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## AIRWORTHINESS DIRECTIVE

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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/CASA/27 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.

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### Casa 212 Series Aeroplanes

**AD/CASA/27  
Amdt 2**

**Centre Wing Lower Skin**

**6/2007  
DM**

Applicability: All Model C-212 series aircraft.

Requirement: 1. Model C-212 series aircraft used for operations other than commercial transport (including but not limited to Maritime Patrol operations or other similar low altitude operations):

- a. For aircraft that have accumulated more than 8,000 flight hours or 3,600 landings at the effective date of this Directive:

Perform a Non Destructive Inspection (NDI) in accordance with C-212 Supplemental Inspection Procedures (SIP) C-212-PV-02-SIP document Section 57-10-03, unless already accomplished in accordance with AD/CASA/27 original issue, or Amdt 1.

Perform Non Destructive Inspection in accordance with the “Complementary inspection” procedure of C-212 Supplemental Inspection Procedures C-212-PV-02-SIP document Section 57-10-03, sequence 2 as defined in Annex 1 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007; unless already accomplished in accordance with AD/CASA/27 Amdt 1.

Perform a High Frequency Eddy Current Inspection as defined in Annex 3 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007, unless the non destructive inspections required by AD/CASA/27 Amdt 1 are already accomplished.

- b. For aircraft that have accumulated more than 5,600 flight hours or 2,400 landings at the effective date of this Directive:

Perform a Non Destructive Inspection (NDI) in accordance with C-212 Supplemental Inspection Procedures (SIP) C-212-PV-01-SIP document Section 57-10-03, unless already accomplished in accordance with AD/CASA/27 original issue, or Amdt 1.

## Casa 212 Series Aeroplanes

AD/CASA/27 Amdt 2 (continued)

Perform Non Destructive Inspection in accordance with the “Complementary inspection” procedure of C-212 Supplemental Inspection Procedures C-212-PV-02-SIP document Section 57-10-03, sequence 2 as defined in Annex 1 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007; unless already accomplished in accordance with AD/CASA/27 Amdt 1.

Perform a High Frequency Eddy Current Inspection as defined in Annex 3 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007, unless the non destructive inspections required by AD/CASA/27 Amdt 1 are already accomplished.

2. Model C-212 series aircraft used in commercial transport operations.
  - a. For aircraft that have accumulated more than 15,000 flight hours or 15,000 landings at the effective date of this Directive:

Perform a Non Destructive Inspection in accordance with C-212 Supplemental Inspection Procedures C-212-PV-02-SIP document Section 57-10-03 unless already accomplished in accordance with AD/CASA/27 original issue, or Amdt 1.

Perform Non Destructive Inspection in accordance with the “Complementary inspection” procedure of C-212 Supplemental Inspection Procedures C-212-PV-02-SIP document Section 57-10-03, sequence 2 as defined in Annex 1 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007; unless already accomplished in accordance with AD/CASA/27 Amdt 1.

Perform a High Frequency Eddy Current Inspection as defined in Annex 3 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007, unless the non destructive inspections required by AD/CASA/27 Amdt 1 are already accomplished.

- b. For aircraft that have accumulated more than 10,000 flight hours or 10,000 landings at the effective date of this Directive:

Perform a Non Destructive Inspection in accordance with C-212 Supplemental Inspection Procedures C-212-PV-02-SIP document Section 57-10-03 unless already accomplished in accordance with AD/CASA/27 original issue, or Amdt 1.

Perform Non Destructive Inspection in accordance with the “Complementary inspection” procedure of C-212 Supplemental Inspection Procedures C-212-PV-02-SIP document Section 57-10-03, sequence 2 as defined in Annex 1 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007; unless already accomplished in accordance with AD/CASA/27 Amdt 1.

## Casa 212 Series Aeroplanes

AD/CASA/27 Amdt 2 (continued)

Perform a High Frequency Eddy Current Inspection as defined in Annex 3 of EADS-CASA AOL 212-018, revision 2, dated 20 March 2007, unless the non destructive inspections required by AD/CASA/27 Amdt 1 are already accomplished.

A ferry flight with minimum crew is permitted in order to position the aircraft to where appropriate inspection facilities are located.

If a crack or loose rivet is detected during any inspection, before further flight, a detailed report shall be sent to EADS-CASA for evaluation.

The results of all inspections shall be sent to EADS-CASA.

*Note: EASA Emergency AD 2007-0108-E refers.*

**Compliance:**

- 1.a. Before further flight. Repeat the inspections before accumulating 600 flight hours or 250 landings, whichever occurs first, from the first inspections. Inspect thereafter at intervals not to exceed 600 flight hours or 250 landings, whichever occurs first.
- 1.b. Within 200 flight hours or 100 landings after 23 April 2007, whichever occurs first. Repeat the inspections before reaching a threshold of 8,000 flight hours or 3,600 landings, whichever occurs first. Inspect thereafter at intervals not to exceed 600 flight hours or 250 landings, whichever occurs first.
- 2.a. Before further flight. Repeat the inspections before accumulating 4,500 flight hours or 4,500 landings, whichever occurs first, from the first inspections. Inspect thereafter at intervals not to exceed 4,500 flight hours or 4,500 landings, whichever occurs first.
- 2.b. Within 200 flight hours or 100 landings after 23 April 2007, whichever occurs first. Repeat the inspections before reaching a threshold of 15,000 flight hours or 15,000 landings, whichever occurs first. Inspect thereafter at intervals not to exceed 4,500 flight cycles or 4,500 landings, whichever occurs first.

This Amendment becomes effective on 23 April 2007.

**Background:**

Initial investigation of a recent C-212 Maritime Patrol aircraft accident has revealed cracks in the centre wing lower skin at STA Y=1030. The aircraft had accumulated 17,000 flight hours and 7,300 flight cycles. Fatigue cracking is suspected to be the cause.

The suspect element is identified in document C-212-PV-02-SID as a Principal Structural Element with No. 57.212.06 and an inspection threshold of 20,000 landings.

## Casa 212 Series Aeroplanes

AD/CASA/27 Amdt 2 (continued)

Spain AD 02/88 Revision 3 (AD/CASA/1 Amdt 5) remains valid and relevant inspections have to be performed in addition to the requirements of this Directive.

Undetected fatigue cracking could lead to reduced structural integrity of the aircraft.

Amendment 1 required a revised inspection procedure and the inclusion of aircraft not previously affected.

Amendment 2 is issued in response to a new EASA AD, which introduces a High Frequency Eddy Current procedure, as an additional inspection to detect cracks with higher reliability.



David Villiers  
Delegate of the Civil Aviation Safety Authority

19 April 2007