



EASA Safety Information Bulletin

SIB No.: 2011-23
Issued: 29 July 2011

- Subject:** **Koito Industries Seats – EASA AD 2011-0098 Compliance Information**
- Ref. Publications:** EASA Airworthiness Directive (AD) 2011-0098 dated 02 June 2011.
- Applicability:** All aeroplanes, manufactured by Airbus, Boeing, Fokker Aircraft and McDonnell Douglas, as identified in EASA AD 2011-0098, if equipped with seats manufactured by Koito Industries.
- Description:** This SIB proposes acceptable methods to use the similarity concept, as detailed in Note 2 and Note 3 of EASA AD 2011-0098, and specifies the use of the Alternative Method of Compliance (AMOC) procedure to obtain approval of certification programs and test plans, as required by paragraph (1.3) of the AD.
- The information contained within this SIB is for guidance only to facilitate compliance with the AD of reference; this SIB has no mandatory character and does not grant any rights or impose any obligations to the addresses of the aforesaid AD.
- This SIB will be revised as further information becomes available.
- Recommendations:**
- Note 2 of EASA AD 2011-0098 states (quoted in part) that “It is not required to test all in-service seat part numbers. The use of similarity is acceptable to show that the results obtained from a chosen test article are valid for other seat part numbers”.
- In order to facilitate AD compliance the concept of “seat clusters” has been developed based on similarity of design/construction.
- Each row of the tables shown in Appendix 1 and 2 of this SIB corresponds to a seat cluster that may include one or more Koito Industries seat models.
- The most critical seat part number for each cluster has been identified. Successfully testing such part number will be sufficient to show that all seat part numbers in that cluster are in compliance with the relevant structural requirement of the AD.

2. Between December 2009 and June 2010 Koito Industries, under the oversight of the Japan Civil Aviation Board (JCAB), performed a series of tests (both static and dynamic). The results of these tests are fully acceptable to EASA.

Note 1: All Koito testing to date has been conducted on newly manufactured test articles. While this is acceptable to demonstrate compliance to the AD static strength requirements, it is not currently acceptable for compliance to the AD dynamic strength requirements.

Note 2: Information on available test data has been incorporated into the seat cluster tables only to assist Operators in action planning to meet the requirements of the AD. Any commercial arrangements necessary to obtain such data are the responsibility of the Operators.

3. The following further guidance is provided to ease the submittal of compliance plans to EASA.

3.1 According to Note 2 included in AD-2011-0098, the date of manufacture is included in the list of items to be checked when testing in service seats. The intention is that the seat which is to be tested was manufactured at a date reasonably close to the manufacture date(s) of the seats installed on the associated aircraft. The submitted test plan should provide details in this regard of how the test seat has been selected.

3.2 When using a new build seat test article, in lieu of an EASA Form 1, some other form of Koito documentation, underwritten by JCAB, will be acceptable for release of the test article. Details of the documentation to be used should be included in the Test Plan.

3.3 In addition to passing a static strength test (as required by the AD), the following ways are acceptable for showing compliance to the static strength requirements of the AD:

- i. Successful dynamic testing conducted on new build test articles, or
- ii. Unsuccessful dynamic testing conducted on new build test articles or in-service seats, provided that the failure occurred in the seat track and must have occurred after the seat has demonstrated substantive load carrying capability.

3.4 Submittal of test plans and reports should be done via an application for an AMOC, using EASA Form 42. The AMOC can be approved according to the following procedure:

- i. An application is submitted to EASA.
- ii. A test plan is submitted to EASA.
- iii. The test plan is approved by EASA.
- iv. Test results are submitted to EASA.
- v. Depending on the test results, the appropriate AD action and correction time are identified, together with the list of affected seat part numbers.
- vi. The AMOC is approved.

The content of the present SIB can be referenced to omit steps (ii), (iii) and (iv) of the above procedure, provided that compliance can be shown by similarity in accordance with already tested clusters.

Contacts: For further information contact the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.

Appendix 1
Airbus Seat Clusters

Seat Models	Critical Seat Part Number for the Static Tests required by the AD	Critical Seat Part Number for the Dynamic Test required by the AD	An available Koito Dynamic/Static Test Report is acceptable to show compliance with the AD static strength requirements (ref. section 2 of the SIB)
ARS-451	83-178B5860-403	N/A	
ARS-507	83-214B6686-401	83-214B6686-401	
ARS-511	83-201B6764-401	83-201B6764-401	
ARS-514	83-178B7542-413	83-178B7542-413	
ARS-516	83-214B7086-401	83-214B7086-401	
ARS-571	83-227B7955-401	83-227B7955-401	
ARS-604	83222B8743-404	N/A	
ARS-617	83-240B10457- 407 or 83-240B8856-407	83-240B10457- 407 or 83-240B8856-407	
ARS-641	83247B10752-401	83247B10752-401	YES
ARS-642	83248B10761-405	83248B10761-405	
ARS-646	83250B10730-403	83250B10730-403	
ARS-658 P22A23	83255B12061-401 From ARS-658	N/A	
ARS-659 Y21A23	83256B12051-401 From ARS-659	N/A	
ARS-667	83257B11418-403	N/A	
ARS-670	83270B17113-401	83270B17113-401	
ARS-672 ARS-643 ARS-643R ARS-694 ARS-707 ARS-837 ARS-647 ARS-838	83262B12136-401 From ARS-672	83262B12136-401 From ARS-672	
ARS-697	83267B15043-404	N/A	
ARS-832	83274B16017-401	N/A	
ARS-836	83279B16586-411	83279B16586-411	
ARS-840	83284B17131-401	83284B17131-401	
F44A33	F4439A3S014-401	F4439A3S014-401	

This is information only. Recommendations are not mandatory.

Appendix 2:
Boeing Seat Clusters

TBD

Seat Models	Critical Seat Part Number for the Static Tests required by the AD	Critical Seat Part Number for the Dynamic Test required by the AD	An available Koito Dynamic/Static Test Report is acceptable to show compliance with the AD static strength requirements (ref. section 2 of the SIB)
ARS-339	161-3325-401		YES
ARS-385 ARS-482	179-9828-401 From ARS-385		
ARS-392	181-5029-405		YES
ARS-423 ARS-417 ARS-446	161-5319-401 From ARS-423		YES
ARS-478 ARS-418	83-178B6124-401 From ARS-478		
ARS-483	83-193B6354-401		
ARS-514	83-178B7325-409 (Fwd) 83-178B7325-401(Side)		
ARS-550 ARS-595 P21B73		83-222B7451-403 From ARS-550	
ARS-553	83-223B7336-401		
ARS-577 Y11B31	83-220B8711-437 (Fwd) 83-220B8713-401 (Side) From ARS-577		
ARS-591 ARS-615 ARS-626 Y11B73		83-220B8306-401 From ARS-591	YES
ARS-592 ARS-616 ARS-814 ARS-859 Y27B73		83-220B8308-402 or 83-220B8308-412 From ARS-592	YES
ARS-597 ARS-669		83-237B8545A401 From ARS-597	
ARS-600	83-236B8558-401 (or dynamic test on ARS-644)		
ARS-601	83-237B8628-401 (or dynamic test on ARS-597)		
ARS-607	83239B10951-403		

This is information only. Recommendations are not mandatory.

Seat Models	Critical Seat Part Number for the Static Tests required by the AD	Critical Seat Part Number for the Dynamic Test required by the AD	An available Koito Dynamic/Static Test Report is acceptable to show compliance with the AD static strength requirements (ref. section 2 of the SIB)
ARS-620	83-220B9716-401 (or dynamic test on ARS-644)		
ARS-627 ARS-594		83-227B9988-401 From ARS-627	YES
ARS-629	83-222B10130-401 (or dynamic test on ARS-597)		
ARS-644 ARS-596 Y11B33		83236B10621A401 From ARS-644	
ARS-649 ARS-651	83251B10915-415 From ARS-649		
ARS-652	83252B11112-401		
ARS-668		83258B11456A401	
ARS-670 (Subset 1) ARS-709		F1141B7C341-401 From ARS-670	YES
ARS-670 (Subset 2)		83260B11938-401	
ARS-670 (Subset 3)		83270B15188-401	
ARS-671	83261B11288-401		
ARS-673	83220B11989-401 (or dynamic test on ARS-644)		
ARS-694 - Front Row		83289B17250-401	
ARS-694 - Std Row		83289B17246-401	
ARS-704	83258B12423-401 (or dynamic test on ARS-668)		
ARS-710 - Std Row ARS-674 - Std Row ARS-815 Y21B73		83269B15257-403 From ARS-710 - Std Row	
ARS-813		83252B16199-401	
ARS-823		83273B15860-407	
ARS-833 PB7-2001		83274B16049-403 From ARS-833	

This is information only. Recommendations are not mandatory.

Seat Models	Critical Seat Part Number for the Static Tests required by the AD	Critical Seat Part Number for the Dynamic Test required by the AD	An available Koito Dynamic/Static Test Report is acceptable to show compliance with the AD static strength requirements (ref. section 2 of the SIB)
ARS-835 ARS-869	83283B16713-403 From ARS-835	83283B16713-403 From ARS-835	
ARS-841		83285B17224-401	
ARS-844		83290B17256-401	
ARS-849 ARS-857		83296B18681-431 From ARS-849	YES
ARS-858		83296B19960-401	
ARS-861		83296B19310-407	
ARS-862		83294B19312-409	
F11M11 ARS-657 ARS-843	F1141M1K141-401 (Fwd) F1141M1K142-401 (Side) F1161M1K141-401 (Fwd & Side) From F11M11		
P11B31 ARS-832 ARS-853	P1143B3N104-401 (Fwd & Side) P1163B3N104-401 (Fwd & Side) From P11B31		
P11B33		P1143B3J306-401	YES
P11M93		P1141M9J302-401	
P21B35 P21B33		P2141B3A405-401 From P21B35	
P32B73		P3241B7J401-401	
P52B41 P56B63	P5241B4A401-401 From P52B41	P5241B4A401-401 From P52B41	
P56B63		P5641B6A407-401	
Y15B73 ARS-674 ARS-710 - Front Row		Y1551B7C341-401 From Y15B73	YES
YE1B35		YE157B3A407-401	
YG7B35		YG751B3A401-401	

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