airfield.

“Les Ailes Namuroises” prepared an operations manual^[1] largely based on (EU) 965/2012, Part ORO “Organization Requirements for Air Operations” and containing check lists as per (EU) 800/2014 Part NCO “Non-commercial operations with other-than complex motor-powered aircraft”.

^[1] This manual is entitled: “MANUEL D’EXPLOITATION – Remorquage des planeurs – Vols Privés - Edition 1 - 15 mars 2015

When the incident occurred, the above regulation was not yet applicable^[2], however the operation manual was internally used, as a guide for the operation of the towing aeroplane. It includes, amongst others, instructions – mostly in French – pertaining to the operation of the towing airplane as well as check lists.

A.6.5.12. LA DESCENTE
Les paramètres « moteur », les vitesses et les trajectoires sont décrits dans la Partie B de ce manuel.
Il est essentiel de veiller à ne pas refroidir le moteur trop rapidement ; une réduction progressive des gaz pendant la descente est recommandée.
Il est essentiel de ne pas entamer la descente de manière abrupte et « acrobatique » : souvent le nombre de planeurs dans la zone, à des altitudes différentes, constitue un risque sérieux de collision. Il convient donc de ne pas se lancer dans la descente d'une manière inconsidérée, ne permettant pas un bon « look out » et sans vérifier si le planeur a bien dégagé. Il est recommandé, avant de réduire et de descendre, de conserver la puissance moteur quelques secondes après le largage afin d'assurer une bonne séparation câble-planeur.

Il convient également de ne pas oublier d'enrouler le câble, et d'anticiper l'arrêt du moteur électrique en le coupant manuellement lorsque le câble est rentré.

Translation

A.6.5.12. THE DESCENT
The engine parameters, speed and trajectories are defined in the B part of this manual.
It is vital to ensure that the engine does not cool off too rapidly; it is recommended to apply an incremental throttle reduction during descent.
The descent should not be abruptly or "acrobatically" initiated: there is often a large number of sailplane flying in the area, at various altitudes and therefore there is a serious risk of collision. Therefore do not initiate the descent in an inconsiderate manner, not allowing a good "look-out" or without checking that the sailplane has been effectively released. It is therefore recommended, before reducing power and descent, to maintain a high engine power for a few seconds after release in order to ensure an adequate separation between cable and the sailplane.

It should not be forgotten to retract the cable and anticipate the stop of the electrical motor by switching it off when the cable is released.

UTILISATION DE L'ENROULEUR DE CÂBLE
Lors du largage, enrouler le câble aussitôt que possible et avant que la vitesse n'atteigne 180-190 km/h. Si possible, anticiper l'arrêt du treuil électrique en coupant l'alimentation dès que le câble est rentré (miroir latéral).

Translation

USE OF THE TOW CABLE WINCH
During release, the cable should be retracted as soon as possible, before the speed would reach 180-190km/h. When possible, the stop of the electrical motor of the winch should be anticipated as soon as the cable is retracted (lateral mirror)

Figure 6: Extracts of "Les Ailes Namuroises" operation manual

Towing check-list Robin DR400R

Glider release:
Be sure that it's really released before to get down!
Electrical cable retractor: "on" (max speed 180 km/h)
Flaps : "up"
Fuel pump "off"
Radio call
Minimum 2100 rpm during descend

Before landing: Classic check-list
Don't use de carburetor heater above 15°C.
Check towing cable in finale (it must be inside the aircraft)

Figure 7: Extract of check list from the Operation Manual

^[2] The regulation is applicable since August 2016

A.6.5.13. L'ATTERISSAGE

Le circuit du remorqueur est à l'extérieur du circuit des planeurs et à une hauteur supérieure. Les planeurs ont priorité sur le remorqueur. Si plusieurs planeurs se présentent quasiment en même temps dans le circuit, le pilote-remorqueur n'hésitera pas à se poser sur la piste « avions » afin de laisser tout le champ libre aux planeurs.

Le pilote remorqueur évitera de passer à la verticale de planeurs parkés ou mis en piste pour le départ. Un survol à faible hauteur des planeurs au sol peut s'avérer catastrophique si le pilote a oublié de rentrer le câble, et le souffle de l'hélice pourrait endommager des verrières non fermées.

Translation:

A.6.5.13. THE LANDING

....

The pilot of the towing aeroplane shall avoid flying above the sailplanes parked or standing on the runway ready for take-off. Overflying the sailplanes on ground at low height may turn out catastrophic if the pilot has forgotten to retract the cable, and the propeller slipstream may damage the canopies still open.

Figure 8: Warning regarding the danger of overflying sailplanes.

Damage

Both aeroplanes were inspected after the event.

Towing aeroplane: The tow cable winch was found undamaged and in working condition.

Sailplane: The tail of the Grob Twin II sailplane showed several impact damages. The right side elevator was cut and the horizontal and vertical stabilizers showed structural damages.



Figure 9: Left: sailplane vertical stabilizer - Right: sailplane stabilizer and elevator

ANALYSIS

The event

The pilot operated the switch for the retraction of the tow cable, but did not check whether the cable effectively fully retracted.

The flight manual of the tow cable winch indicates that the electrical drive motor can stop in case of electrical anomaly or overload. The drag force acting on the retraction cable increases with the airspeed and the resulting torque may eventually cause an overload of the electrical winch motor. The same applies in case the cable gets stuck because it wraps itself on the rotating drum or outside the aeroplane during retraction. The operations manual insists on limiting the airspeed during the retraction of the cable to avoid the winch cable stopping operating due to winch motor overload. Performing abrupt manoeuvres when the cable is not retracted may have the same effect and may even cause the cable to unroll in flight due to the centrifugal force applied to the part of the cable still outside. The inspection performed after the event did not reveal any anomaly to the retractable towing system and the aeroplane was returned to service without any problem. This suggests that the towing cable system stopped operating due to an operational cause that could not be determined by the investigation.

The pilot didn't hear the radio warning calls about the presence of the cable remaining extended likely because there was a lot of broadcasting at that time.

During the final approach, he flew above a narrow strip of terrain located to the left of an imaginary extended runway centre line that was, from his point of view, free of obstacles. However, the pilot assumes that the crosswind and the gusts (up to 15 kt) could have made the aeroplane deviating more to the left than the intended path and also that the towing cable hanging rear of the aeroplane was itself also pushed to the left by the crosswind. That combined with the fact that the pilot chose to perform a low final has made it possible that the cable hit the standing sailplane.

The sailplane towing operation is quite repetitive and the part of the flight after releasing the sailplane is "non-productive". There might be a tendency for pilots to speed-up this portion of the flight, to get to the ground as soon as possible for towing another sailplane. This assumption is supported by the pilot stating that he elected to land on the glider runway (24R) instead of 24L runway because an aeroplane was already flying in final in front of him on the other runway (24L). However, the pilot always has the possibility to extend the downwind leg in order to integrate into the aerodrome circuit behind another aircraft. The pilot also stated he performed a flat approach in order to land short and proceed as soon as possible to the next towing.

However, when asked about flying under time pressure, the pilot clearly responded that it was not the case, but there was a lot of traffic and activities on the airfield on this day, causing a possible distraction. The operator of the towing aeroplane said the same thing, certifying that there is no pressure on pilots, nor any recording, or statistics, to compare the time needed by each pilot for a complete towing flight.

The towing aeroplane flight manual

The aeroplane was registered in Germany and therefore it is quite normal that its documentation, including the flight manual, is written in German. The flight manual was properly updated and consistent with the aeroplane equipment, i.e. with the 'Feuerstein system' retractable tow cable winch. However, the correct documentation for the 'Feuerstein system' tow cable winch was not incorporated in the DR400R French flight manual found in the aeroplane.

However, the pilot was well aware of the procedure to apply with the 'Feuerstein system', described in the Club Operations Manual and in the airplane check list. Therefore the absence of the correct flight manual on board the aeroplane cannot be considered as a contributing factor in this event, but more a general safety issue.

Airfield and the sailplane clubs internal rules of procedure

The applicable internal rules of procedure of the aerodrome³ was consulted, amongst others to assess if instructions were provided to ensure that an active runway remains obstacle free. No instruction was found, other than a taxiing limitation applicable to aircraft taxiing towards the threshold of runway 24 L when another aircraft is in final on this runway.

A specific chapter for sailplane operations requests that a dedicated person named "Le Chef de Piste", the operation supervisor, would be present before starting the sailplane operations. This person acts under the authority of the airfield's commander and must make sure that both the airfield internal rules of procedures and the sailplane clubs internal rules of procedures are properly applied.

The instructions for sailplane operations found in the airfield internal rules of procedure, don't provide any specific instruction avoiding, as much as possible, the presence of standing sailplane(s) on the runway and its associated safety areas. On the contrary, it states amongst others the following:

Les pilotes planeurs veilleront à laisser une partie de la piste libre pour l'atterrissage de l'avion remorqueur.

Translation:

The sailplane pilots will ensure that a part of the runway remains obstacle free for the landing of the towing aeroplane.

Chapter A.6.5.13 of the towing aeroplane operator manual also suggests that the landing of the towing aeroplane when the runway, or the runway safety area, are occupied by sailplanes is an acceptable situation requiring only a special attention from the pilot in order to avoid overflying the sailplanes awaiting take-off:

The pilot of the towing aeroplane shall avoid flying above the sailplanes parked or standing on the runway ready for take-off. Overflying the sailplanes on ground at low height may turn out catastrophic if the pilot has forgotten to retract the cable, and the propeller slipstream may damage the canopies still open.

This gives the airfield's users the impression that the presence of sailplanes on the runway, and by extension on the safety areas, is a normal situation.

Moreover, as the runway edges are clearly marked on the ground, it is easy for the pilot in approach to determine that the runway is free of obstacles, and to reject the landing on an occupied runway. By contrast, because the runway strip and the runway end safety area borders are not materialized

³ The applicable internal rules of procedures of the aerodrome laid down by the airfield's operator and provided to the BCAA was identified as Edition 2014, updated on 27 April 2015.

on the ground, it is not easy for the pilots flying in the landing circuit to determine whether obstacles (standing sailplanes in this case) are located inside or outside the runway strips or RESA.

We can conclude that both the airfield and the operator manuals tolerate the landing of the towing aeroplane when non-frangible obstacles - the sailplanes awaiting take-off, and sailplanes that just landed - are present on the runway or on the safety areas.

Normally, should a runway and its associated safety areas be engaged, the airfield's commander through the glider operations supervisor should declare the runway (temporary) non-active because not clear of obstacle.

CONCLUSIONS

Findings

- The pilot was duly qualified and licenced for piloting the towing aeroplane.
- The aeroplane was in an airworthy condition which means registered, covered by a valid airworthiness certificate and a valid Airworthiness Review Certificate.
- The aeroplane was equipped with a 'Feuerstein system' retractable tow cable winch and the flight manual, in German, was properly updated and consistent with the aeroplane equipment.
- Another flight manual, in French, was on board and was not consistent with the 'Feuerstein system' equipment (Safety issue).
- Both the airfield and the operator manuals tolerate the landing of the towing aeroplane when sailplanes are present on the runway or on the safety areas.
- The pilot of the towing aeroplane did not realize that the tow cable was still extended during approach.
- The pilot flew low in final, above a free of obstacles strip, while trying to avoid overflight of the sailplanes standing on the beginning of the runway and in the safety areas.
- The towing cable hit the Grob Twin II glider, causing structural damage to the tail section. An evaluation of the position of this sailplane shows it was likely standing on the ground at a place located outside the runway safety areas, while respecting the applicable regulation.
- The manual of procedure of the airfield tolerates that the towing aeroplane lands on a partially occupied runway and safety areas.
- The manual of procedure of the towing aeroplane operator, partially based on the airfield's manual of procedures also tolerates landings on runway 24R when occupied by standing sailplanes (Safety issue).
- During the approval of airfields (without ATS and operated in VMC), the airfield internal rules of procedure manuals, although part of the documents requested by BCAA, are not verified by BCAA.

Cause(s)

Direct cause

The failure of the pilot to visually check the full retraction of the tow cable after releasing the sailplane.

Indirect cause(s)

- The pilot's decision to land on a runway and/or safety areas partially occupied by sailplanes involving a deviated flight path in final.
- The airfield internal rules of procedure of both the airfield and the sailplane club mentioning that landing on an occupied runway is acceptable.

Contributing factor(s):

- The BCAA's approval of the airfield without assessing the internal rules of procedure of the airfield.

RECOMMENDATIONS

Safety issue: Presence of an inadequate flight manual on-board aircraft.

As a consequence of another investigation regarding a helicopter accident that occurred in Belgium on 13 June 2014, AAIU(Be) issued the recommendation BE-2015-0013 regarding the flight manuals to the BCAA.

The BCAA reacted positively to the recommendation and issued the “Communication-Mededeling” letter n°39 revision 1 on 7 June 2016, so after this incident with the DR400 towing aeroplane, to remind the owners, operators and CAMO’s of the basic principles and responsibilities related to flight manuals (Letter is in appendix at the end of this report).

Considering that the publication by BCAA of “Communication- Mededeling” letter n°39 revision 1 is an adequate action to remedy this safety issue, AAIU(Be) determines that no further action is needed.

Additionally, the operator of the towing aeroplane stated that he ordered a new adequate supplement to the flight manual in order to update the flight manual that was actually made available to the pilots (placed on board the aircraft). AAIU(Be) also supports this safety action and has no further recommendation on this issue.

Safety issue: Inadequate airfield internal rules of procedure.

The internal rules of procedure of both the airfield and the towing aeroplane association tolerate the landing of the towing aeroplane on an occupied airfield.

As the BCAA approval letter of the airfield doesn’t state that the internal rules of procedure are not assessed and are not approved during the airfield approval process, this can give the airfield operator the confidence that all the procedures incorporated in his manual are fully compliant with the applicable regulation (Circular GDF-04 ...). Therefore:

Recommendation BE-2017-0015

It is recommended that BCAA puts in place a system that ensures, although it is the ultimate responsibility of the airfield operator, that the airfield internal rules of procedure are in compliance with the prevailing regulations (Cir. GDF-04, ...).


AAIU(Be) believes that the safety of the sailplane operation at the Namur airfield could be improved by a constructive dialogue between all the parties concerned. Therefore:

Recommendation BE-2017-0016

It is recommended that the airfield operator undertakes a dialogue with the operator of the towing aeroplane, the sailplane clubs and the BCAA in order to make sure that the applicable regulation regarding aerodromes (Circular GDF-04) is properly implemented during the operation of sailplanes and the towing aeroplane at and around the airfield.

APPENDICES

BCAA “Communication - Mededeling” letter n°39 revision 1 (Dutch version)



FEDERALE OVERHEIDSDIENST MOBILITEIT EN VERVOER
Luchtvaart

Brussel, 7 juni 2016

Mededeling nr.39 Rev01

Betreft: Richtlijn voor de eigenaars, operatoren en Camo's betreffende het vlieghandboek van luchtvaartuigen niet gebruikt in het handelsluchtvervoer

Deze mededeling geeft de algemene richtlijnen waaraan het *vlieghandboek* (*Airplane Flight Manual AFM, Pilot's Operating Handbook – POH, ...*) van een luchtvaartuig, dat niet gebruikt wordt in het handelsluchtvervoer, moet voldoen, en bepaalt de daarbij horende verplichtingen van de eigenaar / operator.

Het vlieghandboek maakt deel uit van de certificering van het luchtvaartuig. Hierin worden de voorwaarden en limitaties voor het gebruik van het luchtvaartuig bepaald in overeenstemming met de veiligheidsstandaard die van toepassing is in de basis voor de certificering. Onvolledige of onjuiste informatie in het vlieghandboek kunnen de veiligheid van het luchtvaartuig, piloot en passagiers in gevaar brengen.

Een geldig vlieghandboek is een vereiste voor het bekomen van een luchtwaardigheidsbewijs. (cfr. Europese Verordening EG nr. 748/2012). Het vlieghandboek is geldig als het van toepassing is op de configuratie van het luchtvaartuig en het bijgewerkt is tot de laatste revisie. Om geldig te blijven dient bijgevolg elke wijziging of revisie die van toepassing is geïmplementeerd te worden.

Het vlieghandboek dat gebruikt moet worden is datgene welke uitgegeven wordt door de houder van het type certificaat (*TC holder*) van het luchtvaartuig.

Voor de luchtvaartuigen waar de nationale regelgeving van toepassing blijft, zal het vlieghandboek geaccepteerd worden door het Directoraat General Luchtvaart (DGLV).

Het beschikken over een geldig vlieghandboek is een voorwaarde voor het behouden van de permanente luchtwaardigheid van een luchtvaartuig. (cfr. Europese Verordening EG N° 1321/2014 (Part-M)).

Wijzigingen aan het vlieghandboek dienen aangebracht te worden in volgende gevallen:

- a) Bij een revisie van het vlieghandboek die gepubliceerd wordt door de TC holder. Een revisie die van toepassing is op het desbetreffende luchtvaartuig dient zo snel mogelijk geïmplementeerd te worden.
- b) Sommige wijzigingen (STC, een goedgekeurde ingrijpende wijziging / major modification of geringe wijziging / minor modification,...) die aangebracht worden aan een luchtvaartuig hebben invloed op de gebruiksvoorwaarden en limitaties ervan. In dat geval zal de houder van het ontwerp van de wijziging (*de houder van een aanvullend typecertificaat, STC Holder*) een bijvoegsel of *Supplement aan het vlieghandboek* uitbrengen. Dit supplement geeft een beschrijving van de bijkomende en/of gewijzigde gebruiksvoorwaarden van het luchtvaartuig. Elk supplement dient geïmplementeerd te worden wanneer de wijziging of STC aan het luchtvaartuig wordt aangebracht.
- c) In welbepaalde gevallen wordt een nieuw massa- en zwaartepuntrapport (*weegrapport, Weight & Balance (W&B)*) gemaakt. De meest recente waarden van massa en moment dienen te worden overgenomen in het vlieghandboek.
- d) Sommige luchtwaardigheidsaanwijzingen (*Airworthiness Directives, AD*) hebben invloed op de gebruiksvoorwaarden en/of limitaties van het luchtvaartuig. In dat geval dienen de wijzigingen die hiermee verband houden en aangegeven worden in de luchtwaardigheidsaanwijzing geïmplementeerd te worden in het vlieghandboek.

Verantwoordelijkheid van de eigenaar / operator

De eigenaar / operator van het luchtvaartuig heeft de verantwoordelijkheid om het vlieghandboek geldig te houden. Hij dient ervoor te zorgen dat :

- 1) het vlieghandboek overeenkomt met het model en de configuratie van het luchtvaartuig,
- 2) de laatste revisie of uitgave van het vlieghandboek gebruikt wordt,
- 3) alle supplementen aan het vlieghandboek als gevolg van de toepassing van een STC of wijziging, in hun meest recente status toegevoegd worden aan het vlieghandboek en bijgewerkt worden met hun meest recente revisie,
- 4) de waarden uit het meest recente massa- en zwaartepuntrapport opgenomen worden,
- 5) de wijzigingen in verband met gebruiksvoorwaarden en/of limitaties die aangegeven worden in een luchtwaardigheidsaanwijzing (Airworthiness Directives, AD), die van toepassing is, geïmplementeerd worden,
- 6) enkel de bijvoegsels en supplementen van de optionele uitrusting die werkelijk geïnstalleerd is op het luchtvaartuig, toegevoegd worden.

De controle van de geldigheid van het vlieghandboek is voorzien in Verordening EG N° 1321/2014 (Part-M). Hiertoe zullen eigenaars of operators er voor zorgen dat het vlieghandboek van hun luchtvaartuig steeds beschikbaar is bij elke controle van de luchtwaardigheid.

Directoraat-generaal Luchtvaart
Technische Directie


Tim Rimez
Verantwoordelijke a.i.

BCAA “Communication - Mededeling” letter n°39 revision 1 (French version)



SERVICE PUBLIC FEDERAL MOBILITE ET TRANSPORTS
Transport aérien
Direction Technique

Bruxelles, le 7 juin 2016

Communication N° 39 Rev011

Objet: Directives aux propriétaires, exploitants et camos concernant le manuel de vol des aéronefs non affectés au transport aérien commercial.

La présente communication donne les directives générales auxquelles le manuel de vol, (*Airplane Flight Manual - AFM, Pilot's Operating Handbook - POH,...*) d'un aéronef, non affecté au transport aérien commercial doit satisfaire et définit les obligations du propriétaire / exploitant.

Le manuel de vol est établi lors de la certification de l'aéronef. Il définit les conditions et limites d'utilisation de l'aéronef conformément au standard de sécurité applicable dans la base de certification. Une information incomplète ou incorrecte peut mettre en danger la sécurité de l'aéronef, du pilote et des passagers.

Un manuel de vol valide est une exigence pour obtenir le certificat de navigabilité (cfr. Règlement CE N° 748/2012 de la Commission). Le manuel de vol est valide s'il correspond à la configuration de l'aéronef et si il est à jour. Afin de maintenir sa validité, toute modification ou révision applicable doit être implémentée.

Le manuel de vol à utiliser est celui qui est émis par le titulaire du certificat de type de l'aéronef concerné (*TC holder*).

Pour les aéronefs auxquels les règles nationales restent applicables, le manuel de vol doit être accepté par la Direction Générale Transport Aérien (DGTA).

Disposer d'un manuel de vol valide est une condition pour maintenir la navigabilité d'un aéronef. (cfr. Règlement CE N° 1321/2014 de la Commission (Part M)).

Des modifications au manuel de vol peuvent être rendues obligatoires dans cas suivants :

- a) Par révision du manuel de vol publiée par le TC holder. Une révision applicable à un aéronef particulier doit être introduite le plus vite possible.
- b) Certaines modifications (STC, modification majeure ou mineure approuvée, ...) peuvent avoir un impact sur les conditions et/ou limites d'utilisation d'un aéronef. Dans ce cas un supplément au manuel de vol est émis par le titulaire de l'agrément de conception de la modification (*STC holder ou responsable de l'approbation de la modification*). Ce supplément donne une description des conditions d'utilisation supplémentaires et/ou modifiées de l'aéronef. Chaque supplément doit être introduit lors de l'application du STC ou de la modification.
- c) Dans des cas particuliers, un nouveau devis de masse et centrage (*rapport de pesée, Weight & Balance report, ...*) est réalisé. Les valeurs les plus récentes de poids et centrage doivent être reprises dans le manuel de vol.
- d) Certaines consignes de navigabilité (*Airworthiness directives, AD*) ont un impact sur les conditions et/ou limitations d'utilisation de l'aéronef. Dans ce cas, les modifications associées à cette consigne de navigabilité, doivent être introduites dans le manuel de vol.

Responsabilité du propriétaire / opérateur

Le propriétaire / exploitant d'un aéronef a la responsabilité de maintenir la validité de manuel de vol. Il doit s'assurer que :

- 1) le manuel de vol correspond au modèle et à la configuration de l'aéronef,
- 2) la dernière révision ou édition du manuel de vol est utilisée,
- 3) tous les suppléments nécessaires suite à l'application d'un STC ou d'une modification sont incorporés et sont tenus à jour,
- 4) les données les plus récentes du devis de masse et de centrage sont incorporées,
- 5) les modifications concernant les conditions et/ou limites d'utilisations associées à une consigne de navigabilité qui est applicable sont introduites,
- 6) seuls les annexes et suppléments relatifs aux équipements optionnels installés sont incorporés.

Le contrôle de la validité du manuel de vol est prévu au § M.A.710 du règlement CE N° 1321/2014 (Part-M). Par conséquent, les propriétaires / opérateurs doivent s'assurer que le manuel de vol est disponible à chaque examen de navigabilité.

Direction générale Transport Aérien
Direction Technique


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Responsable a.i.