



Accident to the DIAMOND DA40
registered **F-HDGB**
on Wednesday 27 September 2023
at Montpellier-Méditerranée airport

Time	Around 17:50 ¹
Operator	Airways Aviation Academy ²
Type of flight	Instruction
Persons on board	Student pilot
Consequences and damage	Aeroplane substantially damaged
This is a courtesy translation by the BEA of the Final Report on the Safety Investigation. As accurate as the translation may be, the original text in French is the work of reference.	

**Damage to nose gear during fourth attempt to land,
rejected landing, in supervised solo flight**

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on statements, radio-communication recordings and radar data.

At around 16:35, the student pilot, accompanied by an instructor, took off from runway 12R³ of Montpellier-Méditerranée airport to carry out runway circuits. After carrying out three runway circuits for runway 12R followed by two runway circuits for runway 12L⁴, she taxied to the apron for a debriefing of the flight with the instructor. The latter decided to allow her to carry out her first supervised solo flight⁵. The weather conditions were favourable with a southerly wind of around 5 kt⁶.

At 17:27, the student pilot took off from runway 12R in order to carry out a runway circuit. Five minutes later, on final at a height of around 250 ft, she considered that she was too high on the approach slope and rejected the approach.

At 17:38, the student pilot lined up a second time to land on runway 12R. The aeroplane slightly bounced and the student pilot rejected the landing.

¹ Except where otherwise indicated, the times in this report are in local time.

² Approved Training Organisation (ATO).

³ Secondary paved runway measuring 1,100 m x 30 m.

⁴ Main paved runway measuring 2,600 m x 50 m.

⁵ See paragraph 2.3.

⁶ The glossary of abbreviations and acronyms frequently used by the BEA can be found on its [web site](#).

At 17:42, the student pilot lined up a third time to land on runway 12R. The aeroplane bounced twice and the student pilot rejected the landing.

At 17:43, the student pilot informed the controller that she was unable to land. The controller then suggested to the student pilot that she tried to land again, but this time on runway 12L which is longer. At this time, this runway was closed by a NOTAM due to drone flights. The student pilot did not read this back. The controller repeated his suggestion and the student pilot replied positively. The controller asked the drone operator to stop his mission.

An instructor flying a Diamond DA42 registered F-HDGQ also operated by Airways Aviation Academy then contacted the controller to inform him that if the student pilot did not manage to land at the next attempt, he would join the airport to guide her up until the landing.

At 17:49, during the fourth attempt to land, on runway 12L, the student pilot reported that the aeroplane had bounced due to her probably having started the flare a little early. She explained that in the sequence, the nose gear had touched down on the runway first followed by the main landing gear. From the control tower, the controller saw smoke coming from the region of the nose gear and understood that the latter had probably been damaged. The student pilot rejected the landing and indicated on the frequency that she was unable to land.

The controller asked the student pilot to climb to 1,500 ft and to hold overhead point NC⁷ for the time required for the instructor on board F-HDGQ to reach the airport to help her. The controller split the tower frequencies. The student pilot and the instructor on board F-HDGQ were given a separate frequency to the other aircraft.

At 17:56, the student pilot started a holding pattern at 2 NM west of point NC. The controller informed her of the correct position of point NC and the student pilot replied that she was continuing the holding pattern.

At 17:57, the instructor of F-HDGQ positioned his aeroplane close to the student pilot's aeroplane.

The instructor on board F-HDGQ then gave various instructions to the student pilot in order to guide her in terms of altitude, heading and speed. He also informed her that she had damaged the nose gear during the last attempt to land. For this reason, he suggested to her that she keep the stick pulled back for as long as possible during the next landing.

At 18:02, the instructor on board F-HDGQ and the student pilot were at the beginning of the downwind leg for runway 12L.

The instructor on board F-HDGQ then helped the student pilot. He verbally guided her for the turn onto the base leg, the engine speed and parameters, holding the approach slope on final, representing the aiming point, flaring and lastly on the ground, holding a positive attitude for as long as possible and braking.

At 18:10, the student pilot landed on runway 12L. When the nose gear touched down on the runway, the wheel separated. The aeroplane slid and then came to a halt on runway 12L.

⁷ This is Manguio water tower situated around 3 NM north-east of the airport.

The instructor on board F-HDGQ, who had remained in flight behind the aeroplane of the student pilot, rejected the approach and then landed on runway 12R after a runway circuit.

2 ADDITIONAL INFORMATION

2.1 Student pilot information

The 19-year-old student pilot was in training for the CPL(A). She had logged 19 flight hours, all on the DIAMOND DA40.

She indicated that her practical training had gone well and that she had felt confident about undertaking her first solo flight. She mentioned that she had changed instructor during her practical training (see paragraph 2.2).

She considered that she had been well and had not been tired before the accident flight. She indicated for the accident flight, that the wind was light and did not pose any difficulty but that adapting to the difference in aeroplane weight, without the instructor, was difficult. She also mentioned the need to improve her flares. She added that she had felt slightly apprehensive about landing on the shorter secondary runway but had not spoken to her instructor about this.

She indicated that her stress level had considerably increased following the go-around on the second attempt to land. During the hard landing when the nose gear was damaged, she explained that she had been afraid of touching the runway with the tail (see paragraph 2.2).

She indicated that the instructor on board F-HDGQ, who had joined her and positioned his aeroplane just behind her, was of great help to her with his various instructions.

The student pilot's instruction report indicated an overall level of between *Poor* and *Standard Low*. The analysis of the student pilot's training record found that the first instructor regularly mentioned a lack of self-confidence and a certain level of stress. The ATO indicated that the student pilot's progression had been slow, in particular for the theoretical training (ATPL) with highs and lows in the practical training. In the end, a more experienced instructor was assigned to continue her training following an incident (see paragraph 2.2).

2.2 Information about student pilot's first instructor

The student pilot's first instructor, who was new to the job, had preferred handing over the student pilot to another instructor after the tail had come into contact with the ground during a landing on runway 12L. This incident had occurred three weeks before the accident. At that time, the student pilot had logged around 15 flight hours. According to him, the aeroplane had bounced on landing and the student pilot had amplified the bounce by pulling on the stick. The aeroplane reached a height of around two metres. The instructor then took the controls and rejected the landing. As the speed was too low, the aeroplane descended again and the tail came into contact with the runway resulting in rub marks. The following flight was to have been the student pilot's first supervised solo flight. It was therefore cancelled. The instructor believed that this incident had probably contributed to the student's lack of confidence, particularly with respect to the flare.

The instructor also explained that the student pilot was by nature stressed and that she sometimes transferred the controls to the instructor in the event of difficulty. He tried to build up her confidence, but felt limited by his small experience as an instructor. At the beginning of September 2023, he had logged around 300 flight hours, including around 50 hours as an instructor, most of them on the Diamond.

2.3 Information about student pilot's second instructor

The second instructor indicated that he had carried out three flights with the student pilot: two the day before the accident and one just before the accident flight. During their first flight together, the student pilot still had to perfect her skills, particularly with regard to holding the flight parameters. The second flight enabled her to consolidate what she had learnt. During the flight preceding the accident flight, the student pilot had seemed ready for her first supervised solo flight, and had achieved the objectives for this step. In particular, he had suggested that she add the vertical speed indicator to her visual scan.

The instructor explained that the solo flight consisted of a single runway circuit. He added that the difference in the aeroplane's weight, due to his absence on board, had been briefed with the student pilot.

During the solo flight, he was monitoring the frequency from the ATO premises, from where he could not intervene on the radio. Following the damage to the nose landing gear, he let the instructor in flight guide the student pilot.

He stated that the student pilot had a satisfactory and standard level during the flights he had supervised. He added that emotional factors had strongly influenced the circumstances of the accident, in particular the incident where the tail had touched the runway on landing. He added that the student pilot had made two additional flights outside the programme (between the incident mentioned in paragraph 2.2 and the accident investigated) and that her theoretical training had been particularly long.

3 CONCLUSIONS

The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation.

Scenario

After carrying out five runway circuits with her instructor, the student pilot started her first solo flight. During the final approach, the aeroplane was high on the approach slope and the student pilot rejected the approach.

This was followed by three more attempts to land, all of which ended in rejected landings due to the aeroplane bouncing. During the fourth landing, the student pilot probably flared too high, the aeroplane bounced and then the nose gear came into contact with the runway first, causing damage to it. She rejected the landing.

An instructor in another aeroplane from the same training organisation (ATO) then took the initiative to join the student pilot in flight and give her instructions. Aided by these instructions, the student pilot managed to land on her fifth attempt.

The ATO had identified that the student pilot's progress was not optimal. Three weeks earlier, the student pilot had been involved in an incident (tail contact with runway during landing) in instruction. The student pilot was entrusted to a more experienced instructor who carried out three flights with her before her first supervised solo flight.

The detailed instructions given on the frequency by the instructor on board the aeroplane which joined the student pilot's aeroplane contributed to the success of the final landing.

Safety lessons

Solo flight and supervision

In the [Safety Lessons General Aviation](#) section of its website, the BEA identified the "solo and supervision" risk in its [2022](#) light aeroplane review. This review refers to five safety investigations which it carried out and a DSAC [guide](#) addressed to instructors about supervising solo flights.

The BEA investigations are conducted with the sole objective of improving aviation safety and are not intended to apportion blame or liabilities.