Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 17-087

Issued: 03 July 2017

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.
All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Change Approval Holder Names:

AEROCONSEIL
FOKKER SERVICES, B.V.
H4 AEROSPACE (UK) LTD
SCANDINAVIAN AVIONICS DESIGN ApS

Design Change Description:

TCAS 7.1 Upgrade on Airbus aeroplanes

Effective Date: [TBD – standard: 14 days after Final AD issue date]

EASA STC Number(s): 10045396, 10047157, 10047744, 10050434, 10051008, 10051519 and 10054797.

Foreign AD: Not applicable

Supersedure: None

ATA 34 – Navigation – Traffic Collision Avoidance System Processor – Modification (Software Update) / Replacement

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Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A300 B2, A300 B4, A300 C4 and A300 F4, all models, all manufacturer serial numbers (MSN),

A310-203, A310-203C, A310-204, A310-221, A310-222, A310-304, A310-308, A310-322, A310-324 and A310-325 aeroplanes, all MSN,

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 MSN,

Airbus A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343 aeroplanes, all MSN, and

A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all MSN,

if modified by an EASA Supplemental Type Certificate (STC) as listed above, as applicable, to install a Honeywell TPA-100B traffic alert and collision avoidance system (TCAS) processor, Part Number (P/N) 940-0351-001.

Reason:

Since 2012, a number of false TCAS resolution advisories (RA) have been reported by various European Air Navigation Service Providers. EASA has published certification guidance material for collision avoidance systems (AMC 20-15) which defines a false TCAS RA as an RA that is issued, but the RA condition does not exist. It is possible that more false (or spurious) RA events have occurred, but were not recorded or reported. The known events were mainly occurring on Airbus single-aisle (A320 family) aeroplanes, although several events have also occurred on Airbus A330 aeroplanes. Investigation determined that the false RAs are caused on aeroplanes with a Honeywell TPA-100B TCAS processor installed, P/N 940-0351-001. This was caused by a combination of three factors: (1) hybrid surveillance enabled; (2) processor connected to a hybrid GPS source, without a direct connection to a GPS source; and (3) an encounter with an intruder aeroplane with noisy (jumping) ADS-B Out position.

EASA previously published Safety Information Bulletin (SIB) 2014-33 to inform owners and operators of affected aeroplanes about this safety concern. At that time, the false RAs were not considered an unsafe condition. Since the SIB was issued, further events have been reported, involving a third aeroplane.

This condition, if not corrected, could lead to a loss of separation with other aeroplanes, possibly resulting in a mid-air collision.

Prompted by these latest findings, and after review of the available information, EASA reassessed the severity and rate of occurrence of false RAs and has decided that mandatory action must be taken to reduce the rate of occurrence, and the risk of loss of separation with other aeroplanes. Honeywell International Inc. published Service Bulletin (SB) 940-0351-34-0005 [Publication Number D201611000002] to provide instructions for an upgrade, introducing software version 05/01, changing the processor unit to P/N 940-0351-005.

EASA previously issued AD 2017-0091 (later revised) to address the unsafe condition on aeroplanes that had the P/N 940-0351-001 processor installed by Airbus major change or SB. However, part of the fleet had the same P/N installed by STC. The relevant STC approval holders have been notified and modification instructions are in process of being developed.

For the reason described above, this AD requires modification or replacement of Honeywell TPA-100B P/N 940-0351-001 TCAS processors. This AD also prohibits installation of those processors on post-mod aeroplanes.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Note 1: Honeywell TPA-100B TCAS processor P/N 940-0351-001 is hereafter referred to as 'affected processor' in this AD.

Modification / Replacement:

(1) Within 12 months after the effective date of this AD, update the software of the affected processor, or replace the affected processor (see Note 1 of this AD) with a TPA-100B processor P/N 940-0351-005.

Modification of an aeroplane, including P/N change from 940-0351-001 to 940-0351-005, must be accomplished in accordance with approved instructions provided by the applicable design change (STC) approval holder.

Note 2: An affected processor can be modified in-shop to P/N 940-0351-005 standard in accordance with the instructions of Section 3.F of Honeywell SB 940-0351-34-0005.

Parts Installation:

(2) After modification of an aeroplane as required by paragraph (1) of this AD, do not install an affected processor on that aeroplane.

Ref. Publications:

Honeywell International Inc. SB 940-0351-34-0005 [Publication Number D201611000002] original issue dated 20 January 2017.

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

Remarks:

1. This Proposed AD will be closed for consultation on 31 July 2017.

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

3. For any question concerning the technical content of the requirements in this PAD, please contact the STC holder, as applicable, or the processor manufacturer:

   Aeroconseil (part of AKKA Technologies), 3 Rue Dieudonne Costes, B.P. 80075, 31703 Blagnac, France, Telephone +33 5 6720 8807, E-mail airworthiness.office@aeroconseil.com.

   Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL Hoofddorp, The Netherlands, Telephone +31-88-6280-350, Fax +31-88-6280-111, E-mail: technicalservices@fokker.com.

H4 Aerospace (UK) Ltd, Blue Court, 39 Queensway, Hemel Hempstead, Hertfordshire HP2 5HE, United Kingdom, Telephone +44 1442 257468, Fax +44 1442 257551.

Scandinavian Avionics Design ApS, Stratusvej 9, 7190 Billund, Denmark, Telephone +45 7950 8000, Fax +45 7950 8099, E-mail msd@scanav.com.

Honeywell via e-mail: AeroTechSupport@Honeywell.com.