Avions de Transport Regional ATR 42 Series Aeroplanes

AD/ATR 42/2  Fuel Tank Safety - Electrical Wiring  8/2007

Applicability: ATR 42 aircraft, all models, all serial numbers, except aircraft that have received ATR modification 05355 during production (MSN 643 and subsequent) or ATR Service Bulletin (SB) ATR42-28-0039 R1, dated 28 February 2006, whilst in service.

Requirement: Modify the fuel system in accordance with SB ATR42-28-0039 R1 or later approved revision.

Note: EASA AD 2006-0186 refers.


This Airworthiness Directive becomes effective on 2 August 2007.

Background: Further to the accident of Boeing 747-131 (flight TWA 800), the United States Federal Aviation Administration (FAA) has published a set of new rules related to the fuel tank safety, including the Special Federal Aviation Regulation 88 (SFAR 88). The European Joint Aviation Authorities (JAA) has issued an Interim Policy JAA INT/POL 25/12, to recommend the application of a similar requirement to the National Aviation Authorities (NAA). This recommendation was followed by the French Direction Générale de l’Aviation Civile, which rendered compliance to JAA INT/POL 25/12 mandatory for all ATR Aircraft.

Under this regulation, all holders of type certificates are required to conduct a design review of their fuel tank systems against explosion risk. It also requires the development and implementation of maintenance and inspection instructions to maintain the safety of the fuel tank system. In following JAA INT/POL 25/12, and in accordance with SFAR 88 requirements and guidelines, ATR carried out a safety review on the fuel tank systems and zones adjacent to the fuel tanks on all ATR models using relevant safety assessment methods of JAR 25.1309.

As a result of this safety review, ATR developed for ATR 42 the modification 05355 (SB ATR42-28-0039). Those modifications consist of the installation of fuses, adapters on wiring entering the fuel tanks and current limitation devices.
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Embodiment of these modifications or service bulletin provides full compliance with JAR 25.1309 and eliminates the unsafe conditions in accordance with SFAR 88 and FAA AC 25-981-1B guidelines.

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