

Civil Aviation Administration of China (CAAC) Aircraft Evaluation Group (AEG)

Aircraft Evaluation Report

For

A350 Series (A350-900)

Initial

Date: 22/May/2018

Manufacturer: AIRBUS

Aircraft Evaluation Report for A350 Series

Revision Record & Approval

No.	Section	Highlight	Date	Prepare	Review	Approve
Initial	All	Initial Evaluation for A350-900	May 22, 2018			

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Foreword

The A350 is a two turbo-fan, long range, twin-aisle, large category airplane. The A350 airplanes including A350-900 series and A350-1000 series due to the difference of cabin size.

The first configuration of A350-900 series aircraft is defined as A350-941 approved by EASA in September 2014.

The initial CAAC AEG evaluation of A350 was in January 2017, initial version of this report was finalized based on the evaluation process for A350-900.

Section 1: Operational information related to Aircraft Type Design

1.1 Statement and Explanation:

This section includes the operation related information for Airbus A350-900 airplane based on the following documents of airworthiness approval:

- EASA Type Certificate Data Sheet No. EASA.A.151 (Issue 08)
- Airplane Flight Manual (13 JUN 16, EASA Approve Reference: 10058413)

The information is provided as an aid to support operation approval but should not be considered operation approval. If operator is required to show compliance, it remains the responsibility of the Principal Inspector (PI) for operator to approve the appropriate operation.

When the aircraft configuration differs from the above stated airworthiness approval, it is the responsibility of the operator and its Principal Inspector (PI) to evaluate those differences and develop the compliance to the relevant requirements.

1.2 A350-900 (941)

(1) General Information

	Item	Type Related Information	Reference
1.1	Category	Transport category airplane	TCDS
1.2	Dimensions	Wingspan: 64,75 m (212ft 5.2in)	TCDS
		Fuselage length: 65,26 m (214ft 1.3in)	
		Overall height: 17,05 m (55ft 11.3in)	
1.3	Engines	Two (2) Rolls Royce Trent XWB-84 turbofan	TCDS
		engines	
1.4	APU	One Honeywell HGT1700	TCDS
1.5	Propellers	N/A	
1.6	Maximum	Maximum operating altitude is 43,100 ft.	TCDS
	Operating		
	Altitude		
1.7	Approach	Category C	OSD-FCD
	category		
1.8	Maximum	Maximum Takeoff Weight (MTOW): 268t	TCDS
	Certified	Maximum Zero Fuel Weight (MZFW): 192t	
	Weights	Maximum Certified Weights may change per Mod	
		number incorporated.	
1.9	Minimum Flight	Two (2): Pilot and Co-pilot	TCDS
	Crew		
1.10.	Maximum	The maximum number of passengers approved for	TCDS
	Occupants	emergency evacuation:	
		- 385 for emergency exit configuration C-A-A-A and	
		A-A-C-A	
		- 330 for emergency exit configuration C-A-C-A	
		- 440 for emergency exit configuration A-A-A-A	
1.11.	Baggage/ Cargo	Fwd: Class C, Max. Loading 22,000 kg	TCDS
	Compartment	Aft: Class C, Max. Loading 19,000 kg	
		Rear (bulk): Class C, Max. Loading 3,468 kg	
1.12	Serial Numbers	Not specified.	TCDS
	Eligibility		

(2) Kind of Operation

Item		Information	Reference
2.1	Visual Flight	Approved as basic type design	TCDS
	Rules(VFR)		
2.2	Instrument	Approved as basic type design	TCDS
	Flight Rules		

	Item	Information	Reference
	(IFR)		
2.3	Night and	Approved as basic type design	TCDS
	over-the-top		
2.4	Icing conditions	Approved as basic type design	TCDS
2.5	Extended	Ditching approved as basic type design.	TCDS
	Overwater	The aircraft has one HF and One SATCOM as basic	
	Operation	type design.	
		For life jacket, life raft and emergency locator	
		transmitter (ELT) installation, it is the responsibility	
		of the operators to show compliance and checked by	
		Principal Inspector (PI).	
2.6	Extended Range	Capable for ETOPS Beyond 180 min when	TCDS
	Operation	configured, maintained and operated in accordance	
		with the ETOPS Configuration, Maintenance and	
		Procedures (CMP) document.	

(3) Communication, Navigation and Surveillance

	Item	Information	Reference
3.1	ATC	The aircraft is equipped with a dual Mode-S	AFM
	transponder	transponder.	
3.2	Data Link	The FMS is interfaced to the data link router and	AFM
	Communication	supports AOC, FANS A and FANS B ATC data link	
		applications.	
3.3	Satellite	One Satellite Communication (SATCOM) system	AFM
	Communication	installed.	
	(SATCOM)		
3.4	RVSM	The airplane is certified capable of RVSM operations	TCDS
3.5	Performance	The airplane has been demonstrated capable of the	AFM
	Based	following operation:	
	Navigation	- Approach: RNP AR, RNP APCH, Baro-VNAV	
		- Terminal: RNAV 1, RNAV 2, RNP 1	
		- En-route: RNAV 1, RNAV 2, RNAV 5	
		- Oceanic and Remote Area: RNP 4	
3.6	Low visibility	The airplane is qualified to automatic approach and	AFM
	operation	landing down to CAT III minima.	
3.7	Weather radar	A dual X-band weather radar system with Predictive	AFM
		WindShear detection and localization and with	
		turbulence detection and localization is installed.	
3.8	Terrain	The aircraft equipped with a Terrain Awareness and	AFM
	awareness and	Warning System (TAWS) system, which provides	
	warning system	both horizontal and vertical background terrain	

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	Item	Information	Reference
	(TAWS)	images on the Navigation Display and the Vertical	
		Display respectively.	
3.9	Traffic Alert and	The aircraft equipped with TCAS II system with	AFM
	Collision	software version 7.1.	
	Avoidance		
	equipment		
3.10	Low altitude	Weather Radar with Predictive WindShear detection	AFM
	windshear	function.	
	system		
	equipment		
3.11	ADS-B	ATC Transponder provides ADS-B OUT parameters.	AFM
3.12	HUD	Dual HUD option available.	AFM

(4) Recording Equipment

	Item	Information	Reference
4.1	Flight recorder	The aircraft is equipped with a data recording system	
		that is able to record flight data. The data is recorded	
		in a digital recorder using crash-protected solid state	
		memories.	
		The aircraft is equipped with a Cockpit Voice	
		Recorder (CVR), CVR provides recording capability	
		for voice communication, cockpit ambient noise and	
		ATC data link.	
4.2	Quick Access	The aircraft is equipped with a Aircraft Condition	
	Recorder	Monitoring System (ACMS), The ACMS reports are	
		stored on the Aircraft Server Function (ASF) mass	
		memory, Continuous recordings like Virtual Quick	
		Access Recorder (VQAR) are stored on the ASF	
		mass.	

Section 2: Pilot Type Rating and Qualification Specification

2.1 Statement and Explanation

This section is the formal notification that the CAAC AEG has conducted Pilot Qualification Evaluation of A350-900 airplane based on the EASA Operation Suitability Data (OSD) process and determination for flight crew, which specifies the pilot type rating, training, checking, and currency specifications for flight crews.

Hereby, the provisions in this section can be used as the basis for Chinese operators to develop their pilot qualification and training program for A350-900 airplane.

Alternate means of compliance to the requirements of CCAR 61, 91 and 121, other than specified in the provisions of this section, must be approved by Flight Standards Department of the CAAC. If an alternate means of compliance is sought, operators will be required to show the CAAC that the proposed alternate means of compliance will provide an equivalent level of safety to the provisions of this section. This may be accomplished by submitting analysis, demonstrations, proof of concept testing, differences in documentation, and other supporting evidences to the CAAC.

Find EASA Approved OSD:

The A330/350 Operational Suitability Data (OSD) for Flight Crew may request from Airbus point of contact: <u>Ops-suitability.support@airbus.com</u>, and also published on AirbusWorld website.

2.2 Pilot Type Rating and Licence Endorsement

Upon the AEG evaluation, the Pilot Type Rating for A350 airplane is listed as follows:

Manufacturer	Aircraft Type	Pilot Type Rating
AIRBUS	A350-900 (-941)	A350

- Note 1: In EASA approved OSD for A330/350, A330 and A350 have been assigned a single license endorsement as "A330/350" as Common Type Rating. CAAC AEG considered as separate type rating as A330, A350 were approved in separate type certificates, but this does not influence the training, checking and currency credit based on EASA determination of difference between the two types.
- Note 2: As in Airbus Term, the A330/A350 difference training called "Common Type Rating" (CTR) differences training instead of "Cross Crew Qualification" (CCQ). CAAC AEG considered this does not change the fact of difference training no matter which term to be used.

License endorsement:

"A350" is the type rating designation for getting a type rating from A350-900 airplane.

2.3 ODR and MDR

Sample Operator Differences Requirements (ODR) and Master Differences Requirements (MDR) tables for A350 series airplanes have been given as follows:

- Reserved

In addition, following ODRs have been given for support the differences specific configuration, operation or CCQ:

- A350 Head up Display ODR Table reference V01RP1536885
- A330 to A350 ODR Table reference V01D14024295
- A320 to A350 ODR Table reference V01D14038508
- A340 to A350 ODR Table reference V01D15029669
- A380 to A350 ODR table reference V01D15025340
- Low Visibility Operations (LVO) ODR table

Note 1: The ODR Tables for A350 to A320, A330, A340 and A380 are described in their own report. Note 2: The ODR Tables are available by request to AIRBUS.

A350 MDR Table

Reserved

Airbus Family		FROM				
		A320	A330	A340	A350	A380
	A320		E/E/D	E/E/D	TBD	TBD
то	A330	E/E/D		B/E/C	D/D/C	TBD
	A340	E/E/D	E/E/C		TBD	TBD
	A350	E/E/D	D/D/C	D/E/C		C/E/C
	A380	E/E/D	E/E/D	E/E/D	TBD	

CCQ/MFF MDR Table

MFF: Mixed Fleet Flying

2.4 Specification for Training

The Type Rating Training Courses proposed by AIRBUS for A350 airplane is as follows and have to be considered as the basis when developing pilot training program.

- A350 XWB Flight Crew Training Program Standard Transition Course;
- A350 XWB Flight Crew Training Program Difference Course from A330 to A350
- A350 XWB Flight Crew Training Program Cross Crew Qualification from A380 to A350
- A350 XWB Flight Crew Training Program Cross Crew Qualification from A320/A340 to A350

Note 1: The difference due to HUD installation is covered in the each courses.

Note 2: For CCQ course, the pilot prerequisite: qualified and current on the base aircraft with a minimum of 3 months and 150 flying hours on the base aircraft.

Note 3: The above training courses are available from Airbus.

Specifications for particular emphasis elements for training are as follows:

For All Airbus Fly-By-Wire Family:

a) Fly-By-Wire : the following must be included in both initial and recurrent training:

- Knowledge of flight characteristics and the degree of flight envelope protection provided by the various flight control laws for pitch, roll and yaw control.
- Procedural and handling consequences following multiple failures that result in alternate or direct law, both at low and high altitude.(Refer to AMC in appendix 3)

- Knowledge of the use of side stick controller with a special emphasis on the relationship between the two controllers and the transfer/takeover of control.
- b) Use of Flight Management System
 - Knowledge of the various modes of automation
 - Knowledge and skills related to MFD / FCU use
 - Recognition of mode awareness and transition modes through the FMA
 - CRM issue linked to automation (task sharing and crosschecks)
- c) Use of ECAM
 - Knowledge of appropriate use of ECAM in conjunction with system failures
 - Crew discipline for ECAM actions: respect of the depicted procedure, crosscheck of irreversible actions, aircraft status analysis
- d) Autothrust system
 - Knowledge of the thrust control system in conjunction with the "non-moving throttles"
 - Recognition of all messages associated to Autothrust failure, engagement and disconnection
 - Management of not sensed failures using abnormal / emergency procedures and the distinction between sensed and not-sensed procedures

For A350: Including A350 Standard Type Rating course as well as in the A330 to A350 difference training and the CCQ courses:

- a) CRM (except the A380 to A350 CCQ course)
 - Strict respect of SOP's when using FMS and OIS to avoid both pilots head down
- b) FMS/MFD (except the A380 to A350 CCQ course)
 - New interface using the KCCU
 - Knowledge and use of new specific FMS features and functions
 - Knowledge of back-up systems associated with the MFD such as software control of the FCU
- c) Use of normal electronic checklists (except the A380 to A350 CCQ course)
- d) ECAM (except the A380 to A350 CCQ course)
 - Management of not sensed failures using abnormal / emergency procedures and the distinction between sensed and not-sensed procedures
- e) Use of OIS (except the A380 to A350 CCQ course)
 - Takeoff and landing performance computation in normal operations
 - Performance computation associated with ECAM aircraft status in abnormal/emergency conditions caused by aircraft systems failure(s).
 - Use of electronic library with a particular emphasis on how to use the MEL and the ECAM messages.

- Cross check of vital data and gross error checks
- f) Use of the CDA (Continuous Descent Approach) function (Applicable for MOD V01RP1713245 installed)
 - Knowledge of the CDA concept of use including:
 - Explanation of the FMS vertical profile computation principles
 - Explanation of DES guidance modes logics and feedback associated
 - Explanation of the FLAP1/2 pseudo waypoints, and the way to use them as advisory mean only
 - Emphasis on monitoring not only for PFD and ND, but also of VD for crew assessment/awareness of actual and future trajectory versus the intended one computed by CDA profile.

For low visibility operations:

For pilots qualified in A320, A330, A340 or A380 low visibility operations when transitioning to the A350, a minimum of one low visibility approach and landing (as PF) should be included in CCQ course.

2.5 Specification for Checking

As required by CCAR Part 61 and 121.

If qualified on the A320, A340 or A380, after CCQ, a full proficiency check on the A350 is required.

If qualified on the A330, after difference training a partial proficiency check on the A350 could be administered instead of a full proficiency check.

For operations of A350 and A330 or A380 Mixed Fleet Flying, the pilots should be scheduled to fly both aircraft types on a regular basis, and recurrent training/checking should alternate as follows:



Note: Concerning the recurrent training for low visibility operations, full credit applies between types, provided that low visibility training is conducted during recurrent training every 6 months.

2.6 Specification for Currency

As required by CCAR Part 61 and 121.

For operations of A320, A330 or A380 and A350 Mixed Fleet Flying, recent experience requirements as specified in the following table:

Mixed Fleet	Recent Experience Requirements (90 Days)
	3 takeoffs as pilot flying in either A330 or A350.
A 220 and A 250	3 landings as pilot flying in either
ASSO allu ASSO	A330 or A350, 1 of which is manually flown.
	- 1 segment in both A330 and A350. *
	3 takeoffs total as pilot flying:
	- In either A380 or A350, or
	- Combination of A380 and A350.
1280 and 1250	3 landings total as pilot flying:
A560 and A550	- 1 manually flown in A380,
	- 1 manually flown in A350, and
	- 1 manually flown or autopilot flown in either A380 and A350
	1 segment in both A380 and A350. *

Note *: For the purposes of this report, a segment consists of completion of all procedural phases of a flight from beginning to end. A pilot performing the duties of either required flight crewmember position may count the performance of those duties toward the completion of a segment. A segment may be completed in one flight, or by cumulatively completing the necessary phases in more than one flight. A segment may also be completed in an approved FFS or FTD, level 5 or higher, using a line flight scenario where all segment procedural phases are completed. For recent experience requirements, an FTD may only provide for segment currency and not for takeoff and landing currency. Recent experience requirements for takeoffs and landings, as shown in the table above, may only be accomplished in the appropriate aircraft or FFS.

2.7 Specification for Flight Simulation Training Devices

The Flight Simulation Training Devices qualified in accordance with CCAR Part 60 are available for A350.

When a mix of A350 and other Airbus Family aircraft are operated, the combinations of an FTD and FFS should adequately address the training requirements. Differences between training devices and airplanes should be clearly identified with associated training solutions.

Section 3: Maintenance License and Training Specification

3.1 Statement and Explanation

This section is the formal notification that the CAAC AEG has conducted Maintenance Training Evaluation (MTE) for A350-900 airplane based on the documentation provided by Airbus.

Thus, the provisions in this section can be used as the basis for Chinese operators to develop their maintenance personnel qualification and training program for A350-900 airplane.

Alternate means of compliance other than specified in the provisions of this section must be approved by Flight Standards Department of the CAAC.

3.2 Maintenance License Endorsement

Upon the MTE evaluation, the maintenance license endorsement for A350-900 airplanes is listed as follows:

Manufacturer	Aircraft Type	License Endorsement
AIRBUS	A350-900 (-941)	A350

3.3 Specification for Training

The maintenance training standard course curriculum proposed by Airbus for A350-900 airplanes is as follows. Operators and maintenance training providers should consider these courses as a baseline when developing maintenance training program:

- Minimum requirements for A350 Maintenance Training Syllabus
- Note 1: There is no T1 Airbus Code since the result of the design analysis for the A350 ME course was that the duration of a ME was almost the same than the ME+AV. Therefore the course in order to endorse the A350 type in the ME-TA license is the ME+AV.
- Note 2: The above training syllabus includes both theoretical and practical training.
- *Note 3:* For the Airplane options, it is the operator's responsibility to compare the detail differences based on their actual configurations; and, the differences training may be conducted by the operator or its contracted maintenance organization.
- *Note 4:* The above training courses are available by request to Airbus.

Section 4: Master Minimum Equipment List

4.1 Statement and Explanation

This section is the formal notification that CAAC AEG has conducted Flight Operation Evaluation Board (FOEB) evaluation for A350-900 airplane based on the A350 MASTER MINIMUM EQUIPMENT LIST (MMEL) approved by EASA which outlines the items of equipment that may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations.

Hereby, the MMEL and its future revisions published by EASA can be used as a basis for operators to develop their Minimum Equipment List (MEL) for the above stated A350-900 airplane.

Find EASA Approved MMEL:

The A350 MMEL is available on AirbusWorld website and EASA approval reference included.

Note: As Airbus MMEL Documentary Unit (DU) instead of traditional MMEL format, the operator should carefully study each DU identification (Ident.) and the "Applicable to" field that lists the aircraft (MSN) to which the DU applies.

4.2 CAAC Supplemental

Not applicable.

Section 5: Scheduled Maintenance Requirements

5.1 Statement and Explanation

This section is the formal notification that CAAC AEG has conducted Maintenance Review Board (MRB) evaluation for A350-900 airplanes based on the Maintenance Review Board Report (MRBR) for Airbus A350 approved by EASA which outlines the initial minimum maintenance requirements to be used in the development of an approved operator's maintenance program for the airframe, engines, systems and components.

Hereby, the MRBR and its future revisions approved by EASA can be used as the basis for operators to develop their maintenance program for the above stated A350-900 airplanes.

Find EASA Approved MRBR:

The Airbus A350 MRBR is available on AirbusWorld website, and EASA approval status could be find in following EASA

website: <u>http://easa.europa.eu/easa-and-you/aircraft-products/manufacturer-scheduled-maintenance-requirement</u>

Note: There may some Temporary Revisions (TRs) for Airbus A350 MRBR which may also need to be checked and referenced when operators to develop their maintenance program.

5.2 CAAC Supplemental

Not applicable.

Section 6: Operational and Continued Airworthiness Instructions

6.1 Statement and Explanation:

This section is the formal notification that CAAC AEG has conducted evaluation of the operational and continued airworthiness instructions for A350-900 airplane and the related Airbus policies and procedures.

Hereby, the Operational and Continued Airworthiness Instructions documents listed below were found acceptable by the CAAC AEG that they give the necessary guidance for operating and maintaining the A350-900 airplanes within the approved operating conditions and limitations.

This acceptance does not assure the accuracy and applicability of the content in each document. It is the responsibility of the owner or the operator to report any defect or discrepancy in these documents to the aircraft manufacturer or the CAAC AEG by mail box: aeg@caac.gov.cn.

Operational & Continued Airworthiness Instructions distribution:

The operational and continued airworthiness documents are available on AirbusWorld website.

Manual	Reference No.	Description	Revision/Date
FCOM		Flight Crew Operating Manual	As revised
QRH		Quick Reference Handbook	As revised
FCTM		Flight Crew Training Manual	As revised
CCOM		Cabin Crew Operating Manual	As revised
WBM		Weight & Balance Manual	As revised
MPD		Maintenance Planning Document	As revised
AM-MP		Air-vehicule Maintenance - Maintenance	As revised
		Procedure	
AM-SD		Air-vehicule Maintenance – System Description	As revised
ARM		Aircraft Recovery Manual	As revised
AWD		Aircraft Wiring Data	As revised
AWL		Aircraft Wiring List	As revised
ASD		Aircraft Schematic Diagram	As revised
ELA		Electrical Load Analysis	As revised
IPD		Illustrated Parts Data	As revised
NTD		Non-Destructive Testing Data	As revised
AFI		Aircraft Fault Isolation	As revised
TEM		Tool and Equipment Manual	As revised
SH		Security Handbook	
СММ		Component Maintenance Manual	As revised

0.2 List of Operational and Continued All worthiness first uctions (ASS0-900)

- *Note 1:* The acceptance of above manuals dose not affected by its technical data access to business categories instead of Manuals.
- *Note 2:* The technical data consist to above manuals is delivered on-line in AirbusWorld and fully supported by Airbus AirN@v suite, training would be necessary for proper use of the system by airline staffs that will be required to referencing the documents for A350 series airplanes operation.
- *Note 3:* The technical data could also deployed by On-board installation via the On-board Information System (OIS).
- *Note 4:* As above situation, the operator of A350 must set-up an Aircraft Network Security Program (ANSP) following Airbus Security Handbook. Including:
 - Roles and responsibilities
 - Policies and procedures (on- and off-wing)
 - To make aware and train staff
 - To setup ground infrastructure and tools
- *Note 5:* The following documents were approved during the type certification process for A350 airplane, and must be followed by Chinese operators for operation and maintenance within approved limitations:
 - Airplane Flight Manual (AFM), including Master Configuration Deviation List.

- Airworthiness Limitations Section (ALS) including Safe Life Airworthiness Limitation Items, Damage Tolerant Airworthiness Limitation Items, Certification Maintenance Requirements, Ageing Systems Maintenance (ASM) limitations, Fuel Airworthiness Limitations.
- Structural Repair Instruction (SRI)
- ETOPS Configuration, Maintenance, and Procedures (CMP)
- *Note 6:* Some non-type-specific airplane manuals (e.g., Standard Manual, Consumable Materials List. etc.) may also need to be referenced by the operator. Please check AirbusWorld website for more information.
- *Note 7: Airbus issues SB and OEB as the need arises to quickly transmit technical and operational information.*
- *Note 8:* The Engine manuals are developed and distributed by the engine manufacturer; please reference the Engine TCDS for more information.
- *Note 9:* Information of Component Maintenance Manual provided by vendors can be found in the AirbusWorld website.

Section 7: Other Evaluation Items

7.1 Forward Observer Seat

Based on the compliance statement submitted by Airbus, CAAC AEG concluded that the seat referred to as the "third occupant seat" of Airbus A350 airplane is considered to have met the requirements of AC-121-28, it may be used as an observer seat for conducting on-route inspections.

Modifications to the above facilities from the original specifications will need approval by the responsible Principal Inspector (PI) of the CAAC and requires submittal of the following to the CAAC: additional analysis, demonstrations, proof of concept testing, differences documentation, or other supporting evidence as required.

7.2 Flight Crew Sleeping Quarters

The Flight Crew Rest Compartment (FCRC) is an option that can be installed in A350-900 airplane.

Based on the compliance statement submitted by Airbus, CAAC AEG concluded that the FCRC facilities in the main deck of Airbus A350-900 is considered to have met the requirements of AC-121-008, however specific operational approval for an operator to use the FCRC is still required, and following requirements should be considered:

- (1) Only approved crewmembers, trained in FCRC evacuation procedures, may occupy the FCRC. Clear definition of "crewmembers" allowed to occupy the FCRC must be specified in the operational approval. As a minimum, prior to occupying the FCRC, crewmembers must be familiarized with the conditions for occupancy and the safety provisions and equipment of the FCRC facility.
- (2) Written procedures should be developed by Operators regarding rescue and evacuation pertaining to occupants of the FCRC compartment.
- (3) FCRC familiarization must also be included in Cabin Crew training and additional responsibilities for ensuring the FCRC, if occupied, are evacuated during an airplane evacuation.

Modifications to the above facilities from the original specifications will need approval by the responsible Principle Inspector (PI) of CAAC, additional analysis, demonstrations, proof of concept testing, differences documentation, or other evidence may be required.

7.3 Electronic Flight Bag

The A350 EFB is part of the A350 On-board Information System (OIS), composed by portable EFBs

interfaced with avionics devices (installed EFB resources).

This paragraph is the formal statement that CAAC AEG has evaluated the EFB of Airbus A350-900 airplane based on the EASA Electronic Flight Bag (EFB) Evaluation Report for FlySmart with Airbus on Windows, and concluded that the compliance, at the manufacturer level, of EFB for operational use in A350-900.

Modifications to either the software or hardware from the original specifications will need re-approval by Flight Standards Department of CAAC, additional analysis, demonstrations, proof of concept testing, differences documentation, or other evidence may be required.

- Note 1: The A350 OIS is formed of two parts: AVNCS side that contains the avionics and maintenance applications part and EFB side that contains the flight operations applications. The Flight crew may use the applications that are installed on both parts, and access to each side through a dedicated OIS switch.
- *Note 2:* The above statement does not address the compliance of the Portable EFB hardware itself, whose choice is left under operator responsibility. Demonstration of compliance with portable hardware provisions is therefore under operator's responsibility.
- Note 3: The A350 EFB installed resources such as the docking stations, the cockpit display units, the flight-crew interaction means (keyboards and KCCU) are part of the A350 type definition and covered by the corresponding airworthiness approval, must be used in accordance with the requirements, guidelines and limitations specified in the document referenced in the AFM (Limitations Section ATA46 Information systems).
- *Note 4:* As the OIS is the baseline configuration for A350-900, and Knowledge about OIS and use of its documentation and performance applications is fully integrated into the A350 type rating courses for flight crews.
- Note 5: The EFB administration, Airbus has developed documents L46PR0609952 (FlySmart Administrator Roles Definition) and X060PR0916051 (FlySmart Windows Administration Workflows). Operators are responsible to appoint a suitable person as administrator and set up workflows accordingly.
- *Note 6:* As A350 designed for e-operation, there are no paper back up as traditional EFB solutions. The operational approval may validated by demonstration flights as required by §121.159.
- *Note 7:* For Any new version on the EFB applications, EASA has authorized Airbus to imply a complementary evaluation to verify that it has no adverse effect.
- *Note 8:* Above EFB related supporting documents, including EASA EFB Evaluation Report, for any new version on the EFB applications, are available by request to Airbus.

Find EASA EFB Evaluation Report:

http://www.easa.europa.eu/document-library/operational-suitability-data

7.4 Emergency Evacuation Demonstration

A350-900 airplane evacuation capability compliance was showed by using compatibility analysis and partial evacuation test instead of conducting a full-scale demonstration, and approved by EASA during type certification process.

As concluded by reference to the EASA OSD for Cabin Crew, CAAC AEG considers A350-900 has been shown to be in compliance with the full capacity emergency evacuation demonstration during the type certification process, and maximum number of passengers approved for emergency evacuation is as following:

- 385 passengers for CAAA exit configuration
- 330 passengers for CACA exit configuration
- 385 passengers for AACA exit configuration
- 440 passengers for AAAA exit configuration

The evacuation procedures are included in the A350 CCOM. Airbus document titled "A350-900 Type Specific Data for Cabin Crew" includes all necessary data to support the development of aircraft type specific training program by operators. Airbus document titled "A350-900 Cabin Aspects of Special Emphasis" (Reference V01RP1428088), includes the Cabin Aspects of Special Emphasis (CASE) identified during the cabin airworthiness certification process.

Find EASA Approve OSD for Cabin Crew:

The A350 Operational Suitability Data for Cabin Crew is available on AirbusWorld website or contact, SUPPORT, Ops-Suitability ops-suitability.support@airbus.com

Appendix: CAAC AEG Team and Point of Contact

A: CAAC AEG Team for A350-900 Evaluation

Xue Shi Jun	Director, AEG Division, Flight Standards Department
Chen Dong	Pilot, AEG Office, Civil Aviation Safety & Technology Center
<u>Fan Jing Zhu</u>	Engineer, AEG Office, Shanghai Aircraft Airworthiness Certification
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B: Airbus Point of Contact

Regine Vadrot	Head of Training Operational Certification, Product Integrity
Caroline Keegan	Operational Suitability Manager
Stella Liu Hui	Government Affairs Director