EASA Safety Information Bulletin

SIB No.: **2014-01**
Issued: **07 January 2014**

Subject: **Cessna – Supplemental (Structural) Inspection Programmes**

Ref. Publications: Cessna Single Engine Service Letter (SEL) SEL-05-01 dated 3 October 2012; and the applicable Cessna Service Manuals, as listed in Appendix 1 of this SIB, which incorporate the SID inspections.

Applicability: Cessna 100 and 200 Series aeroplanes, all types, models and serial numbers, manufactured until 1986 (inclusive).

Description: A number of enquiries have been made to EASA regarding the need to incorporate the Supplemental Inspection Documents (SIDs) as published by Cessna (see Applicability and Appendix 1 of this SIB) into the approved Aircraft Maintenance Programme (AMP). This is a valid question, irrespective of whether an aeroplane owner/operator has decided to use a programme based on Cessna's recommendations, or an alternative programme approved by the competent authority of the State of Registry. This SIB is issued to advise aeroplane owners and operators of their options regarding the inclusion of SID tasks into an approved AMP.

The affected aeroplanes constitute a large part of an ageing fleet of general aviation aeroplanes in Europe. The SID inspections are largely based upon service experience and are aimed at detecting known potential problems such as fatigue cracking and corrosion before these become an airworthiness concern. Cessna has released a video that shows some of the issues that the SIDs aim to prevent.

EASA is in the process of a number of rulemaking activities, including Opinion 10/2013 'General Aviation - Maintenance Programme and Airworthiness Reviews', RMT.0252 (MDM.056) on instructions for continued airworthiness (ICA) and RMT.0226 for consideration of ageing aircraft (other than large transport aeroplanes), that may affect the way in which

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ICA documents, such as the Cessna SID, are developed, controlled and implemented.

EASA is also evaluating whether any mandatory action on some of the content of the Cessna SIDs may be necessary. Pending the outcome of this evaluation, this SIB provides guidance as to how owners and operators can evaluate the Cessna SIDs in the context of their existing maintenance programmes and applicable regulations.

At this time, the safety concern described in this SIB is not considered to be an unsafe condition that would warrant Airworthiness Directive (AD) action under Commission Regulation (EU) 748/2012, Part 21.A.3B.

Currently, the following SID items are being focused on in EASA's review:

1. Cessna 210 (all models) - Wing Lower Spar Cap inspection (new SID 57-11-03). Eight reports of main spar lower cracking have been received to date. The Model 210 wing is a single spar wing, thus spar integrity is critical.
2. Cessna 206, 207 and 210 series (all models) - Foam Filled Elevator and Trim Tab inspection (SID 55-10-02). Elevators and trim tabs were designed with a foam insert which over time collects moisture and thus changes the balance of the elevator. In addition, the fasteners connecting the trim tab to the trim tab bracket actuator corrode allowing the trim tab bracket and actuator to separate resulting in a free tab situation.
3. All 100 and 200 series models – Rudder Pedal Torque Tube inspection (SID 27-20-01). The FAA is discussing what type of action to take on this item. Cracks and corrosion in the rudder pedal torque tube can lead to loss of rudder control and braking action.

In addition, a number of SID inspections are already subject to an AD, either in the United States or in Australia, as specified in Appendix 2 of this SIB. The relevant FAA ADs are adopted by EASA, under Commission Regulation (EU) No 748/2012 article 3, paragraph (1)(a)(iii).

Owners/operators implementing the Cessna Continued Airworthiness Programme (CAP) will find that some of the CAP Manual structural inspections have been superseded and replaced by SID inspections. Relevant information can be found in Cessna SEL-05-01. The SID inspections have been incorporated into the affected Cessna Maintenance/Service Manuals and are considered to be revised ICA in the context of Commission Regulation (EC) 2042/2003, Annex I Part M, M.A.302, paragraphs (d) and (g).

Under Part M.A.201, the primary responsibility of an owner/operator is to ensure the aeroplane is in an airworthy condition. The adoption of the SIDs is considered a means of ensuring the AMP will achieve this objective. The majority of the SID inspections are visual and Cessna consider they will

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not add significant downtime to an already well maintained aeroplane.

It should not be inferred from Commission Regulation (EC) 2042/2003, Part M.A.302, paragraphs (d) and (g), that all ICAs included in the Cessna 100/200 SIDs are 'required' to be incorporated into the approved aircraft maintenance programme. However, owners and operators should 'take into account' the SID to determine the need for revising their AMP.

According to current Part M requirements, the maintenance programme is approved by the competent authority, either directly or through an indirect approval procedure of the Continuing Airworthiness Management Organisation (CAMO), as defined in Part M.A.302, paragraphs (b) and (c) respectively. To issue the approval, the competent authority (or the CAMO) must accept the justification (including possible compensating actions) provided for any deviation from the recommendations of the design approval holder.

In the future, if the content of the Opinion 10/2013 'General Aviation - Maintenance Programme and Airworthiness Reviews' is adopted, for ELA1 aircraft not used in commercial operations, the owner may 'self-declare' the maintenance programme (without having it approved by the competent authority), deviating from the design approval holder's recommendations (or the recommendations made by the contracted CAMO) under his/her own responsibility and without the need to provide justifications. The Opinion further defines that in such a case, at the time of the annual airworthiness review, the airworthiness review staff will need to establish whether such 'self-declared' maintenance programme is effective or not and whether it needs to be amended.

Recommendation(s): EASA recommends that owners and operators update their AMP to incorporate the tasks of the applicable Cessna SID, considering the relevance of each task, taking into account the type of operation being undertaken, aeroplane utilisation, age and general condition. This is in line with the principles set out in Commission Regulation (EC) 2042/2003, Part M.A.302 and the related AMCs, in particular Appendix I to AMC M.A.302 and AMC M.B.301(b) "Content of the Maintenance Programme", item 1.1.13a).

Before making a decision not to incorporate the applicable Cessna SID into the AMP, careful consideration should be given to the potential airworthiness and safety consequences of this course of action.

Any decision not to incorporate the applicable Cessna SID should be properly substantiated, to the satisfaction of the competent authority, or the CAMO in case of indirect approval of the AMP.

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Note: 1. Operators using the aeroplane for commercial air transport must ensure their decision is consistent with their embodiment policy for non-mandatory inspections and modifications, as required by Part M.A.301, paragraph 7.

Note: 2. EASA intends to hold an open session on this subject soon and may update this SIB as a result of this open session and the on-going review of the SIDs; see EASA events web page for more information in the near future.

Contact(s):

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Appendix 1 – Cessna Service Manuals (Temporary Revisions – TR)

Type(s) – all Models (manufacturing years)	**Manual / TR Nr**	**Revision Date**
100 Series (1953 – 1962)	D183-1TR7	1 December 2011
100 Series (1963 – 1968)	D637-1TR9	1 December 2011
177 (1968 – 1978)	D841-8TR8	1 December 2011
	D841-8TR9	1 April 2012
FR172 “Reims Rocket” (1968 – 1978)	D849-5TR6	1 April 2012
	D849-5TR7	1 December 2011
150 (1969 – 1976)	D971-3TR6	1 December 2011
	D971-3TR7	1 April 2012
150 (1977)	D2011-1TR5	1 December 2011
152 (1978 – 1985)	D2064-1TR5	1 December 2011
172 (1969 – 1976)	D972-4TR5	1 December 2011
	D972-4TR6	1 April 2012
172 (1977 – 1986)	D2065-3TR7	1 December 2011
R172 (1977 – 1981)	D2027-1TR7	1 December 2011
172RG (1980 – 1985)	D2066-1TR6	1 December 2011
177RG “Cardinal RG” (1971 – 1975)	D991-3TR7	1 December 2011
	D991-3TR8	1 April 2012
177RG (1976 – 1978)	D2009-4TR10	1 December 2011
180/185 (1969 – 1980)	D2000-9TR7	1 December 2011
180/185 (1981 – 1985)	D2067-1TR7	1 December 2011
182 “Skylane” (1969 – 1976)	D2006-4TR5	1 December 2011
182/T182 (1977 – 1986)	D2068-3TR5	1 December 2011
R182/TR182	D2069-3TR8	1 December 2011
188/T188 (1966 – 1984)	D2054-1TR7	1 December 2011

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Appendix 2

Acronyms used in Table:
FAA = Federal Aviation Administration, USA
CASA = Civil Aviation Safety Authority, Australia

Type/Model	Component	SID Task Nr.	Existing AD
All Types	Seat Rails	53-47-01	FAA AD 2011-10-09
150 and 152	Fin Attach Bracket	55-11-02	FAA AD 78-25-07
172	Lower Door Post	53-12-03	CASA AD/CESSNA 170/57
172	Horizontal Stabilizer Front Spar	55-11-01	CASA AD/CESSNA 170/59
172RG	MLG Retraction System	32-10-01	FAA AD 2001-06-06
177	Main Carry-Thru Spar	53-11-01	CASA AD/CESSNA 177/30
180, 182 and 185	Wing Rear Spar	57-11-01	CASA AD/CESSNA 180/15 CASA AD/CESSNA 185/2
180 and182	Aft Tailcone	55-30-02	CASA AD/CESSNA 180/31
180, 182 and 185	Vertical Fin Rear Spar	55-30-02	CASA AD/CESSNA 180/62 CASA AD/CESSNA 185/35
185	Engine Mount	71-20-01	CASA AD/CESSNA 185/12
188	Engine Mount	71-20-01	CASA AD/CESSNA 188/8
188	Aileron Control Cables	27-10-01	FAA AD 73-16-02
188	Wing Front and Rear Spar	57-11-01	CASA AD/CESSNA 188/22
188	Vertical Fin Rear Spar	55-30-01	CASA AD/CESSNA 188/36
206	Wing Rear Spar	57-11-01	CASA AD/CESSNA 206/3
206	Forward Door Post Bulkhead	53-30-02	CASA AD/CESSNA 206/48
206	Horizontal Stabilizer Front Spar	55-10-01	CASA AD/CESSNA 206/54

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