TCAR OPS OM-D WORKSHOP
Introduction to "OSD-FC"

Flight Operations Standards Department

Contents

Operational Suitability Data Flight Crew-Scope

OSD are normally established **by Aircraft Manufacturer**, however for the majority of <u>small</u> aircraft OSD are not established.

EASA
European Union Aviation Safety Agency

List of OSD TC/STC holders contacts

Revision date: 05 September 2023

Nr.	TC/STC Holder	Types/Models	CONTACT(S)
1	328 SUPPORT SERVICES GMBH	All	OSD@328.eu
2	AEROSTAR AIRCRAFT CORPORATION	All	info@aerostaraircraft.com
3	AIR TRACTOR, INC.	All	ATOSD@airtractor.com
4	AIRBUS	All	Operational Suitability Certification page of the external portal Airbus World.
		All	Ops-suitability.support@airbus.com
5	AIRBUS DEFENCE AND SPACE GmbH	All	ulrich.hagmann@airbus.com
6	AIRBUS DEFENCE AND SPACE SAU	All	jesus.canas@airbus.com
7	AIRBUS HELICOPTERS	All	information.osd-airbushelicopters.ahd@airbus.com
8	AIRBUS HELICOPTERS DEUTSCHLAND GmbH	All	information.osd-airbushelicopters.ahd@airbus.com
9	ALPHA AVIATION CONCEPT LIMITED	All	customer.support@alphaaviation.co.nz
10	ATR	All	OSD reports are available in ATR customer website-via ATRDOC, login is required. https://www.atractive.com
		All	OSD.Ops-Suitability@atr-aircraft.com
11	BAE SYSTEMS (OPERATIONS) LTD.	All	Alistair.Scott@baesystems.com
12	BEECHCRAFT CORPORATION	All	Please visit the website www.txtavsupport.com Once logged in and aircraft model selected, you will find OSD reports in the Aircraft Publications area.
13	BELL TEXTRON	All	Bell Product Support EngineeringTel: 1-450-437-2862 / 1-800-363-8003 productsupport@bellflight.com
14	BOEING COMPANY (THE)	All	Please log into MyBoeingFleet below: For Master Minimum Equipment List (MMEL): Flight Operations For Flight Crew Data (FCD) or Cabin Crew Data (CCD): Common Download Service
		All	OSD@boeing.com
15	BOMBARDIER TRAINING SERVICES (BTS)	All	ba_training_services@aero.bombardier.com
	MHIRJ AVIATION ULC	CL-600	percy.contractor@mhirj.com

OSD – Applicability of Data

OSD consists of **Mandatory** and **Non-Mandatory** element for the user

- ❖ Mandatory **[M]** element must be considered by the user (ATO, Operator)
    - Example:
        - ❖ **TASE**: Training Area Special Emphasis;
        - ❖ Operator Difference Requirement (**ODR**) table;
        - ❖ **Pre-requisite**.

- ❖ Non-Mandatory **[AMC]** elements are classified as AMC and provide flexibility for AMoC of achieving the same objective
    - Example:
        - ❖ Training Footprint (delivery method, session of FSTD, duration of training)
        - ❖ Training for optional devices.

OSD – Applicability of Data

OSD contains elements which **must** be provided by OEM and element which **may** be provided.

❖ Certain data **<u>must</u>** be provide:

Example:
  - ❖ **Aircraft Type** designation and Licence endorsement;
  - ❖ Initial **Type rating syllabus.**

❖ Certain data **<u>may</u>** be provided:

Example:
  - ❖ **Variant determination** and associated differences training syllabus;
  - ❖ FC requirement for operation of **optional equipment** (HUD, EFVS, etc.) or performance of **optional procedures** (RNP AR APP, LVO, Steep APP, etc.);
  - ❖ Common Takeoff and Landing Credits (**CTLC**).

OSD – Differences Level

DIFFERENCE LEVEL	TRAINING	CHECKING	CURRENCY
A	Self-Instruction	--	--
B	Aided instruction	Task or system check	Self-review
C	System devices	Partial proficiency check using qualified device	Designated system
D	Manoeuvre Training Devices or aircraft to accomplish specific manoeuvres *FTD Level 2 (& Level 3 for helicopter) or FFS or aircraft*	Partial proficiency check using qualified device	Designated manoeuvre(s)
E	Aeroplane: FFS Level C or D, or aeroplane Helicopter: FSTD'S having dual qualification (FFS Level B and FTD Level 3), or FFS Level C or D, or helicopter	Proficiency check	in accordance with regulation (Licensing / Air Ops Regulations)

OSD – Master Differences Requirement (MDR)

Example of MDR Table

<table>
<tr><td colspan="7">Master Differences Requirements (MDR) TABLE</td></tr>
<tr><td colspan="2">Aircraft Type Rating: xxx</td><td colspan="4">FROM AIRCRAFT</td></tr>
<tr><td rowspan="5">TO AIRCRAFT</td><td></td><td>Aircraft 1</td><td>Aircraft 2</td><td>Aircraft 3</td><td>Aircraft 4</td></tr>
<tr><td>Aircraft 1</td><td>---</td><td>D/D/C</td><td>D/D/C</td><td>*</td></tr>
<tr><td>Aircraft 2</td><td>C/C/B</td><td>---</td><td>A/A/A</td><td>*</td></tr>
<tr><td>Aircraft 3</td><td>C/C/B</td><td>A/A/A</td><td>---</td><td>*</td></tr>
<tr><td>Aircraft 4</td><td>D/D/E</td><td>D/D/D</td><td>D/D/A</td><td>---</td></tr>
</table>

Technical Requirement (AIRCREW Regulation)

Some example from TCAR PEL Part - FCL

Regulation/Ref.	Descriptions
FCL.010 - **Definition**	"**Type of aircraft**" means a categorisation of aircraft requiring a type rating as determined in the *operational suitability data established in accordance with EASA Part-21* or any equivalent material acceptable to the CAAT, and which include all aircraft of the same basic design including all modifications thereto except those which result in a change in handling or flight characteristics.
FCL.725 - Requirements for the issue of **class and type ratings**	(a) **Training course**. An applicant for a class or type rating shall complete a training course at an ATO….. The type rating training course shall include the *mandatory training elements for the relevant type as defined in the operational suitability data* established in accordance with EASA Part-21……

Technical Requirement (AIROPS)

Regulation/Ref.	Descriptions
ORO.FC.140 - **Operation on more than one type or variant**	(a) Flight crew members that operate **more than one type or variant** of aircraft shall comply with the requirements prescribed in this Subpart for each type or variant, unless **credits** related to the *training, checking, and recent experience requirements are defined in the mandatory part of the operational suitability data* established in accordance with EASA Part 21 or any equivalent material acceptable to the CAAT for the relevant types or variants.
AMC1 ORO.FC.240 - **Operation on more than one type or variant**	(2) When a flight crew member operates more than one aeroplane type or variant within one or more licence endorsement, as determined by the operational suitability data established in accordance with EASA Part 21 or any equivalent material acceptable to the CAAT, the operator should ensure that: ………. (ii) the flight crew member does not operate more than two aeroplane types or variants for which a separate licence endorsement is required, *unless **credits** related to the **training, checking,** and **recent experience** requirements are defined in the operational suitability data* established in accordance with EASA Part 21 or any equivalent material acceptable to the CAAT for the relevant types or variants;….

Technical Requirement (AIROPS)

Regulation/Ref.	Descriptions
SPA.GEN.105 Application for a **specific approval**	(a)The operator applying for the initial issue of a specific approval shall provide to the competent authority the documentation required in the applicable Subpart … (b) The operator shall provide the following evidence to the competent authority: (1) compliance with the requirements of the applicable Subpart; (2) that the *relevant elements defined in the mandatory part of the operational suitability data* established in accordance with EASA Part 21 or any equivalent material acceptable to the CAAT are taken into account

Flight Crew Data (Mandatory information)

2 Operational Suitability Data (OSD)-Flight Crew

2.1 Aircraft Type Designation and Pilot License Endorsement [M]

With reference to Part-FCL, FCL.010 ('type of aircraft') and GM1 FCL.710, all ATR 42/72 series aircraft have been evaluated for aircraft categorisation and license endorsement.

The ATR 42/72 series aircraft have been assessed as variants requiring familiarization / differences training as detailed in this report. The license endorsement is established as "ATR42/72".

2.2 EASA Type Rating & License Endorsement List – Aeroplanes: [M]

Manufacturer	Aircraft Model / Name	License Endorsement	Variants	Complex	SP/ SP HPA/ MP	OEB FC Report OSD FC available	Remarks
ATR	ATR 42 (Non PEC equipped) ATR 42 (PEC equipped) ATR 72 (non PEC equipped) ATR 72 (PEC equipped) ATR 42 (glass cockpit) ATR 72 (glass cockpit)	ATR42/72	X	X	MP	X	OSD FC ATR42/72 dated of issue Dec 11th 2015

PEC = Propeller Electronic Control

Note: All ATR 42/72 series aircraft have been assessed as variants requiring familiarization / differences training as summarized in the MDR table.

See EASA Explanatory Notes: EASA Type Rating & License Endorsement Lists Flight Crew

4 Aircraft Type Designation and Pilot Licence Endorsement [M]

With reference to Part-FCL, FCL.010 ('type of aircraft') and GM1 FCL.700, the A350-900 aircraft has been evaluated for aircraft categorisation and licence endorsement.

The A350-900 and A330 series aircraft have been assessed as requiring maximum Level D differences training, allowing thus a single licence endorsement.

The licence endorsement is established as A330/350.

EASA Type Rating & Licence Endorsement List – Aeroplanes:

Manufacturer	Aeroplane Model / Name	Licence Endorsement	Complex Aircraft	SP / SP HPA / MP	OSD FC available
Airbus	A330 - 300 series - 200 series - 200 F A350 -900 series	A330/350 (D)	X	MP	X

Operational Suitability Data (OSD) – Flight Crew

1. Aircraft Type Designation and Pilot License Endorsement [M]

With reference to Part-FCL, FCL.010 ('type of aircraft') and GM1 FCL.700, the C-510 has been evaluated for aircraft categorisation and license endorsement.

The license endorsement is established as "C510".

Manufacturer	Aircraft Model / Name	License Endorsement	Variants	Complex	SP / SP HPA / MP	OEB FC REPORT / OSD FC available	Remarks
Cessna	510 (Citation Mustang)	C510	–	X	SP HPA	X	OSD FC C-510, dated 27 Jan 2015

Flight Crew Data (Mandatory information: TASE)

Training Area of Special Emphasis:

❖ Given mandatory training items specific to **aircraft type**, **variant** or **equipment**. TASE items will be related to:

- ➢ Type rating Training;

- ➢ Difference / Familiarisation (or Equipment) Training;

- ➢ Recurrent Training.

Example of TASE:

- ▪ FMS, MFD/MCDU, Use of electronic checklist: ECL, Flight Desk Alerting System;

- ▪ Flight control system (e.g. stabilizer trim, Runaway Stabilizer, unreliable A/S….

Flight Crew Data (Mandatory information: TASE)

7.4 Training Areas of Special Emphasis (TASE) [M]

Part-FCL, FCL.710(a) and FCL.725(a) address training requirements for type rating, differences and familiarization training to include the relevant elements as defined in the operational suitability data.

Part-ORO, ORO.FC.145(b) addresses operator requirements to include the relevant elements as defined in the operational suitability data when establishing the training programmes and syllabi.

The TASE are organized as follows:

- **[M]** TASE applicable to any Airbus fly by wire aircraft and that shall be considered as part of any Airbus fly by wire family "Standard Transition Course" are provided in §7.4.1
- **[M]** TASE applicable only to the A350 and A380 and that shall be considered as part of A350 or A380 "Standard Transition Courses" as well as in A330-A350 CTR difference training course and CCQ courses to the A350 (except the A380-A350 CCQ course) are provided in §7.4.2.
- **[M]** TASE applicable to specific variants or aircraft modifications within the A330 or A350 are provided in §7.4.3.

Operator Difference Requirements (ODR) table

ODR table need to be **used** and **customized** by ATO or Operator when developing differences/familiarisation training program.

BASE AIRCRAFT: A320 (MSN 4465)		CANDIDATE AIRCRAFT: A330-200 (MSN 1104)			DIFFERENCE LEVELS		
SYSTEMS	DIFFERENCES		FLT CHAR	PROC CHG	TRNG	CHECK	CUR
21 - Pressurization	OUTFLOW VALVES : - 2 outflow valves are installed - Pressurization is inhibited if the doors are not closed - Addition of a negative relief valve		No	Yes	B	B	--
21 - Pressurization	OUTFLOW VALVES : - Specific switches in the cockpit		No	Yes	B	B	--
21 - Pressurization	CONTROLS & INDICATORS : - New PRESS panel layout (control and location)		No	Yes	C	C	--

Systems

Description of the identified differences

Impact Assessment

Differences training level (A-E)

FCL.720.A Experience requirements and prerequisites for the issue of class or type ratings – aeroplanes

(b) Multi-pilot aeroplanes.

Applicants for the issue of the first type rating for a multi-pilot aeroplane shall be student pilots currently undergoing training on an MPL training course or shall, before starting the type rating training course, comply with the following requirements:

(1) have at least 70 hours of flight experience as PIC on aeroplanes;

(2) hold or have held a multi-engine IR(A);

(3) have passed the ATPL(A) theoretical knowledge examinations in accordance with this regulation

(4) except when the type rating course is combined with an MCC course:

  (i) hold a certificate of satisfactory completion of an MCC course in aeroplanes; or

  (ii) hold a certificate of satisfactory completion of MCC in helicopters and have more than 100 hours of flight experience as a pilot on multi-pilot helicopters; or

  (iii) have at least 500 hours as pilots of multi-pilot helicopters; or

  (iv) have at least 500 hours as pilot in multi-pilot operations on Single-pilot multi-engine aeroplanes, in commercial air transport in accordance with the applicable air operations requirements; and

/i\ RECAP: Regulatory Requirement – Prerequisite for Type Rating

FCL.720.A Experience requirements and prerequisites for the issue of class or type ratings – aeroplanes

(5) have completed the training course specified in FCL.745.A, unless they comply with any of the following:

    (i)   they completed, within the preceding 3 years, the training and checking in accordance with points ORO.FC.220 and ORO.FC.230 of TCAR OPS Part ORO;

    (ii)   they have completed the training specified in point FCL.915(e)(1)(ii).

Training Footprint for type rating training

Additional **Pre-Requisites of FC for initial TR** [FCL 720.A] are also detailed in OSD:

AIRBUS

[AIRBUS Amber]

OPERATIONAL SUITABILITY DATA – FLIGHT CREW – A330/A350
Operational Suitability Data Flight Crew Report

REFERENCE V01RP1505446
ISSUE 11.1
DATE 08 October 2021

Appendix 8. [AMC] A320 to A330 CCQ

Prerequisite: valid A320 type rating with 3 months and 150 hours of A320 experience

Day1	Day 2	Day 3	Day 4	Day 5
CREW registration CBT	CBT	CBT	FFS 1	FFS 2
Day 6	Day 7	Day 8		
FFS 3	SKILL TEST FFS	BASE TRAINING FLIGHT OR BASE TRAINING FFS		

CBT: Computer Based Training
FFS: Full Flight Simulator Level D

5.1 Prerequisites for Initial type rating

[M] In addition to the requirements stated in FCL 720.A (d) pilots shall meet the following prerequisites before commencing an ATR 42/72- initial type rating training:

Captain	First Officer

• Valid and current ATPL
• Flight time
  ➢ 1500h as pilot
  ➢ 500h on Part-25/FAR-25 or Part-23/FAR-23 aircraft operated in multi-crew environment
	• Valid and current CPL with IR/ME
	• Flight time
	  ➢ 500h as pilot
	  ➢ 200h on Part-25/FAR-25 or Part-23/FAR-23 aircraft operated in multi-crew environment

/i\ Note: OSD may contain inconsistency info with current regulation (e.g. pre-requisite, article reference)

Training Footprint for Type Rating (TR) Training

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Operational Suitability Data – Flight Crew   Boeing 737 CL / NG / MAX

[AMC - 2] 737 NG Initial Type Rating

Day 1	Day 2	Day 3	Day 4	Day 5
Introduction (1:00) CBT (6:00)	CBT (3:30) OTD (3:30)	CBT (2:00) OTD (5:00)	CBT (1:30) OTD (5:30)	CBT (7:00)
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day 10**
CBT (1:30) OTD (5:30)	CBT (2:00) OTD (5:00)	CBT (7:00)	CBT (1:30) OTD (5:30)	CBT (1:30) OTD (5:30)
Day 11	**Day 12**	**Day 13**	**Day 14**	**Day 15**
CBT (2:00) OTD (5:00)	Performance / Tutorial L&B (5:00) CBT (2:00)	TKE (4:00) Variances (if needed) (3:00)	FSTD (6:00)	FSTD (6:00)
Day 16	**Day 17**	**Day 18**	**Day 19**	**Day 20**
FFS (6:00)	FFS (6:00)	FFS (6:00)	FFS (6:00)	FFS (6:00)
Day 21	**Day 22**			
FFS (6:00)	Skill Test			

Notes:

Times for OTD include 1.5 Hour briefing and .5 Hour debriefing.
Times for FFS include 1.5 Hour briefing and .5 Hour debriefing.

OTD: Boeing 737 NG Classroom, may be substituted by appropriate device (FPT).
FFS: 737 NG FFS Level C or D.

TKE: Technical Knowledge Examination.
L&B: Load & Balance.

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Appendix 10.   [AMC] A350 Standard Transition type training (with and without HUD)

Prerequisite: pilots complying with FCL.720.A (d)

Day 1	Day 2	Day 3	Day 4	Day 5
CREW registration WELCOME Briefing (1h) ACE Presentation (1h) PERFORMANCE Course (4h)	ACE	ACE	ACE	ACE Doors Trainer (1h) AOP
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day 10**
ACE FMST (2h)	ACE SOPs (4h) System Test (2h30)	FFS 1	APT+ 1	APT+ 2
Day 11	**Day 12**	**Day 13 (HUD)**	**Day 13 or 14 (HUD)**	**Day 14 or 15 (HUD)**
APT+ 3	FFS 2	FFS HUD (OPTION)	FFS 3	FFS 4
Day 15 or 16 (HUD)	**Day 16 or 17 (HUD)**	**Day 17 or 18 (HUD)**	**Day 18 or 19 (HUD)**	**Day 19 or 20 (HUD)**
APT+ 4	APT+ 5	APT+ 6	FFS 5	FFS 6
Day 20 or 21 (HUD)	**Day 21 or 22 (HUD)**	**Day 22 or 23 (HUD)**	**Day 23 or 24 (HUD)**	
FFS 7	FFS 8	FFS 9	SKILL TEST	

PTT: Part Task Trainer – ACE- FMS Trainer (description in Appendix 15)
APT+: Flight Training Device (description in Appendix 15)
FFS: Full Flight Simulator Level D

Flight Crew Training Workshop, OSD-FC

Information relevant to Regulatory Requirement

❖ **Recurrent Training & Checking** [ORO.FC.230 + AMC]:

➢ Included identified **TASE**;

➢ **Validity** for **variant** (including ORO.FC.140,240 e.g. 330/350);

❖ **Recent Experience** [FCL.060]:

➢ Takeoff and Landing;

➢ Common Take-Off and Landing Currency: **CTLC** (for variant).

12.2.1.3   A330 and A320 (or A340, or A380) MFF recent experience requirements

Recent experience requirements are contained in Part-FCL, FCL.060.

[M] With reference to Part-ORO, ORO.FC.140(a), credit is granted for recent experience requirements when operating both the A330 type and the A320 (or A340, or A380) type, as specified in the following table:

MIXED FLEET FLYING	CURRENCY/RECENT EXPERIENCE REQUIREMENTS
A330 and A320	- 3 takeoffs and landings as PF in either A330 or A320 within 90 days - 1 takeoff and landing as PF in each type **every 45 days**.
A330 and A340	- 3 takeoffs and landings as PF in either A330 or A340 within 90 days - 1 takeoff and landing as PF in each type **every 90 days**.
A330 and A380	- 3 takeoffs and landings as PF in either A330 or A380 within 90 days - 1 takeoff and landing as PF in each type **every 45 days**.

Note: re-establishing currency/recent experience requirements – when lost, it may be re-established by a training or use of a flight simulator of the aeroplane type concerned.

10.1   Common Take-Off and Landing Currency (CTLC)

[AMC-4] CTLC recency of experience. Take-offs and landings performed on the 787-8/-8200/-9 may be credited towards the take-off and landing requirements for the 737-300 to 737-900 as specified in the following table.

Table 4 – Credit for Recent Experience

Credit for recent experience in accordance with Part-FCL, FCL.060	
From aircraft	To aircraft
B787-8/-9	B737 300-900: 1 take-off and 1 landing may be credited in the preceding 90 days

CTLC credits are applicable from the 787-8/-9 to the 737 300-900.

Information relevant to Regulatory Requirement

- ❖ **OPC/LPC** [ORO.FC.220, 230]
  - ➢ Validity for variant;
  - ➢ MFF.

- ❖ **LIFUS** [GM1 ORO.FC.220(d)]
  - ➢ MFF (e.g. CCQ, Differences)

- ❖ **Line Check** [ORO.FC.230 (c) + AMC]
  - ➢ Validity for variant;

- ❖ **Consolidated Period** for S/MFF:
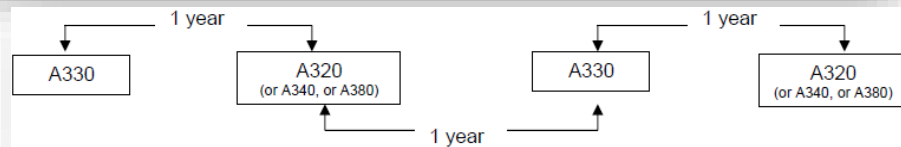 - ➢ Flying hours / Route sectors….

[M] Proficiency checks performed on A330 or on A350 series aircraft are valid for both variants, provided that the differences are addressed during recurrent training as per ODR tables.

Consequently proficiency checks can be conducted on any approved A330 simulator or A350 simulator (FFS).

10.2 LIFUS following A320 to A330 CCQ course

[M] After completion of CCQ A320 to A330, a minimum of 4 route sectors of LIFUS should be performed, followed by a 2 route sector line check.

[AMC] Where the change of aircraft type also implies a change of operating conditions or route structure this should also be taken into account and may need the addition of route sectors to cover these elements.

e) Consolidation period as per AMC1 ORO.FC.240(a)(4)(iv):

   a. If qualified and current on A380 and for the purpose of A350/A380 MFF: 4 sectors solely on A350

   b. If qualified and current on A320, or A340 and for the purpose of A350/A320 or A350/A340 MFF: 50 flying hours or 20 sectors solely on A350

Flight Crew Training Workshop, OSD–FC

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