
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 revokes Airworthiness Directive (AD) AD/A320/174 Amdt 1 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the 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.

Airbus Industrie A319, A320 and A321 Series Aeroplanes

**AD/A320/174
Amdt 2**

Air Data/Inertial Reference Unit

6/2012

Applicability: Model A318, A319, A320 and A321 series aeroplanes, all serial numbers, equipped with at least one Northrop-Grumman (previously Litton) Air Data/Inertial Reference Unit (ADIRU) with part numbers (P/N) listed in Table 1, except aeroplanes equipped with three ADIRUs P/N 465020-0303-0316 (installed by Airbus modification 35517 or Airbus Service Bulletin (SB) A320-34-1350 dated 20 March 2006) and that have modified the shelf as per Airbus modification 30650 or 30872 or SB A320-25-1248 dated 16 February 2001.

Table 1 - List of Affected ADIRU P/N

465020-0303-0307	465020-0303-0312	465020-0303-0316
465020-0303-0308	465020-0303-0314	
465020-0303-0309	465020-0303-0315	

Note 1. These P/N ADIRUs were introduced during production by Airbus modification 24852 or 25108 or 25336 or 26002 or 28218 or 31070 or 31742 or 35517.

Requirement:

1. For all aircraft - Operational dispatch of the aircraft with one ADIRU inoperative will be authorised under the following conditions:
 - Stand-by compass operative, and
 - Stand-by attitude indicator operative.

For aircraft equipped with conventional standard instruments, compliance with A318/319/320/321 Master Minimum Equipment List (MMEL) Temporary Revision (TR) No 01-34/02Z issue 04 is an acceptable means of compliance with this Requirement.

For aircraft equipped with Integrated Standby Instruments System (ISIS) (Airbus modification 27620/Airbus SB A320-34-1261), compliance with A318/319/320/321 MMEL TR No. 01-34/07Z issue 03 is an acceptable means of compliance with this Requirement.

Airbus Industrie A319, A320 and A321 Series Aeroplanes

AD/A320/174 Amdt 2 (continued)

2. For aircraft that have not:
 - (a) embodied Airbus modification 30650 or 30872 during production;
 - (b) incorporated SB A320-25-1248 whilst in service; or
 - (c) complied with AD/320/138;

Modify the ADIRU shelf supports in accordance with SB A320-25-1248 Revision 1 dated 16 April 2003 or later EASA approved revision.

3. For all aircraft - Install three Northrop-Grumman (previously Litton) ADIRU P/N 465020-0303-0316 in accordance with SB A320-34-1350 or later EASA approved revision.

Compliance with Requirements 2 and 3 terminates the Requirement 1 despatch restrictions and no further action is required by this Amendment.

Note 2: EASA 2007-0217 refers.

Compliance: For Requirement 1 - As of the effective date of this Amendment.

For Requirement 2 - Within six months after the effective date of this Amendment.

For Requirement 3 - Before 31 May 2010.

This Amendment becomes effective on 16 March 2012.

Background: Initially, the French Direction Générale de l'Aviation Civile (DGAC) advised that some instances of loss of inertial references have been reported which could reduce the control of the aircraft due to the non-availability of some parameters (attitude, vertical speed, ground speed, etc.). Subsequent investigation identified the loss of the parameters as being caused by the ADIRU striking the bottom of the upper shelf.

AD/A320/138 mandated the modification of the ADIRU shelf supports in an attempt to prevent contact between the ADIRUs and the upper shelf. This measure alone did not prove sufficient and the original issue of this Directive introduced revised despatch limitations for the MMEL.

Again these measures were found to be insufficient and the European Aviation Safety Agency (EASA) has advised that replacement of the three ADIRUs together with the modification of the shelf will provide terminating action for the despatch limitations. Consequently, this Amendment continues the despatch limitations, reiterates the shelf modification and requires replacement of the three ADIRUs.

Airbus Industrie A319, A320 and A321 Series Aeroplanes

AD/A320/174 Amdt 2 (continued)

Amendment 2 of this AD is issued to inform that AD/A320/138 has been cancelled and the requirements contained in that AD have been incorporated in AD/A320/174 Amdt 2.

A handwritten signature in black ink, appearing to read 'David Villiers', with a long horizontal stroke extending to the right.

David Villiers
Delegate of the Civil Aviation Safety Authority

14 March 2012