

Annex to Decision 2014/009/R

Annex to Decision 2014/009/R of the Executive Director of the Agency of 31.01.2014 amending Acceptable Means of Compliance and Guidance Material to Part-ORO of Regulation (EU) No 965/2012.

The text of the amendment is arranged to show deleted text, new or amended text as shown below:

1. deleted text is marked with ~~strike through~~;
2. new or amended text is highlighted in **grey**;
3. an ellipsis (...) indicates that the remaining text is unchanged in front of or following the reflected amendment.

AMC1 ORO.FC.240 Operation on more than one type or variant**GENERAL**

(a) Aeroplanes

- (1) When a flight crew member operates more than one aeroplane class, type or variant ~~listed in Regulation (EU) No 1178/2011 and associated procedures~~, as determined by the operational suitability data established in accordance with Commission Regulation (EU) No 748/2012 for class-single pilot ~~and/or~~ type-single pilot, but not within a single licence endorsement, the operator should ensure that the flight crew member does not operate more than:
 - (i) three reciprocating engine aeroplane types or variants;
 - (ii) three turbo-propeller aeroplane types or variants;
 - (iii) one turbo-propeller aeroplane type or variant and one reciprocating engine aeroplane type or variant; or
 - (iv) one turbo-propeller aeroplane type or variant and any aeroplane within a particular class.
- (2) When a flight crew member operates more than one aeroplane type or variant within one or more licence endorsement as ~~defined by Regulation (EU) No 1178/2011 and associated procedures~~ determined by the operational suitability data established in accordance with Commission Regulation (EU) No 748/2012, the operator should ensure that:
 - (i) the minimum flight crew complement specified in the operations manual is the same for each type or variant to be operated;
 - (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 data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for the relevant types or variants; and
 - (iii) only aeroplanes within one licence endorsement are flown in any one flight duty period, unless the operator has established procedures to ensure adequate time for preparation.
- (3) When a flight crew member operates more than one aeroplane type or variant as ~~listed in Regulation (EU) No 1178/2011 and associated procedures~~ determined by the operational suitability data established in accordance with Commission Regulation (EU) No 748/2012 for type-single pilot and type-multi pilot, but not within a single licence endorsement, the operator should comply with points (a)(2) and (4).
- (4) When a flight crew member operates more than one aeroplane type or variant ~~listed in Regulation (EU) No 1178/2011 and associated procedures~~ as determined by the operational suitability data established in accordance

with Commission Regulation (EU) No 748/2012 for type multi-pilot, but not within a single licence endorsement, or combinations of aeroplane types or variants listed in Regulation (EU) No 1178/2011 and associated procedures as determined by the operational suitability data established in accordance with Commission Regulation (EU) No 748/2012 for class single-pilot and type multi-pilot, the operator should comply with the following:

- (i) point (a)(2);
- (ii) before exercising the privileges of more than one licence endorsement:
 - (A) flight crew members should have completed two consecutive operator proficiency checks and should have:
 - 500 hours in the relevant crew position in CAT operations with the same operator; or
 - for IFR and VFR night operations with performance class B aeroplanes, 100 hours or flight sectors in the relevant crew position in CAT operations with the same operator, if at least one licence endorsement is related to a class. A check flight should be completed before the pilot is released for duties as commander;
 - (B) in the case of a pilot having experience with an operator and exercising the privileges of more than one licence endorsement, and then being promoted to command with the same operator on one of those types, the required minimum experience as commander is 6 months and 300 hours, and the pilot should have completed two consecutive operator proficiency checks before again being eligible to exercise more than one licence endorsement;
- (iii) before commencing training for and operation of another type or variant, flight crew members should have completed 3 months and 150 hours flying on the base aeroplane, which should include at least one proficiency check, unless credits related to the training, checking and recent experience requirements are defined in data established in accordance with Regulation (EC) No 1702/2003 Commission Regulation (EU) No 748/2012 for the relevant types or variants;
- (iv) after completion of the initial line check on the new type, 50 hours flying or 20 sectors should be achieved solely on aeroplanes of the new type rating, unless credits related to the training, checking and recent experience requirements are defined in data established in accordance with Regulation (EC) No 1702/2003 Commission Regulation (EU) No 748/2012 for the relevant types or variants;
- (v) recent experience requirements established in Commission Regulation (EU) No 1178/2011 for each type operated;
- (vi) the period within which line flying experience is required on each type should be specified in the operations manual;

(vii) when credits are defined in data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for the relevant type or variant, this should be reflected in the training required in ORO.FC.230 and:

- (A) ORO.FC.230 (b) requires two operator proficiency checks every year. When credits are defined in data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for operator proficiency checks to alternate between the types, each operator proficiency check should revalidate the operator proficiency check for the other type(s). The operator proficiency check may be combined with the proficiency checks for revalidation or renewal of the aeroplane type rating or the instrument rating in accordance with Commission Regulation (EU) No 1178/2011.
- (B) ORO.FC.230 (c) requires one line check every year. When credits are defined in data established in accordance for ~~Regulation (EC) No 1702/2003~~ with Commission Regulation (EU) No 748/2012 for line checks to alternate between types or variants, each line check should revalidate the line check for the other type or variant.
- (C) Annual emergency and safety equipment training and checking should cover all requirements for each type.

(b) Helicopters

(1) If a flight crew member operates more than one type or variant, the following provisions should be met:

- (i) The recency requirements and the requirements for recurrent training and checking should be met and confirmed prior to CAT operations on any type, and the minimum number of flights on each type within a 3-month period specified in the operations manual.
- (ii) ORO.FC.230 requirements with regard to recurrent training.
- (iii) When credits related to the training, checking and recent experience requirements are defined in data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for the relevant types or variants, the requirements of ORO.FC.230 with regard to proficiency checks may be met by a 6 monthly check on any one type or variant operated. However, a proficiency check on each type or variant operated should be completed every 12 months.
- (iv) For helicopters with a maximum certified take-off mass (MCTOM) of more than 5 700 kg, or with a maximum operational passenger seating configuration (MOPSC) of more than 19:
 - (A) the flight crew member should not fly more than two helicopter types, unless credits related to the training, checking and recent experience requirements are defined in data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for the relevant types or variants;

- (B) a minimum of 3 months and 150 hours experience on the type or variant should be achieved before the flight crew member should commence the conversion course onto the new type or variant, unless credits related to the training, checking and recent experience requirements are defined in data established in accordance with Commission Regulation (EU) No 748/2012 for the relevant types or variants;
 - (C) 28 days ~~and/or~~ 50 hours flying should then be achieved exclusively on the new type or variant, unless credits related to the training, checking and recent experience requirements are defined in data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for the relevant types or variants; and
 - (D) a flight crew member should not be rostered to fly more than one type or significantly different variant of a type during a single duty period.
 - (v) In the case of all other helicopters, the flight crew member should not operate more than three helicopter types or significantly different variants, unless credits related to the training, checking and recent experience requirements are defined in data established in accordance with ~~Regulation (EC) No 1702/2003~~ Commission Regulation (EU) No 748/2012 for the relevant types or variants.
- (c) Combination of helicopter and aeroplane
- (1) The flight crew member may fly one helicopter type or variant and one aeroplane type irrespective of their MCTOM or MOPSC.
 - (2) If the helicopter type is covered by paragraph (b)(1)(iv) then (b)(1)(iv)(B), (C) and (D) should also apply in this case.

AMC2 ORO.FC.240 Operation on more than one type or variant

(a) Terminology

The terms used in the context of the operation of more than one type or variant have the following meaning:

- (1) Base aircraft means an aircraft used as a reference to compare differences with another aircraft.
- (2) Variant means an aircraft or a group of aircraft within the same pilot type rating that has differences to the base aircraft requiring difference training or familiarisation training.
- (3) Credit means the recognition of training, checking or recent experience based on commonalities between aircraft. For substantiation of the credits ODR tables or other appropriate documentation for comparison of the relevant aircraft characteristics may be provided.
- (4) Operator difference requirements (ODRs) mean a formal description of differences between types or variants flown by a particular operator.

(b) Philosophy

The concept of operating more than one type or variant depends upon the experience, knowledge and ability of the operator and the flight crew concerned.

The first consideration is whether or not aircraft types or variants are sufficiently similar to allow the safe operation of both.

The second consideration is whether or not the types or variants are sufficiently similar for the training, checking and recent experience. Unless credits have been established by the operational suitability data in accordance with Commission Regulation (EU) 1702/2003, all training, checking and recent experience requirements should be completed independently for each type or variant.

(c) Methodology – Use of Operator Difference Requirement (ODR) Tables

(1) Before assigning flight crew members to operate more than one type or variant of aircraft, the operator should conduct a detailed evaluation of the differences or similarities of the aircraft concerned in order to establish appropriate procedures or operational restrictions. This evaluation should be based on the data established in accordance with Commission Regulation (EU) No 1702/2003 for the relevant types or variants, and should be adapted to the operator’s specific aircraft configurations. This evaluation should take into account of the following:

- (i) the level of technology;
- (ii) operational procedures; and
- (iii) handling characteristics.

The methodology described below should be used as a means of evaluating aeroplane differences and similarities to justify the operation of more than one type or variant, and when credit is sought.

(2) ODR tables

Before requiring flight crew members to operate more than one type or variant, operators should first nominate one aircraft as the base aircraft from which to show differences with the second aircraft type or variant, the ‘difference aircraft’, in terms of technology (systems), procedures, pilot handling and aircraft management. These differences, known as operator difference requirements (ODR), preferably presented in tabular format, constitute part of the justification for operating more than one type or variant and also the basis for the associated differences/familiarisation or reduced type rating training for the flight crew.

(3) The ODR tables should be presented as follows:

GENERAL OPERATOR DIFFERENCES REQUIREMENTS TABLE		
DIFFERENCE AIRCRAFT:	COMPLIANCE METHOD	
	TRAINING	CHKG/ CURR
BASE AIRCRAFT:		

General	Differences	Flt char	Proc chg	A	B	C	D	E	FLT CHK	REC EXP
GENERAL	Range ETOPS Certified	No	Yes		CB T					
DIMENSIONS	Configuration per AFM, FCOM	Yes	No		CB T					

SYSTEM OPERATOR DIFFERENCES REQUIREMENTS TABLE										
DIFFERENCE AIRCRAFT: BASE AIRCRAFT:				COMPLIANCE METHOD						
				TRAINING					CHKG/ CURR	
System	Differences	Flt char	Proc chg	A	B	C	D	E	FLT CHK	REC EXP
21 - AIR CONDITIONIN G	CONTROLS AND INDICATORS: - Panel layout	No	Yes	HO						
21 - AIR CONDITIONIN G	PACKS: - Switch type - Automatically controlled - Reset switch for both packs	No	Yes		CBT					

MANEUVER OPERATOR DIFFERENCES REQUIREMENTS TABLE										
DIFFERENCE AIRCRAFT: BASE AIRCRAFT:				COMPLIANCE METHOD						
				TRAINING					CHKG/ CURR	
Manoeuvre	Differences	Flt char	Proc chg	A	B	C	D	E	FLT CHK	REC EXP
Exterior Preflight	Minor differences	NO	NO	HO						

Preflight	Differences due to systems, ECL	NO	YES		CBT	FTD				
Normal takeoff	FBW handling vs Conventional ; AFDS TAKEOFF: - Autothrottle engagement FMA indications	NO	YES		CBT			FFS		

(4) Compilation of ODR Tables

(i) ODR 1: General

The general characteristics of the candidate aircraft are compared with the base aircraft with regard to:

- (A) general dimensions and aircraft design (number and type of rotors, wing span or category);
- (B) flight deck general design;
- (C) cabin layout;
- (D) engines (number, type and position);
- (E) limitations (flight envelope).

(ii) ODR 2: Systems

Consideration is given to differences in design between the candidate aircraft and the base aircraft. For this comparison the Air Transport Association (ATA) 100 index is used. This index establishes a system and subsystem classification and then an analysis performed for each index item with respect to the main architectural, functional and operations elements, including controls and indications on the systems control panel.

(iii) ODR 3: Manoeuvres

Operational differences encompass normal, abnormal and emergency situations and include any change in aircraft handling and flight management. It is necessary to establish a list of operational items for consideration on which an analysis of differences can be made.

The operational analysis should take the following into account:

- (A) flight deck dimensions (size, cut-off angle and pilot eye height);
- (B) differences in controls (design, shape, location and function);
- (C) additional or altered function (flight controls) in normal or abnormal conditions;

- (D) handling qualities (including inertia) in normal and in abnormal configurations;
- (E) aircraft performance in specific manoeuvres;
- (F) aircraft status following failure;
- (G) management (e.g. ECAM, EICAS, navaid selection, automatic checklists).

(iv) Once the differences for ODR 1, ODR 2 and ODR 3 have been established, the consequences of differences evaluated in terms of flight characteristics (FLT CHAR) and change of procedures (PROC CHNG) should be entered into the appropriate columns.

(v) Difference Levels - crew training, checking and currency

(A) The final stage of an operator's proposal to operate more than one type or variant is to establish crew training, checking and currency requirements. This may be established by applying the coded difference levels from Table 4 to the compliance method column of the ODR Tables.

(B) Differences items identified in the ODR tables as impacting flight characteristics, or procedures, should be analysed in the corresponding ATA section of the ODR manoeuvres. Normal, abnormal and emergency situations should be addressed accordingly.

(d) Difference Levels

(1) Difference levels — General

Difference levels are used to identify the extent of difference between a base and a candidate aircraft with reference to the elements described in the ODR tables. These levels are proportionate to the differences between a base and a candidate aircraft. A range of five difference levels in order of increasing requirements, identified as A through E, are each specified for training, checking, and currency.

Difference levels apply when a difference with the potential to affect flight safety exists between a base and a candidate aircraft. Differences may also affect the knowledge, skills, or abilities required from a pilot. If no differences exist, or if differences exist but do not affect flight safety, or if differences exist but do not affect knowledge, skills, or abilities, then difference levels are neither assigned nor applicable to pilot qualification. When difference levels apply, each level is based on a scale of differences related to design features, systems, or manoeuvres. In assessing the effects of differences, both flight characteristics and procedures are considered since flight characteristics address handling qualities and performance, while procedures include normal, non-normal and emergency items.

Levels for training, checking, and currency are assigned independently, but are linked depending on the differences between a base and candidate aircraft. Training at level E usually identifies that the candidate aircraft is a different type to the base aircraft.

(2) Difference levels are summarised in the table below regarding training, checking, and currency.

DIFFERENCE LEVEL	TRAINING	CHECKING	CURRENCY
A	<ul style="list-style-type: none"> • Self-instruction 	Not applicable or integrated with next proficiency check	Not applicable
B	<ul style="list-style-type: none"> • Aided instruction 	Task or system check	Self-review
C	<ul style="list-style-type: none"> • System devices 	Partial proficiency check using qualified device	Designated system
D	Manoeuvre Training Devices ¹ or aircraft to accomplish specific manoeuvres	Partial proficiency check using qualified device ¹	Designated manoeuvre(s) ¹
E	FSTDs ² or aircraft	Proficiency check using FSTDs ² or aircraft	As per regulation, using FSTDs ² or aircraft

Footnote (1):

- Aeroplane: FTD Level 2, or FFS, or aeroplane
- Helicopter: FTD Level 2 and 3, or FFS, or helicopter

Footnote (2):

- 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

Training Levels A and B require familiarisation training, levels C and D require differences training. Training Level E means that differences are such that type rating training is required.

(3) Difference level — Training

The training differences levels specified represent the minimum requirements. Devices associated with a higher difference level may be used to satisfy a training differences requirement.

(i) Level A training

Level A differences training is applicable to aircraft with differences that can adequately be addressed through self-instruction. Level A training represents a knowledge requirement such that once appropriate information is provided, understanding and compliance can be assumed to be demonstrated.

Training needs not covered by level A training may require level B training, or higher, depending on the outcome of the evaluations described in the aircraft evaluation process (CS FCD.420).

(ii) Level B training

Level B differences training is applicable to aircraft with system or procedure differences that can adequately be addressed through aided instruction.

At level B aided instruction it is appropriate to ensure pilot understanding, emphasise issues, provide a standardised method of presentation of material, or to aid retention of material following training.

(iii) Level C training

Level C differences training can only be accomplished through the use of devices capable of systems training.

Level C differences training is applicable to variants having 'part task' differences that affect skills or abilities as well as knowledge. Training objectives focus on mastering individual systems, procedures, or tasks, as opposed to performing highly integrated flight operations and manoeuvres in 'real time'. Level C may also require self-instruction or aided instruction of a pilot, but cannot be adequately addressed by a knowledge requirement alone. Training devices are required to supplement instruction to ensure attainment or retention of pilot skills and abilities to accomplish the more complex tasks, usually related to operation of particular aircraft systems.

The minimum acceptable training media for level C is interactive computer-based training, cockpit systems simulators, cockpit procedure trainers, part task trainers [such as Inertial Navigation System (INS), Flight Management System (FMS), or Traffic Collision Avoidance System (TCAS) trainers], or similar devices.

(iv) Level D training

Level D differences training can only be accomplished with devices capable of performing flight manoeuvres and addressing full task differences affecting knowledge, skills, or abilities.

Devices capable of flight manoeuvres address full task performance in a dynamic 'real time' environment and enable integration of knowledge, skills and abilities in a simulated flight environment, involving combinations of operationally oriented tasks and realistic task loading for each relevant phase of flight. At level D, knowledge and skills to complete necessary normal, non-normal and emergency procedures are fully addressed for each variant.

Level D differences training requires mastery of interrelated skills that cannot be adequately addressed by separate acquisition of a series of knowledge areas or skills that are interrelated. However, the differences are not so significant, that a full type rating training course is required. If demonstration of interrelationships between the systems was important, the use of a series of separate devices for systems training would not suffice. Training for level D differences requires a training device that has accurate, high fidelity integration of systems and controls and realistic instrument indications. Level D training may also require manoeuvre visual cues, motion cues, dynamics, control loading or specific environmental conditions. Weather phenomena such as low visibility operations or wind shear may or may not be incorporated. Where simplified or generic characteristics of an aircraft type are used in devices to satisfy level D difference training, significant negative training cannot occur as a result of the simplification.

Appropriate devices as described in CS FCD.420(a), satisfying level D differences training range from those where relevant elements of aircraft flight manoeuvring, performance, and handling qualities are incorporated. The use of a Manoeuvre Training Device or aircraft is limited for the conduct of specific manoeuvres or handling differences, or for specific equipment or procedures.

(v) Level E training

Level E differences training is applicable to candidate aircraft having such a significant 'full task' differences that a full type rating training course or a type rating training course with credit for previous experience on similar aircraft types is required to meet the training objectives.

The training requires a 'high fidelity' environment to attain or maintain knowledge, skills, or abilities that can only be satisfied by the use of FSTDs or the aircraft itself as mentioned in CS FCD.415(a). Level E training, if done in an aircraft, should be modified for safety reasons where manoeuvres can result in a high degree of risk.

When level E differences training is assigned, suitable credit or constraints may be applied for knowledge, skills or abilities related to other pertinent aircraft types and specifies the relevant subjects, procedures or manoeuvres.

(4) Difference level – Checking

Differences checking addresses any pertinent pilot testing or checking. Initial and recurrent checking levels are the same unless otherwise specified.

It may be possible to satisfactorily accomplish recurrent checking objectives in devices not meeting initial checking requirements. In such instances the applicant may propose for revalidation checks the use of certain devices not meeting the initial check requirements.

(i) Level A checking

Level A differences checking indicates that no check related to differences is required at the time of differences training. However, a pilot is responsible for knowledge of each variant flown.

(ii) Level B checking

Level B differences checking indicates that a 'task' or 'systems' check is required following initial and recurring training.

(iii) Level C checking

Level C differences checking requires a partial check using a suitable qualified device. A partial check is conducted relative to particular manoeuvres or systems.

(iv) Level D checking

Level D differences checking indicates that a partial proficiency check is required following both initial and recurrent training. In conducting the partial proficiency check, manoeuvres common to each variant may be credited and need not be repeated. The partial proficiency check covers the specified particular manoeuvres, systems, or devices. Level D checking is performed using scenarios representing a 'real time' flight environment and uses qualified devices permitted for level D training or higher.

(v) Level E checking

Level E differences checking requires that a full proficiency check be conducted in FSTDs or in an aircraft as mentioned in CS FCD.415(a), following both initial and recurrent training. If appropriate, alternating Level E checking between relevant aircraft is possible and credit may be defined for procedures or manoeuvres based on commonality.

Assignment of level E checking requirements alone, or in conjunction with level E currency, does not necessarily result in assignment of a separate type rating.

(5) Difference level — Currency

Differences currency addresses any currency and re-currency levels. Initial and recurrent currency levels are the same unless otherwise specified.

(i) Level A currency

Level A currency is common to each aircraft and does not require separate tracking. Maintenance of currency in any aircraft suffices for any other variant within the same type rating.

(ii) Level B currency

Level B currency is 'knowledge-related' currency, typically achieved through self-review by individual pilots.

(iii) Level C currency

(A) Level C currency is applicable to one or more designated systems or procedures, and relates to both skill and knowledge

requirements. When level C currency applies, any pertinent lower level currency is also to be addressed.

(B) Re-establishing level C currency

When currency is lost, it may be re-established by completing required items using a device equal to or higher than that specified for level C training and checking.

(iv) Level D currency

(A) Level D currency is related to designated manoeuvres and addresses knowledge and skills required for performing aircraft control tasks in real time with integrated use of associated systems and procedures. Level D currency may also address certain differences in flight characteristics including performance of any required manoeuvres and related normal, non-normal and emergency procedures. When level D is necessary, any pertinent lower level currency is also to be addressed.

(B) Re-establishing level D currency

When currency is lost, currency may be re-established by completing pertinent manoeuvres using a device equal to or higher than that specified for level D differences training and checking.

(v) Level E currency

(A) Level E currency requires that recent experience requirements of Part-FCL and operational requirements be complied with in each aircraft separately. Level E currency may also specify other system, procedure, or manoeuvre currency item(s) necessary for safe operations, and requires procedures or manoeuvres to be accomplished in FSTDs or in an aircraft as mentioned in CS FCD.415(a). Provisions are applied in a way which addresses the required system or manoeuvre experience.

When level E is assigned between aircraft of common characteristics, credit may be permitted. Assignment of level E currency requirements does not automatically lead to a determination on same or separate type rating. Level E currency is tracked by a means that is acceptable to the competent authority.

When CTLC is permitted, any credit or constraints applicable to using FSTDs, as mentioned in CS FCD.415(a), are also to be determined.

(B) Re-establishing level E currency

When currency is lost, currency may be re-established by completing pertinent manoeuvres using a device specified for level E differences training and checking.

(6) Competency regarding non-normal and emergency procedures — Currency

Competency for non-normal and emergency manoeuvres or procedures is generally addressed by checking requirements. Particular non-normal and emergency manoeuvres or procedures may not be considered mandatory for

checking or training. In this situation it may be necessary to periodically practice or demonstrate those manoeuvres or procedures specifying currency requirements for those manoeuvres or procedures.