Airworthiness Directive

AD No.: 2016-0113

Issued: 15 June 2016

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:
AIRBUS

Type/Model designation(s):
A318, A319, A320 and A321 aeroplanes

Effective Date: 29 June 2016

TCDS Number(s): EASA.A.064

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2012-0012 dated 23 January 2012.

ATA 27 – Flight Controls – Flap Interconnecting Strut – Identification / Modification / Replacement

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Manufacturer(s):
Airbus (formerly Airbus Industrie)

Applicability:
Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, all manufacturer serial numbers (MSN).

Reason:
The flap interconnecting strut is a safety device of the High Lift System which acts as an alternative load path from one flap surface to another in case of a flap drive system disconnection. In such a failure case, the installed proximity sensors provide information to the slat flap control computer (SFCC) and the operation of the flap drive system is inhibited.
An engineering investigation showed that, when a certain combination of target/sensor serial number (s/n) is installed on a flap interconnecting strut, a "target FAR" signal cannot be detected when reaching the mechanical end stop of the interconnecting strut.

This condition, if not corrected, could cause a flap down drive disconnection to remain undetected, due to an already-failed interconnecting strut sensor, potentially resulting in asymmetric flap panel movement and consequent loss of control of the aeroplane.

To address this potential unsafe condition, Airbus issued Service Bulletin (SB) A320-27-1206 and SB A320-57-1164, to provide identification and replacement instructions for struts that have a certain target/sensor s/n combination installed. Aeroplanes on which modification (mod) 27956 had been accomplished in production were identified as not affected by the unsafe condition. Consequently, EASA issued AD 2012-0012 to require accomplishment of these inspections and corrective actions.

Since that AD was issued, Airbus has informed EASA about a batch of aeroplanes that were delivered with pre-mod 27956 Part Number (P/N) flap interconnecting strut(s) installed, but declared to be in post-mod configuration in the Aircraft Inspection Report. Airbus SB A320-57-1202 has been issued to provide instructions to verify the interconnecting strut P/N, and to update aircraft documentation.

In addition, to ensure that all pre-mod parts are checked and corrected as required, SB A320-27-1206 was revised to include a wider range of P/N of affected interconnecting struts.

For the reasons described above, this AD retains the requirements of EASA AD 2012-0012, which is superseded, expands the Applicability, changes the compliance time and requires an additional inspection for aeroplanes that have already been inspected.

Required Action(s) and Compliance Time(s):
Required as indicated, unless accomplished previously:

(1) Within 24 months after the effective date of this AD, accomplish the actions as required by paragraphs (1.1) and (1.2) of this AD in accordance with the instructions of Airbus SB A320-27-1206 Revision 02:

(1.1) Determine the P/N of the interconnecting struts installed on both left-hand and right-hand wings on the aeroplane.

(1.2) If an interconnecting strut is installed with a P/N as listed in Table 1 of this AD, identify the P/N and the s/n of the associated target and proximity sensor and, for the target and proximity sensor P/N and s/n combination as defined in Appendix 1 of this AD, within the compliance times defined in Appendix 1 of this AD, carry out the actions specified in Appendix 1 of this AD for that interconnecting strut.

A review of aeroplane maintenance records is acceptable to determine the P/N of the installed interconnecting struts and/or the P/N and s/n of the associated target and proximity sensor, in lieu of the instructions of Airbus SB A320-27-1206 Revision 02, if the P/N of the installed interconnecting struts and the P/N and the s/n of the associated target and proximity sensor can be conclusively identified from that review.

Table 1 – P/N Affected Interconnecting Struts

D 57570305000XXX	D 57570305002XXX	D 57570305008XXX	D 57570305012XXX
D 57570305001XXX	D 57570305006XXX	D 57570305010XXX	D 57570322000XXX

Note 1: For the purpose of Table 1 of this AD, XXX signifies any alpha-numeric combination. It may be possible to find units with only XX.

(2) Aeroplanes on which Airbus mod 27956 has been embodied in production, and on which no interconnecting strut with a P/N as identified in Table 1 of this AD is installed, are not affected by the requirements of paragraph (1) of this AD, except those MSNs listed in Table 2 of this AD.
Aeroplanes having MSN listed in Table 2 of this AD are affected by the requirements of paragraph (1) of this AD.

Table 2 – Additional affected aeroplanes

Type	**MSN**							
A320	1857	1858	1860	1861	1864	1865	1867	1868
	1871	1873	1874	1877	1879	1883	1885	1888
	1889	1891	1892	1894	1895	1896	1898	1899
	1900	1902	1903	1904	1906	1907	1909	1910
	1911	1913	1914	1915	1917	1918	1920	1922
	1924	1927	1929	1931	1933	1935	1937	1940
	1942	1944	1945	1948	1949	1951	1954	1957
	1958	1961	1964	1965	1968	1969	1973	1975
	1979	1981	1983	1987				
A319	1819	1820	1824	1826	1831	1833	1837	1839
	1841	1844	1846	1851	1853	1855	1863	1866
	1870	1872	1875	1876	1880	1882	1884	1886
	1890	1893	1897	1901	1908	1912	1916	1923
	1925	1934	1936	1938	1943	1947		

(3) For an aeroplane that has already been inspected prior to the effective date of this AD, in accordance with the instructions of Airbus SB A320-27-1206 at original issue or Revision 01, within the compliance time defined in paragraph (1) of this AD, accomplish the additional work as defined in Airbus SB A320-27-1206 Revision 02, unless it is determined that no interconnecting strut with a P/N as listed in Table 1 of this AD is installed on that aeroplane. A review of aeroplane maintenance records is acceptable to make this determination, provided the P/N can be conclusively identified from that review.

(4) From the effective date of this AD, do not install or modify an interconnecting strut with a P/N as identified in Table 1 of this AD on an aeroplane, unless it has been determined to be in compliance with the requirements of this AD.

Ref. Publications:
Airbus SB A320-27-1206 Revision 02 dated 02 November2015.

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.

2. This AD was posted on 13 April 2016 as PAD 16-052 for consultation until 11 May 2016. The Comment Response Document can be found at http://ad.easa.europa.eu.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51;
E-mail: account.airworth-eas@airbus.com.

Appendix 1 – Action(s) and Compliance Time(s) for Targets P/N ABS0121-13 and P/N 8-536-01

Configuration / condition			Action and Compliance time
Target serial number	**Proximity sensor P/N and s/n**		
s/n is lower than 1600, or s/n unreadable	P/N ABS0121-31 or P/N 8-372-04	s/n between C59198 and C59435, or s/n C500000 or higher	Before next flight (see exception in Note 2 below), replace the interconnecting strut with a serviceable unit (see Note 3 below) in accordance with the instructions of Airbus SB A320-27-1206 Revision 02
s/n is 1600 or higher	All P/N	All s/n	Within 24 months after the effective date of this AD, re-identify the interconnecting strut in accordance with the instructions of Airbus SB A320-27-1206 Revision 02

Note 2: If the interconnecting strut cannot be replaced, before next flight, inspect the flap down drive in accordance with the instructions of Airbus SB A320-27-1206 Revision 02 and, if no discrepancy is found, within 50 flight cycles after the inspection, replace the interconnecting strut with a serviceable unit (see Note 3 below). If discrepancies are detected during the inspection, the replacement must be accomplished before next flight.

Note 3: For the purpose of this AD, a serviceable interconnecting strut is a unit which has been determined to be in compliance with the requirements of this AD.