

## GENERAL INFORMATION

Identification number:	2009073
Classification:	Serious incident
Date, time <sup>1</sup> of occurrence:	1 September 2009, 19.59 hours
Location of occurrence:	Amsterdam Schiphol Airport
Aircraft registration:	G-LEAA
Aircraft model:	Cessna 510 Mustang Citation
Type of aircraft:	Twin engine jet aircraft
Type of flight:	Charter flight
Phase of operation:	Lining up on runway 22
Damage to aircraft:	None
Cockpit crew:	Two
Passengers:	Not known
Injuries:	None
Other damage:	None
Lighting conditions:	Daylight

## SUMMARY

The aircraft departed from the Schiphol East apron and taxied to runway 22 in order to take off. It then taxied onto the runway without permission of air traffic control. Another aircraft which was approaching runway 22 for a landing had to abort its approach and carry out a go-around.

This report is based on statements from the crew of G-LEAA and from the air traffic control officials on duty, the transcript of the radio traffic on the Schiphol delivery, ground and tower frequencies and the report from the Royal Netherlands Meteorological Institute.

## FACTUAL INFORMATION

G-LEAA, a twin engine jet aircraft, was parked at Schiphol East position K12 at Amsterdam Schiphol Airport. The crew reported at 19.44 hours on the frequency of the Schiphol Delivery air traffic control service. The delivery controller<sup>2</sup> gave the clearance for a flight to London Luton Airport in Great Britain and permission to start the engines. Then the crew received permission from the KLM Jet Center<sup>3</sup> to taxi from parking position K12 to point GD (see figure 1).

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<sup>1</sup> All times in this report are local times unless indicated otherwise.

<sup>2</sup> The delivery controller passes on route clearances for departing flights and checks flight plan details, amongst other things.

<sup>3</sup> KLM Jet Center is responsible for (taxi/tow) movements on the K-apron at Schiphol East.

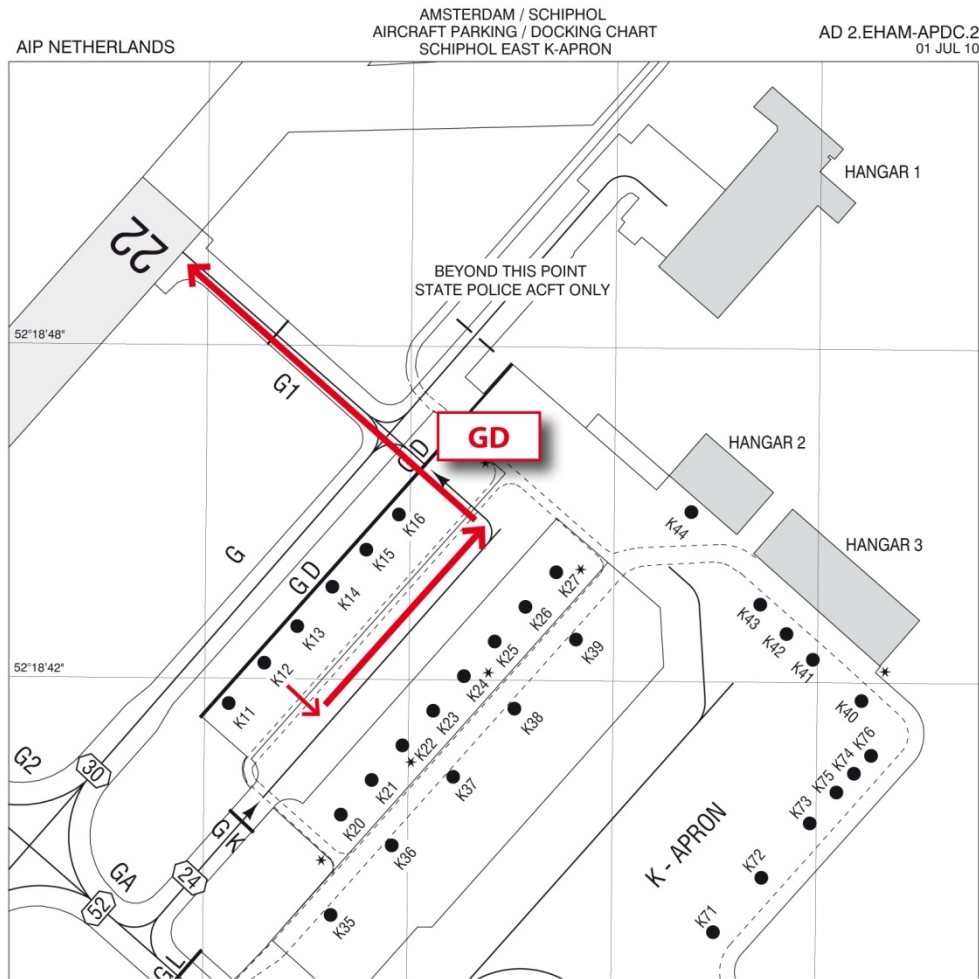


Figure 1: overview of K-apron, taxiway and start of runway 22 at Amsterdam Schiphol Airport

At 19.55 hours the crew of a Cessna 525 with registration PH-SOL contacted Schiphol Tower with the message that they were approaching runway 22 to land. They were given permission to land on runway 22 by the runway controller.<sup>4</sup>

At 19.56 hours, having arrived at point GD, the crew of G-LEAA contacted Schiphol Ground with the words: "Schiphol hello, LNX3AA approaching GD". The ground controller<sup>5</sup> replied with: "hello LNX3AA, continue to runway 22". The crew confirmed this transmission with the words: "continue to runway 22, LNX3AA". About 20 seconds later the ground controller gave instructions to contact Schiphol Tower on frequency 119.22 MHz.

In giving the instruction to contact Schiphol Tower, the ground controller handed over responsibility with regard to G-LEAA to the runway controller. He looked outside and saw that

<sup>4</sup> The runway controller is responsible for controlling local traffic (departing and landing) with the exception of traffic under the control of the ground controller.

<sup>5</sup> The ground controller is responsible for controlling traffic in the manoeuvring area with the exception of the runways available for take-off and landing.

G-LEAA was very close to the runway. After aiming the ground radar at the start of runway 22 he saw that G-LEAA was lining up. Because PH-SOL was close to runway 22 with the intention of landing, the runway controller gave this aircraft the immediate instruction to carry out a go-around.

The crew of G-LEAA stated that they changed the frequency after the instruction to contact Schiphol Tower, but that they were unable to contact Schiphol Tower immediately, because the runway controller was talking to other traffic during a period of approximately 30 seconds. The crew of G-LEAA did taxi further towards runway 22 during this time and, assuming that permission had been given for this, they lined up in the take-off position at the start of runway 22. During this period the first officer saw an aircraft approaching runway 22. He did communicate about it with the captain, but they did not see any reason to stop taxiing onto the runway.

When the crew of G-LEAA reported on the frequency of Schiphol Tower, the runway controller gave instructions to remain stationary with the statement that they had taxied onto the runway without permission. The crew stated that according to them they had received permission for this on the previous frequency. Once PH-SOL had carried out a go-around, the crew of G-LEAA was given permission to take off for the flight to London Luton Airport.

#### *The crew*

The crew of G-LEAA consisted of two pilots, a captain and a first officer, who worked together according to the crew resource management.<sup>6</sup> The captain sat in the left-hand seat and was responsible for the radio traffic; the first officer sat in the right-hand seat and was responsible for steering the aircraft.

The crew held valid licences and medical certificates for carrying out the flight.

Type of licence	ATPL(A) C510 until 13 December 2009
Medical certificate	Class I until 12 May 2010
Number of hours in total	4410
Number of hours on type	445
Number of hours on type over past three months	7

*Table 1: captain's experience*

Type of licence	UK CPL(A) C510 until 13 December 2011
Medical certificate	Class I until 28 January 2010
Number of hours in total	500
Number of hours on type	130
Number of hours on type over past three months	7

*Table 2: first officer's experience*

#### *The weather*

Visual meteorological conditions applied at the site of the incident. Visibility was more than ten kilometres and there was no precipitation. The wind at ground level was from 190 degrees at twelve knots and there were no clouds below 2500 feet.

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<sup>6</sup> Crew resource management is a management system which helps to ensure optimum use of all available resources – equipment, procedures and people – in order to improve safety and efficiency.

## INVESTIGATION AND ANALYSIS

Amsterdam Schiphol Airport is a controlled airport. This means that permission must be obtained from air traffic control to use among other things a taxiway. After the crew of G-LEAA reported on the frequency, the ground controller used the words "continue to runway 22", with the intention that they could pass point GD and taxi to the holding point for runway 22. The crew confirmed this transmission with the same words.

It has been laid down internationally<sup>7</sup> that the permission to taxi to a holding point for departure is granted by using the phraseology: TAXI TO HOLDING POINT [*number*] [RUNWAY (*number*)] [HOLD SHORT OF RUNWAY (*number*) (or CROSS RUNWAY (*number*))] [TIME (*time*)].

The ground controller did not apply the standard terminology.

The clearance to line up on a runway and subsequently wait for the take-off clearance is granted by using the phraseology:

- LINE UP [AND WAIT];
- LINE UP RUNWAY (*number*)<sup>8</sup>;
- LINE UP. BE READY FOR IMMEDIATE DEPARTURE.

So the crew of G-LEAA should only be allowed to line up on runway 22 (and subsequently wait for the take-off clearance) after receiving one of above-mentioned clearances from air traffic control. The review of the transmissions that took place shows that the crew did not receive a similar clearance and did not repeat it either. The crew of G-LEAA incorrectly interpreted the ground controller's transmission as clearance to taxi onto runway 22.

Procedures in the event of restricted visibility are in force at Amsterdam Schiphol Airport. The use of stop bars - red lights before a runway - is part of that. These stop bars are located on taxiway G1 (see figure 1) but were not switched on, because visibility was not restricted. The lights of the stop bars could not have served as a barrier to prevent the crew of G-LEAA from taxiing onto runway 22.

The first officer was sitting on the right of the cockpit and was operating the controls. He stated that when taxiing onto the runway he looked to the right and saw an aircraft in line with runway 22. However, because he did not hear any radio traffic on the set frequency, he assumed that the aircraft was approaching another runway. He also believed that he had been given clearance to taxi onto the runway and judged that the observed aircraft was not a significant factor. He did communicate about it with the captain, who did not see any reason to stop taxiing onto the runway either. The fact that an aircraft was on the approach to runway 22 and this was observed by the crew of G-LEAA could not have prevented the incident.

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<sup>7</sup> Doc 4444, ATM/501, Procedures for Air Navigation Services, Air Traffic Management, ICAO.

<sup>8</sup> When there is the possibility of confusion during multiple runway operations.

## **CONCLUSION**

A misinterpretation of a clearance from the ground controller, in the course of which no standard terminology had been applied, resulted in the crew of G-LEAA taxiing onto runway 22 without permission.

Although the crew observed traffic approaching runway 22, they did not take any further action in response to this, even after some consideration.

Note: This report has been published in English and Dutch language. If there are differences in interpretation the Dutch text prevails.