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## Interim Statement IN-004/2013

Incident involving an Airbus A-340-313 aircraft, registration CC-CQE operated by LAN Airlines, on 6 February 2013 at the Madrid-Barajas airport (Madrid, Spain).



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DE ESPAÑA

MINISTERIO  
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SUBSECRETARÍA

COMISIÓN DE INVESTIGACIÓN  
DE ACCIDENTES E INCIDENTES  
DE AVIACIÓN CIVIL

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## **Important notice**

This document constitutes the interim statement envisioned in Article 16.7 of Regulation (EU) no. 996/2010 of the European Parliament and of the Council, as well as in paragraph 6.6 of Annex 13 to the Convention on International Civil Aviation. The statement includes the details of the progress of the investigation and the most important operational safety issues revealed to date. The information provided herein is subject to change as the investigation proceeds.

Pursuant to the contents of Regulation (EU) no. 96/2010 of the European Parliament and of the Council, and of Annex 13 to the Convention on International Civil Aviation, the investigation is purely technical in nature and is not intended to determine or apportion blame or liability. The investigation is being conducted without necessarily resorting to evidentiary procedures and for the sole purpose of preventing future accidents.

Consequently, the use of this information for any purpose other than to prevent future accidents may result in faulty conclusions or interpretations.

### **Abbreviations**

AC	Air Conditioning
ACC	Area Control Center
ACM	Air Cycle Machine
APU	Auxiliary Power Unit
APTL (A)	Airline Transport Pilot License (Airplane)
BEA	French accident investigation authority ( <i>Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation civile</i> )
CPL (A)	Commercial Pilot License (Airplane)
ECAM	Electronic Centralized Aircraft Monitoring
EDDF	ICAO code for Frankfurt airport (Germany)
LEMD	ICAO code for Madrid airport (Spain)
MEL	Minimum Equipment List
MSN	Manufacturer Serial Number
SCEL	ICAO code for Santiago airport (Chile)
UTC	Universal Time Coordinated

**DATA SUMMARY****LOCATION**

Date and time	<b>Wednesday, 6 February 2013 at 23:40<sup>1</sup></b>
Site	<b>Madrid-Barajas airport (Madrid, Spain)</b>

**AIRCRAFT**

Registration	<b>CC-CQE</b>
Type and model	<b>AIRBUS A-340-313</b>
Operator	<b>LAN Airlines</b>

**Engines**

Type and model	<b>CFMI CFM56-5C4</b>
Number	<b>4</b>

**CREW**

	Captain 1	Captain 2	First officer 1	First officer 1
Age	<b>64</b>	<b>41</b>	<b>37</b>	<b>43</b>
License	<b>ATPL(A)</b>	<b>ATPL(A)</b>	<b>CPL(A)</b>	<b>CPL(A)</b>
Total flight hours	<b>18986,90</b>	<b>11328,29</b>	<b>4461,09</b>	<b>3283,02</b>
Flight hours on the type	<b>9279,55</b>	<b>4866,67</b>	<b>2542,59</b>	<b>877,74</b>

**INJURIES**

	Fatal	Serious	Minor / None
Crew			<b>14</b>
Passengers			<b>244</b>
Third persons			

**DAMAGE**

Aircraft	<b>None</b>
Third parties	<b>None</b>

**FLIGHT DATA**

Operation	<b>Commercial air transport - Scheduled - International - Passenger</b>
Phase of flight	<b>Climb</b>

**REPORT**

Date of approval	<b>27 January 2014</b>
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<sup>1</sup> All times in this report are in UTC. To calculate local time, add one hour to UTC.





## 1. INCIDENT INFORMATION

The Airbus A-340-313 aircraft, registration CC-CQE, was on flight LAN-705 from the Frankfurt airport (EDDF) in Germany to the Santiago airport in Chile (SCEL), with a stopover in Madrid-Barajas (LEMD). After stopping in Madrid, it took off from the Barajas airport at 23:08 from runway 36L.

While climbing through 27,000 feet, the flight crew noticed a smell similar to that of tear gas. Quickly afterwards smoke appeared on the flight deck. The crew donned their oxygen masks, declared an emergency and requested to return immediately to LEMD at 23:40. They alerted the cabin crew, who confirmed the presence of smoke in the front of the cabin, and the relief crew. The local alert was activated at the airport at 23:50.

The aircraft started to descend and, with the engines at flight idle, the ECAM (Electronic Central Aircraft Monitoring) screen showed the message "AIR PACK 1 REGULATOR FAULT. PACK 1 IN BYPASS MODE". The smoke cleared quickly, and the crew notified the Madrid Area Control Center (ACC) that the situation was under control and that they were preparing to land with excess weight.

The airplane landed normally at 00:18 on the next day (7 February 2013) via runway 32R and taxied to parking followed by the firefighters, who were there to check the landing gear.

Once the airplane was parked and it was verified that there were no problems preventing disembarking, the passengers were deplaned using the normal procedure. The local alarm at the airport was deactivated at 00:46.

The aircraft crew were properly trained, experienced and medically fit, and they had valid and in force licenses, ratings and medical certificates.

The aircraft, with serial number (MSN) 0429, had valid and in force Airworthiness and Registration Certificates, and it had been maintained in accordance with the Approved Maintenance Program.

Once on the ground, maintenance personnel carried out the checks specified for troubleshooting the recorded fault (Pack 1 Air Cycle Machine Fault) and cleaned the APU bleed air duct elbow. They also did an operational check of the no. 2 pack with the engines and the APU, the results of which were satisfactory. After performing these tests, they locked the AC no. 1 pack flow control valve in place and deferred correcting the fault as per the Minimum Equipment List (MEL). A few days later, the fault was corrected by replacing the ACM, the temperature control valve and the control system for the AC no. 1 pack.

## **2. CONDUCT OF THE INVESTIGATION**

The investigation is being conducted with the participation of the accident investigation boards of Chile (Sección de Investigación de Accidentes de la Dirección General de Aeronáutica Civil) and France (BEA – Bureau d’Enquêtes et d’Analyses pour la Sécurité de l’Aviation Civile), of the manufacturer (Airbus) and of the operator (LAN Airlines).

## **3. PROGRESS OF THE INVESTIGATION**

The investigation is proceeding along the lines of evaluating the relationship between the damage found with the ACM removed and what happened during the flight, and the crew’s actions in response to the event. Once completed, a final report on the incident will be published.