



## Safety recommendation no. 529

<b>Date of the publication</b>	16.06.2017
<b>Number of the final report</b>	2303
<b>Safety deficit</b>	<p>On 4 December 2014, the ATR 72-202 commercial aircraft, registered as D-ANFE, was approaching Zurich Airport (LSZH) with two pilots, two female flight attendants and 26 passengers on board. The commercial aircraft touched down on runway 14 in a light northerly wind. After the nose wheels had come into contact with the runway approximately 1,050 m after the threshold, both tyres separated from the wheel rims in such a way that the nose landing gear continued to skid on only the wheel rims from approximately 1,520 m after the runway threshold.</p> <p>During the investigation, the valve input lever of the hydraulic differential control selector valve (DCSV) was found to be attached rotated by 180°. The design of the freely rotating input lever was identified as a contributory factor in the accident. Back in May 2009, a similar incident occurred involving a different airline in New Zealand, in which the valve input lever being attached rotated by 180° was the cause. Thereafter, the aircraft maintenance manual was supplemented. The most recent incident from 25 August 2015 involving yet another airline in Brazil, the cause of which could also be attributed to the valve input lever being attached rotated by 180°, clearly shows that the risk of incorrect assembly has still not been eliminated.</p>
<b>Safety recommendation</b>	Together with the aircraft manufacturer, the European Aviation Safety Agency (EASA) should ensure that it is no longer possible to incorrectly attach the valve input lever of the hydraulic differential control selector valve (DCSV).
<b>Addressees</b>	EASA Europäische Agentur für Flugsicherheit; EASA Europäische Agentur für Flugsicherheit
<b>Stage of the implementation</b>	<p>Not implemented. The European Aviation Safety Agency (EASA) has assessed the incident as well as the problem addressed in the safety recommendation in collaboration with the aircraft manufacturer and has come to the following conclusion: The aircraft involved in the incident had been operating for several months without any steering problems being reported and without maintenance being carried out in the corresponding section of the aircraft. There was no evidence that the required functional check following the replacement of the hydraulic differential control selector valve (DCSV) was carried out.</p> <p>During the certification of the ATR aircraft, the loss of nose wheel steering was classified as 'minor'. The contribution of the hydraulic DCSV's valve input lever in such an incident is minor. The movement of the nose landing gear would only be restricted at low speeds and a large steering angle – both of which are common for the area near the gate. Meanwhile, ATR has adapted the relevant component</p>

maintenance manual (CMM) and job instruction card (JIC), and added a warning for the attachment of the control valve.

Considering this, EASA will take no further steps with regards to this problem. For this reason, the STSB believes the present safety deficit still exists. Therefore, the safety recommendation is considered as not implemented.

---

**Investigation report concerning  
the safety recommendation**

Final report  
Schlussbericht

---