

# The Dutch Safety Board

**Occurrence #:** 2003057

**Classification:**

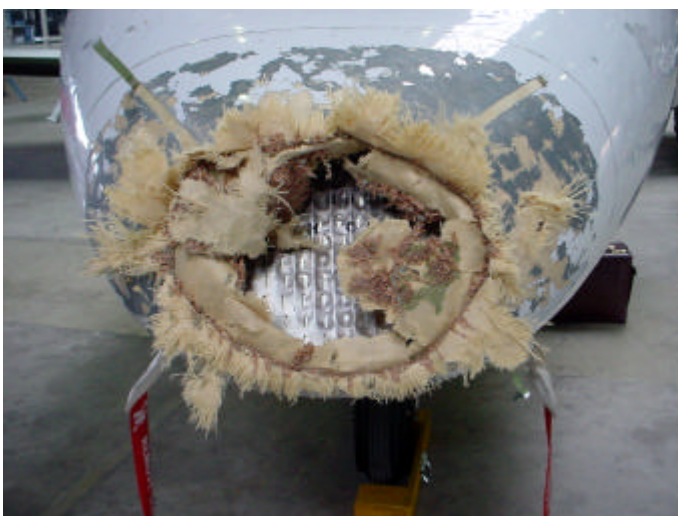
**Serious incident**

## FACTUAL INFORMATION

|                        |                              |                            |   |
|------------------------|------------------------------|----------------------------|---|
| Date:                  | 02-06-2003                   | POB flight crew:           | 2   |
| Place:                 | German airspace <sup>1</sup> | Flight experience pilot 1: | 1904 hours, approximately<br>1000 hours on type |
| Aircraft registration: | N18HJ                        | Flight experience pilot 2: | 2265 hours, approximately<br>400 hours on type  |
| Aircraft model:        | Cessna Citation II           | POB passengers:            | 6   |
| Type of aircraft:      | Twin engine business jet     | Injuries:                  | None  |
| Type of flight:        | Commercial                   | Lighting conditions:       | Daylight  |
| Phase of operation:    | En route                     |                            |   |
| Damage to aircraft:    | Substantial                  |                            |   |

## The flight and the incident

The N18HJ was en route from Falköping (Sweden) to Amsterdam (The Netherlands) with six passengers and two flight crew on board. Over Germany the aircraft was transferred to the Dutch air traffic control and the flight crew started the descent. Due to weather deterioration the air traffic controller asked the flight crew if they wanted to deviate to the right or to the left to stay clear of the clouds. During the investigation the flight crew stated that they had chosen to deviate to the left because of the better visibility. The aircraft was flying at flight level 150 (15,000 feet) when it became dark, the turbulence increased followed by the hard sound of hail impact. The pilot flying reduced the airspeed, switched the anti-ice system on and turned the autopilot off. The passengers were requested to tighten their seatbelts. After approximately three minutes the aircraft was clear of the clouds and the flight crew continued the approach and landing at Amsterdam Airport Schiphol. The flight crew observed no further difficulties and was not aware of any damage to the aircraft. When the aircraft came to a stand still on the ground the amount of damage became visible to the flight crew. The fiberglass radome in front of the weather radar antenna was completely destroyed and the aluminium sheet metal lining of the wings and fuselage showed deep dents.



The destroyed fiberglass radome



Dents in the aluminium sheet metal lining

<sup>1</sup>During the investigation the radar data revealed that the event in fact took place in German airspace. After consulting the Bundesstelle für Flugunfalluntersuchung (BFU) in Germany it was decided that The Dutch Safety Board would perform the investigation.

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## Investigation & Analysis

During the flight preparation the flight crew had discussed the weather. They were familiar with the fact that thunderstorms were forecasted in the area they had to cross but there was no reason to cancel the flight. The first part of the flight was without problems, the sky was clear with sufficient visibility (CAVOK). When the aircraft entered an area with cumulonimbus clouds the air traffic controller asked the flight crew if they wanted to deviate to the right or to the left to stay clear of the clouds. The crew chose for a 25 degrees course deviation to the left, upon which the heading was changed to 180 degrees.

From the radio conversation it appeared that the air traffic controller doubted if the course deviation on that particular moment was sufficiently to divert the squall area, upon which he indicated to the flight crew to call him if necessary.

Radar tapes showed that N18HJ flew straight through the center of a cumulonimbus resulting in the above mentioned damage.

Aircraft N18HJ was equipped with a weather radar which was not switched on during the incident flight. When the aircraft entered the clouds it was too late to switch the weather radar on because, according to the flight crew, it would take 3 till 4 minutes for the system to become active.

The serious incident was caused when the aircraft unexpectedly flew through the center of a cumulonimbus. Although the flight crew responded with the appropriate corrective procedures when they flew through the cloud, the decision not to activate the weather radar can be criticized.

### Note:

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