
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001 (1) of CASR. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct an unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Fokker Services F100 (F28 Mk 100) Series Aeroplanes

AD/F100/98 F100 Main Landing Gear Pistons overhauled by 22/2022
Aerospace NDI Pty Ltd

Applicability: F28 Mark 0100 aircraft equipped with any of Goodrich Main Landing Gear (MLG) part numbers (pn) 41050 -7/-8/-9/-10/-11/-12/-13/-14/-15/-16 or 41060 -3/-4/-5/-6 with pistons pn 41141-7 treated with any of:

AeroNikl process

serial number (sn) SS0057, SS0096, SS0140, SS0154, SS0167, SS0174, SS0185, SS0200, SS0210, SS0225, or

Atotech process

sn SS0028, SS0035, SS0045, SS0093, SS0112, SS0123, SS0130, SS0139, SS0151, SS0155, SS0157, SS0163, SS0164, SS0173, SS0176, SS0177, SS0182, SS0189, SS0190, SS0199, SS0214, SS0217, SS0223, SS0228, SS0230, SS0231, SS0236, SS0242, SS0265.

or any other MLG that was overhauled at Aerospace NDI (ANDI) Pty Ltd as holder of CASA Certificate 1- RT6UE between 25 October 2019 to 18 November 2021 using either the AeroNikl or Atotech plating processes.

- Requirement:**
- a. Carry out a Detailed Visual Inspection (DVI) of the pistons in accordance with Fokker Services All Operators Message (AOM) AOF100.230#5, as in force at the date of this AD.
Note: The pistons are marked by serial number by an engraving near the torque link connection point.
 - b. All pistons must be permanently removed from service and rendered unsalvageable.

- Compliance:**
- a. Prior to each flight, carry out a DVI as stated above.
 - b. (i) Main landing gear part numbers that have had the pistons overhauled using the AeroNikl process must be removed from service by the effective date of this airworthiness directive.
(ii) Main landing gear part numbers that have had the pistons overhauled using the Atotech process must be removed from service before 1 February 2024.

This AD commences on 24 November 2022 (the effective date).

Fokker Services F100 (F28 Mk 100) Series Aeroplanes

AD/F100/97 (continued)

Background: CASA received notification from the European Aviation Safety Agency (EASA) detailing that MLG pistons overhauled by ANDI were not compliant with the process contained in SAE/AMS2424. There have been missing detailed process sheets for the pistons and there is no proof that the test specimens are fully representative of the process applied to the pistons. This issue can cause internal hydrogen embrittlement and cause cracking after incorrect treatment. Hydrogen embrittlement may lead to a failure of the MLG axle piston resulting in dual wheel separation.

The effected AeroNikl components were required to be removed from service in accordance with Fokker all operator message AOF100.230 #3 before 1 March 2022. The subject CASA AD supports the requirements stated within the Fokker all operator message.

EASA has requested that the remainder Atotech effected components be removed from service before the 1 February 2024 to ensure that the airworthiness of the Australian F28 fleet is safeguarded, and that the affected units are not introduced into the worldwide supply chain.



David Punshon
Delegate of the Civil Aviation Safety Authority
24 October 2022