



EASA
European Aviation Safety Agency

Aircrew Training Conference

OSD Flight Crew Data

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- **OSD FC – Framework**
- **Requirement for OSD FC data**
- **OSD FC Scope – typical examples regarding**
 - **regulation aircrew (Part-FCL)**
 - **air operations (Part-ORO, Part SPA)**



Basic Regulation

Regulation (EC) No 216/2008
as amended

Initial Airworthiness (Part-21)

Regulation (EU)
748/2012 as
amended by
Commission
Regulation (EU)
69/2014

Continuing Airworthiness

Commission
Regulation (EU)
No 1321/2014

Certification Specifications for Operational
Suitability Data (OSD) Flight Crew Data CS-
FCD



OSD FC activity is derived from the "Basic Regulation", Article 5 (Airworthiness), para. 5(e)(v)



... the minimum syllabus of pilot type rating and the qualification of associated simulators to ensure compliance with Article 7 [Pilots]



OSD FC activity is implemented through Part-21, para. 21.A.21 (e)



The applicant shall be entitled to have a product type-certificate issued by the Agency after ... it is demonstrated that the operational suitability data meets the applicable operational suitability data certification basis ...



OSD FC is maintained through CA activities



OSD FC activity is conducted in accordance with CS-FCD



describes the process



CS FCD.100 (Applicability) (a) ... applicable to aircraft for which a pilot type rating is determined



Aircrew Regulation

Commission Regulation 1178/2011
“Part-FCL”

AMC & GM
to Part-FCL
and to Part-ORA

Air operations (Part-ARO, -ORO, Part-CAT, -SPA)

Commission Regulation 965/2012

AMC & GM
to Part-ORO

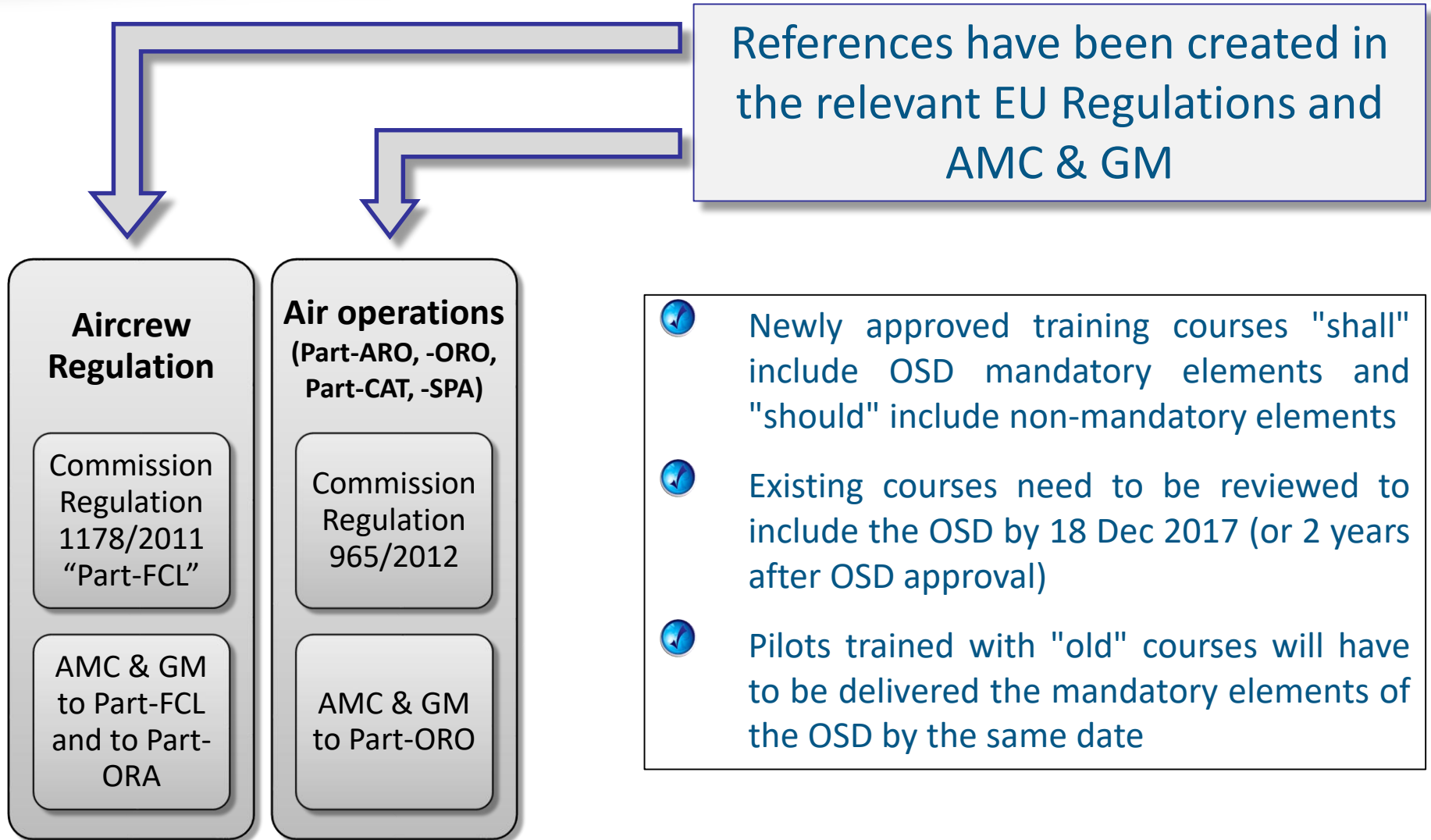


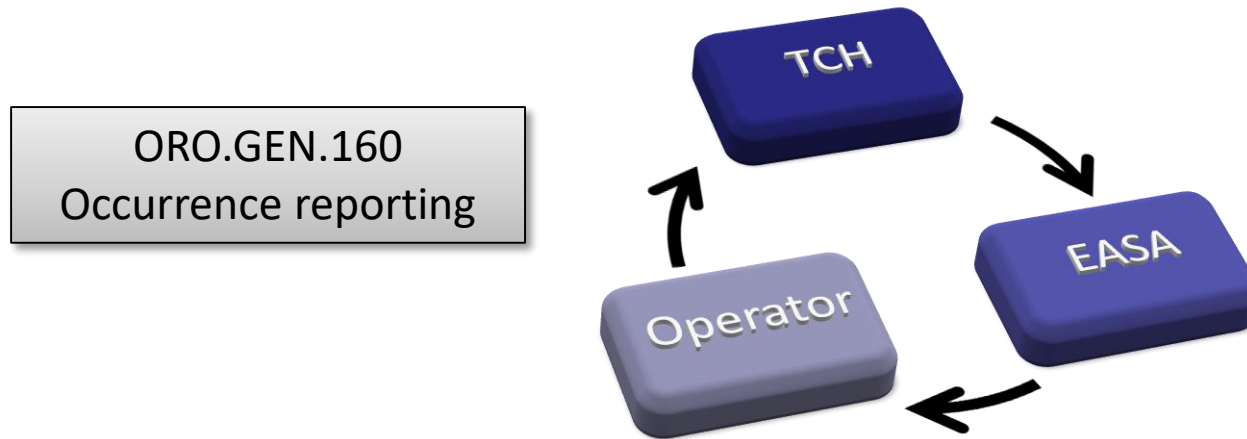
OSD FC scope is referenced in Part-FCL and Air Operations (Part-ORA, Part-ORO, Part-SPA):

- establishes mandatory and non-mandatory (AMC) data
- ... unless otherwise determined by the operational suitability data ...
- ... when credits are defined in the operational suitability data ...



OSD FC – Framework





OSD closes the Safety Management loop



integrates occurrence reporting



incorporates design changes



OSD FC is required, if



TC was issued / application submitted before 17 Feb 2014
and



Manufacturer intends to deliver a new aircraft to an EU
operator on or after 17 Feb 2014



**Compliance with the OSD FC may be deferred until the
operational suitability data must actually be used.**

Existing (J)OEB reports have been transposed into OSD data



OSD FC – Requirements

➤ **Operational Suitability Data consist of elements which must be developed by the OEM and of elements which may be developed**

- Certain data must be provided for each aircraft to enable pilots to operate the aircraft
examples are
 - Aircraft type designation and license endorsement
 - Data for Initial type rating training

- Certain data may be provided
examples are
 - Variant determination and associated differences training syllabus
 - Flight crew requirements for the operation of optional equipment (HUD, EVS, etc.) or the performance of optional procedures (RNP AR, LVO, Steep Approaches, etc.)
 - Common Take-Off and Landing Credits (CTLIC)



➤ **EASA Operational Suitability Data consist of mandatory and non-mandatory elements for the user**

➤ **Mandatory elements**

examples are

- Training Areas of Special Emphasis (TASE)
- Operator Differences Requirement (ODR) Tables
- Prerequisites

➤ **Non-mandatory elements provide flexibility for alternate means of achieving the same objective**

examples are

- Training Footprint (delivery method of training, selection of training devices, duration of training)
- Training for optional devices or procedures



OSD FC stand-alone elements



- are not in conjunction with type design changes (not combined with TC or STC modifications)



- may result from in-service experience or safety recommendations (e.g. addition of TASEs)



- may be voluntary additions to support operational needs (e.g. credits for mixed fleet flying)



- ...



Examples:



- Common Take-off and Landing Credit (CTLIC) between aircraft



- Training credits for commonality between different aircraft



- ...



OSD FC Elements – Regulation Aircrew

- Regulations for pilot licensing and air operations contain the technical requirements
- Example aircrew licensing



FCL.010

Definitions

"Type of aircraft" means a categorisation of aircraft requiring a type rating as determined in the operational suitability data established in accordance with Part-21, 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.



OSD FC elements typically include:

-  Determination of aircraft pilot type rating (new type / variant, license endorsement)

Example

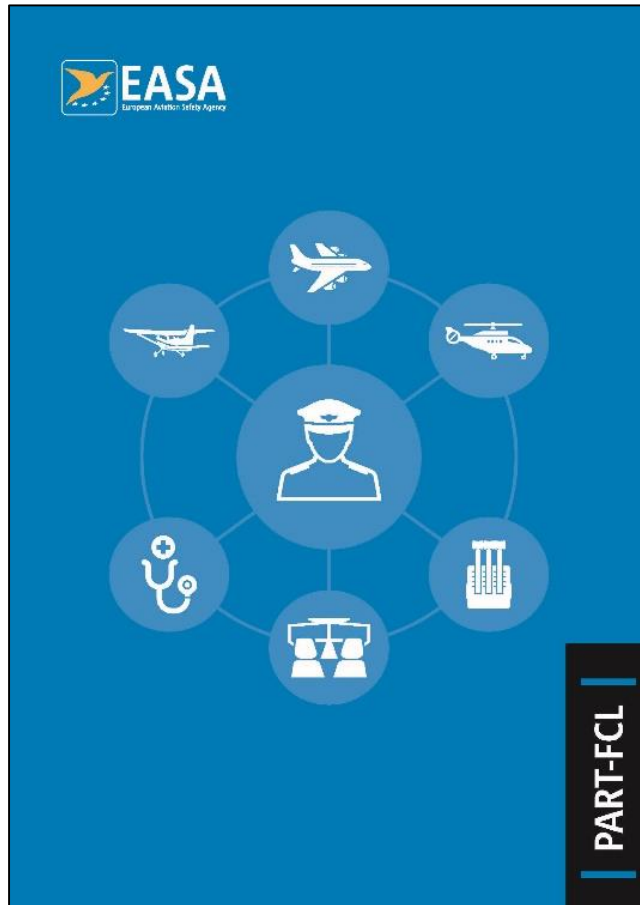
Manufacturer	Aircraft Model / Name	License Endorsement	Variants	Complex	SP / SP HPA / MP	OEB FC REPORT / OSD FC available	Remarks
Boeing	B777 - 200 series	B777/787	X	X	MP	X	OSD FC B777/787
	-300 series						
	B777F						
	B787 - 8 series						
	- 9 series						

-  Mandatory element



OSD FC Elements – Regulation Aircrew

- Regulations for pilot licensing and air operations contain the technical requirements
- Example aircrew licensing



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 Part-21.



OSD FC elements typically include:

Training Areas of Special Emphasis

Training Areas of Special Emphasis (TASE)

Example

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.

- 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.

Mandatory element



OSD FC Elements – Air Operations



Regulations for pilot licensing and air operations contain the technical requirements



Example aircrew licensing



Part-FCL

Appendix 9

Training, skill test and proficiency check for MPL, ATPL, type and class ratings, and proficiency check for IRs

CONTENT OF THE TRAINING, SKILL TEST/PROFICIENCY CHECK

4. Unless otherwise determined in the operational suitability data established in accordance with Part-21, the syllabus of flight instruction shall comply with this Appendix. The syllabus may be reduced to give credit for previous experience on similar aircraft types, as determined in the operational suitability data established in accordance with Part-21.

5. Except in the case of skill tests for the issue of an ATPL, when so defined in the operational suitability data established in accordance with Part-21 for the specific type, credit may be given for skill test items common to other types or variants where the pilot is qualified.



OSD FC elements typically include:

-  Credit for commonality (between different type of aircraft)
-  Familiarization / Differences Training between variants)

Master Differences Requirement (MDR) Table				
		FROM AIRPLANE		
		<aircraft 1>	<aircraft 2>	<aircraft 3>
TO AIRPLANE	<aircraft 1>	-----	B/A/A	not evaluated
	<aircraft 2>	A/A/A	-----	C/C/A
	<aircraft 3>	D/D/C	C/C/A	-----

Example

 Mandatory element



OSD FC elements typically include:



Operator Differences Requirements (ODR) Tables

ODR Tables for <aircraft 1> to <aircraft 2>

Definitions used in the ODR Tables:

X Flight Manual / Pilot's Operating Handbook and/or FM Supplement
AI Aided Instruction
CBT Computer Based Training
ICBT Interactive Computer Based Training
FTD Flight Training Device (Level 1 or 2)
FFS Full Flight Simulator (Level C or D)

Example

				COMPLIANCE METHOD					
				TRAINING				CHKG/CURR	
DESIGN / SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Weights	MTOW 13,420 lbs Ramp Weight 13,510lbs.	NO	YES		AI			A	B
Flight Deck	Takeoff Trim Warning System Overspeed Warning System Stall Warning Ice Mode	NO	YES			FTD		B	C
31 Indicating/Record	Takeoff Warning Trim system added Stall Warning system new Ice mode	NO	YES		AI			B	B



Mandatory element



OSD FC elements typically include:



Operator Differences Requirements (ODR) Tables

ODR Tables for <aircraft 1> to <aircraft 2>

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Example

				COMPLIANCE METHOD					
				TRAINING				CHKG/CURR	
MANEUVER	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Takeoff	Add V1, Vr Procedure, Rotate 6-7 degrees pitch initially	YES	YES			FTD		C	C
Climb	Delce Boot activation at first indication								
Cruise	Stall Warning Ice Mode speed procedures	NO	YES		AI			B	C
Decent	Minimum speed in Icing not 145 kts								
Instrument Approaches	Approach Climb Gradient for landing Balked Climb Gradient for landing	YES	YES				FFS	D	D



Mandatory element



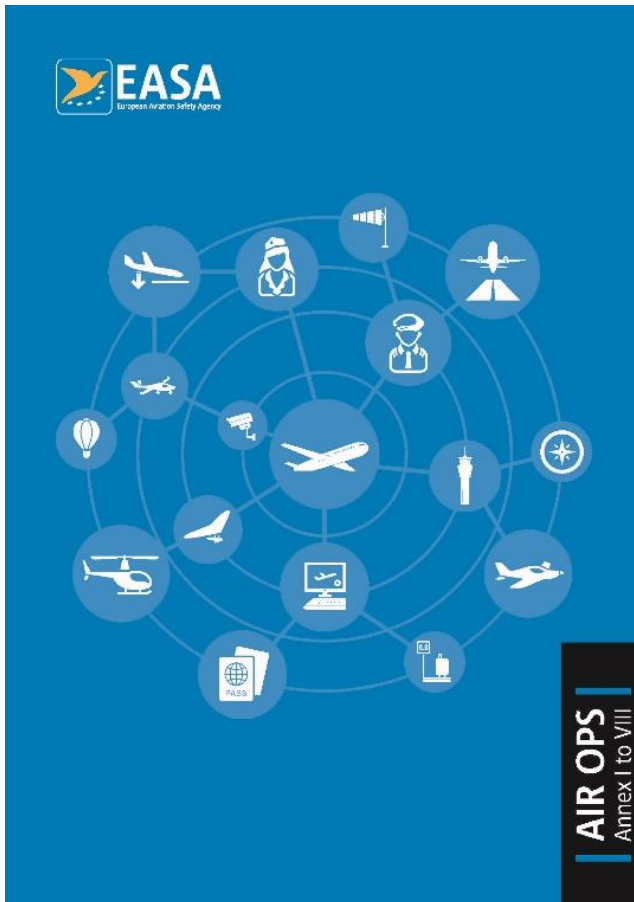
OSD FC Elements – Air Operations



Regulations for pilot licensing and air operations contain the technical requirements



Example air operations



ORO.FC.140

**Operation on
more than one
type or variant**

(a) Flight crew members operating 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 applicable operational suitability data for the relevant types or variants.



OSD FC elements typically include:

Example

Line Checks

A line check performed on either <aircraft 1> or <aircraft 2> revalidates the line check for either type.

Example

Operator Proficiency Checks

Full credit is granted for recurrent checking requirements when operating multiple <aircraft> variants, either by alternating recurrent checking between the variants or by addressing the differences of the variants flown in each checking.

Mandatory elements



EASA

European Aviation Safety Agency

EASA OSD Flight Crew

Thank You

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