

***European Aviation Safety Agency***

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

Initial issue  
31 January 2014<sup>1</sup>

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<sup>1</sup> For the date of entry into force of this Amendment, kindly refer to Decision 2014/008/R in the [Official Publication](#) of the Agency

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# CS-FCD BOOK 1

## SUBPART A

### GENERAL

#### CS FCD.050 Scope

- (a) These Certification Specifications for Flight Crew Data (CS-FCD) address:
  - (1) the determination of a pilot type rating:
    - (i) to establish if a candidate aircraft is recognised as a new type or as a variant to an existing aircraft;
    - (ii) to assign the pilot licence endorsement designation for a candidate aircraft.
  - (2) Aircraft type specific pilot training, checking and currency requirements;
- (b) This CS-FCD takes into consideration:
  - (1) the specific characteristics of the candidate aircraft;
  - (2) any proposal by the manufacturer regarding design changes, specific equipment, procedures or operations of a candidate aircraft;
  - (3) the technical requirements and administrative procedures related to civil aviation aircrew and air operations regulations and of Part-21;
  - (4) the pilot entry prerequisites;
  - (5) the commonality between the candidate aircraft and the base aircraft in accordance with the Operator Differences Requirements (ODR) tables, where applicable.

#### CS FCD.100 Applicability

- (a) CS FCD.200(a) is applicable to all aircraft. All other paragraphs are applicable to aircraft for which a pilot type rating is determined.
- (b) This CS-FCD specifies Operational Suitability Data (OSD) based on data provision which is required from the Type Certificate (TC) applicant and data provided at request of the TC applicant. OSD are presented as mandatory or non-mandatory (recommendations) for the end user in accordance with the civil aviation aircrew and air operations regulations as follows:
  - (1) Data required from the TC applicant and mandatory for the end users (Box 1):
    - (i) CS FCD.200;
    - (ii) CS FCD.300(a);(b);(c);(d);(e)(1) and (e)(2);
    - (iii) CS FCD.405;
    - (iv) CS FCD.410;
    - (v) CS FCD.415;
    - (vi) CS FCD.420.
  - (2) Data required from the TC applicant and non-mandatory (recommendations) for the end users (Box 2):
    - (i) CS FCD.300(a);(b);(c);(d);(e)(3) and (f);

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- (ii) CS FCD.415;
  - (iii) CS FCD.420.
- (3) Data at the request of the TC applicant and mandatory for the end users (Box 3):
- (i) CS FCD.300(a);(b);(c);(d);(e)(1) and (e)(2);
  - (ii) CS FCD.310(a) and (b);
  - (iii) CS FCD.400;
  - (iv) CS FCD.405;
  - (v) CS FCD.410;
  - (vi) CS FCD.415;
  - (vii) CS FCD.420.
- (4) Data at the request of the TC applicant and non-mandatory (recommendations) for the end users (Box 4):
- (i) CS FCD.300(a);(b);(c);(d);(e)(2);(e)(3) and (f);
  - (ii) CS FCD.305;
  - (iii) CS FCD.310(a) and (b);
  - (iv) CS FCD.400;
  - (v) CS FCD.405;
  - (vi) CS FCD.410;
  - (vii) CS FCD.415;
  - (viii) CS FCD.420.
- (5) Item (c)(1) and (c)(2) combined constitute the minimum syllabus for pilot type rating training as required by Part-21.

### CS FCD.105 Definitions

Within the scope of this CS-FCD, the following definitions apply:

- (a) *Base aircraft* means an aircraft used as a reference to compare differences with another aircraft.
- (b) *Candidate aircraft* means an aircraft subject to the evaluation process.
- (c) *Common Take-off and Landing Credit (CTLC)* means a programme or process that allows credit for recent experience between aircraft that can be demonstrated to have the same handling and flying characteristics during take-off and initial climb, approach and landing, including the establishment of final landing configuration.
- (d) *Currency* means the experience necessary for the safe operation of aircraft, equipment and systems.
- (e) *Difference level* means a formally designated level of difference between a base and a candidate aircraft for the evaluation of pilot training, checking, or currency.
- (f) *Flight characteristics* means handling characteristics or performance characteristics perceivable by a pilot. Flight characteristics relate to the natural aerodynamic response of an aircraft, particularly as affected by changes in configuration or flight path parameters.

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- (g) *Handling characteristics* means the manner in which the aircraft responds with respect to rate and magnitude of pilot initiated control inputs to the primary flight control surfaces.
- (h) *Line Flying Under Supervision (LIFUS)* means the part of the operator's conversion course in accordance with the air operation Implementing Rules.
- (i) *Master Differences Requirements (MDR)* means those requirements that pertain to differences between aircraft. MDRs are specified in terms of the minimum difference levels.
- (j) *Minimum syllabus* means the training elements provided by the applicant and approved by the Agency for a specific aircraft type.
- (k) *Operator Differences Requirement (ODR)* means a description of differences regarding the level of training, checking, or currency between a base and a candidate aircraft and their impact on flight characteristics and change of procedures.
- (l) *Pilot type rating endorsement* means the designation of an aircraft type endorsed on a pilot licence.
- (m) *Recent experience* means the recent experience described in Part-FCL.060.
- (n) *Training Areas of Special Emphasis (TASE)* means specific knowledge and skills required for the safe operation of an aircraft, use of equipment, application of procedures or performance of operations.
- (o) *Training footprint* means a summary description of a training programme, usually in short tabular form, showing training subjects, modules, procedures, manoeuvres or other programme elements which are planned for completion during each day or phase of training.
- (p) *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.

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## SUBPART B

### DETERMINATION OF A PILOT TYPE RATING

#### **CS FCD.200 Determination of a pilot type rating**

- (a) The determination of whether a certain type of aircraft is subject to a pilot type rating is as follows:
  - (1) The following aircraft are subject to a pilot type rating:
    - (i) complex motor-powered aircraft;
    - (ii) helicopters except helicopters certified in accordance with CS-VLR;
    - (iii) gas airships;
  - (2) The following aircraft are not subject to a pilot type rating:
    - (i) sailplanes;
    - (ii) powered sailplanes;
    - (iii) balloons;
    - (iv) aeroplanes that meet the definition of ELA 1 or ELA 2;
    - (v) hot air airships.
  - (3) An aircraft not listed in subparagraphs (1) or (2) will be subject to a pilot type rating, either:
    - (i) upon request of the applicant;
    - (ii) if the Agency determines that based on operational experience, data, its handling characteristics, performance or level of flight deck technology require type rating training for its safe operation.
- (b) The determination of whether a certain aircraft is a variant may be made at the request of the applicant in accordance with Subpart D.
- (c) The type rating or variant determination is recorded in the TC data sheet.
- (d) Changes to a TC are assessed for their impact on the type rating or variant determination.

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## SUBPART C

### PILOT TYPE RATING TRAINING AND OPERATIONAL TRAINING REQUIREMENTS

#### **CS FCD.300 Pilot type rating training and operational training requirements for a specific aircraft**

- (a) The specific training requirements to build the necessary theoretical and practical skills to fly a specific aircraft are defined.
- (b) For the development of the specific training requirements the provisions related to civil aviation aircrew and air operations regulations and Part-21 are considered.
- (c) The development of the specific training requirements is based on the assumption that the pilot undergoing training has met the prerequisites described for the training to be evaluated.
- (d) The specific training requirements are identified or confirmed through the evaluation process and evaluation descriptions as described in CS FCD.425.
- (e) The specific training requirements depend on the aircraft type, any design changes, specific equipment, procedures or operations, and contain:
  - (1) training areas of special emphasis related to the particular aircraft type, including identification of all type specific knowledge and skills;
  - (2) the prerequisite for the minimum entry-level requirement to be fulfilled by the pilot;
  - (3) the training footprint.
- (f) The training footprint indicates which training methods and device(s) are assumed to be used, based on CS FCD.415.

#### **CS FCD.305 LIFUS**

Requirements for LIFUS are specified by air operation Implementing Rules; however, credit for LIFUS between base aircraft and candidate aircraft may be permitted as a result of the evaluation process, and specified in the OSD.

#### **CS FCD.310 Credit for operation on more than one type or variant**

- (a) Based on commonalities between candidate aircraft and other aircraft types the applicant may propose:
  - (1) credit for training, checking and currency for the operation on more than one type or variant;
  - (2) CTLC.
- (b) For substantiation of the credits proposed under (a), the applicant provides ODR tables or other appropriate documentation for comparison of the relevant aircraft characteristics.



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## SUBPART D OPERATIONAL EVALUATION

### **CS FCD.400 Operator Difference Requirement (ODR) tables**

- (a) ODR tables are provided for any evaluation of differences and similarities between a base and a candidate aircraft for type rating assessment and for the content of the type rating training syllabus.
- (b) ODR tables identify the differences between base and candidate aircraft in terms of general characteristics, systems and manoeuvres, and propose appropriate difference levels.
- (c) ODR tables can be expanded to address multiple aircraft comparisons.
- (d) Specifications for setting up the ODR tables are to be found in the Appendix to CS FCD.400.

### **CS FCD.405 Master Difference Requirement (MDR) tables**

Based on an applicant's proposal, MDR tables are specified by the Agency for any evaluation between base aircraft and candidate aircraft in accordance with the process contained in this CS-FCD. MDR tables are specified in terms of the minimum difference levels.

### **CS FCD.410 Difference levels – General**

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

### **CS FCD.415 Difference levels – Training, checking and currency**

- (a) Difference levels are summarised in the table below regarding training, checking, and currency:

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

(b) 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.

(1) 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 in the aircraft evaluation process described in CS FCD.420.

(2) Level B training

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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 is appropriate to ensure pilot understanding, emphasise issues, provide a standardised method of presentation of material, or to aid retention of material following training.

### (3) 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 or similar devices.

### (4) 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.

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

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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.415(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.

### (5) Level E training

Level E differences training is applicable to a 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.

### (c) 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.

#### (1) 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.

#### (2) Level B checking

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

#### (3) 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.

#### (4) Level D checking

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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.

(5) 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 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.

(d) Difference level — Currency

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

(1) 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.

(2) Level B currency

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

(3) Level C currency

(i) 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.

(ii) 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.

(4) Level D currency

(i) 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.

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(ii) 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.

(5) Level E currency

(iii) 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.

(ii) 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.

(e) 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.

### CS FCD.420 Evaluation process overview

(a) Six standard evaluations (T1, T2, T3, T4, T5 and T6) are defined under CS FCD.425. They are used to set MDRs, acceptable training programmes, other provisions, and to define type rating requirements as shown in Appendix 2. One or more of these six evaluations are applied depending on the objectives of the applicant, on the difference level sought, and on the successful outcome of any previous evaluations used in identifying MDRs.

(b) The following evaluations are used:

(1) The T1, T2 and T3 evaluations are used when an applicant presents an aircraft seeking pilot training, checking, or currency credit, based on similarities with an existing aircraft, in order to determine its level of difference with the base aircraft of comparison. The results of these evaluations determine whether the aircraft is a new type or a variant.

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The level of differences determines the minimum required training, checking and currency standards as applicable to the candidate aircraft.

- (2) The T4 evaluation is used to establish relief from established currency requirements based on system, procedural and manoeuvring differences between aircraft.
  - (3) The T5 evaluation is used when an applicant presents a candidate aircraft as a new aircraft type with no anticipated application for pilot type rating credit for similarities with aircraft previously type certified. The results of a T5 evaluation determine a separate pilot type rating and the minimum required training, checking, and currency standards as applicable to that type of aircraft.
  - (4) The T6 evaluation is used to evaluate CTLC between different types of aircraft.
- (c) The flow chart for the evaluation process is to be found in the Appendix to CS FCD.420.

### CS FCD.425 Evaluation process and evaluation descriptions

Definition of the evaluation process and evaluation descriptions:

(a) Difference level evaluations

Five standard evaluations are used to evaluate a candidate aircraft with regard to pilot type rating, minimum syllabus, operational evaluations, and credit for operations on more than one type or variant. One additional evaluation, the T6 evaluation, can be used to establish CTLC between related aircraft when not previously demonstrated in a T2 evaluation.

One or more of these six evaluations are applied depending on the objectives of the applicant, difference level sought, and the successful outcome of any previous evaluations used in identifying MDRs.

(b) Steps in the evaluation process

When evaluation is accomplished, T1 and T2 evaluation compare the candidate aircraft with the base aircraft. The applicant submits ODR and MDR tables that address the differences between the base and candidate aircraft and vice versa, if requested by the applicant. Normally for level A and B differences, two-way testing is not necessary.

If an applicant wished to obtain an evaluation for a direction that was not initially evaluated, the Agency will review the request and may perform an evaluation in the direction that was not previously evaluated.

(c) Prior to evaluation:

- (1) representative training programmes, difference programmes and necessary supporting information are developed as needed;
- (2) proposed MDRs and example ODRs are identified;
- (3) the applicant proposes which evaluations and criteria apply. Evaluations may be combined;
- (4) the applicant proposes which aircraft, variants, simulation devices, or analysis is needed to support the evaluation;

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(5) the applicant proposes test procedures, schedules and specific interpretation of possible results.

(d) Evaluation purpose and application

Evaluation purpose and application are summarised in the table below:

	<b>EVALUATION PURPOSE</b>	<b>APPLICATION</b>
T1	Establishes functional equivalence	Sets levels A/B
T2	Handling qualities comparison	Pass permits T3, and A/B/C/D; failure sets level E and requires T5 or T2+T3 for commonality credit
T3	Evaluates differences and sets training or checking requirements	Pass sets levels A/B/C/D; failure sets level E and requires T5 or T2+T3 for commonality credit
T4	Revises currency requirements	
T5	Sets training or checking for new or 'E' aircraft	Sets level E
T6	Evaluation for CTLC	Sets recent experience requirements

Detailed description of the purpose, process and application of each of the six difference level evaluations is as follows:

(e) Evaluation 1 (T1): functional equivalence

Evaluation purpose: to determine whether A or B training level is appropriate.

Evaluation subjects: as established by the Agency based on a proposal by the applicant.

Evaluation process: administer appropriate portions of a proficiency check as agreed by the Agency based on a proposal by the applicant. This evaluation may be accomplished in a training device, FFS, or aircraft as appropriate. Only those portions of the proficiency check which are affected by the differences from the base aircraft need to be evaluated. For minor level A or B differences this evaluation may be conducted through analysis.

(1) Successful evaluation validates that base and candidate aircraft are sufficiently alike to assign level A or B differences.

(2) Failure of evaluation generally requires completion of T2 and T3 evaluation. Normally, re-evaluation is not appropriate; however, at the request of the applicant re-evaluation may be accepted by the Agency.

(3) The Agency may waive the T1 test if a T2 test is to be performed.

(f) Evaluation 2 (T2): handling qualities comparison

Evaluation purpose: to evaluate handling qualities using specific flight manoeuvres to determine whether level A, B, C or D training is appropriate.



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At the discretion of the Agency the T2 evaluation may be completed through analysis.

Evaluation subjects: as established by the Agency based on a proposal by the applicant.

Evaluation process: compare the handling qualities during a set of agreed manoeuvres. This evaluation is conducted in the base and candidate aircraft, unless safety considerations dictate use of an approved FSTD as defined in CS FCD.415(a) for Level E. Manoeuvres are performed with the aid of a safety pilot who may only aid in areas not related to the evaluation. Normal crew call-outs and coordination are permitted; however, the safety pilot may not assist in any other manner unless directly related to a safety of flight issue, for example no 'coaching' or instructing is permitted.

Successful evaluation: validates that base and candidate aircraft are sufficiently alike in handling characteristics to permit assignment of level A, B, C or D training. A successful evaluation permits a subsequent evaluation (T3) to assess systems differences, training or checking to be conducted. If a subsequent T3 test is not requested, level A or B training can be assigned.

When T2 is otherwise successfully completed, manoeuvre training devices or aircraft as mentioned in CS FCD.415(a) may be proposed within level D training for the conduct of specific manoeuvres.

Failure of evaluation: failure of the T2 evaluation indicates that major differences exist in handling characteristics during critical phases of flight (such as take-off or landing) or that numerous less critical but still significant handling qualities differences exist between the base and candidate aircraft. T2 evaluation failure requires the assignment of level E training. Also with level E training a separate type rating is normally assigned to the candidate aircraft being evaluated. Normally T2 re-evaluation is not appropriate; however, re-evaluation may be proposed.

- (g) Evaluation 3 (T3): systems differences and validation of proposed differences training and checking

Evaluation purpose: to evaluate the proposed differences training and checking programmes and training devices at level A, B, C or D.

Evaluation subjects: pilots designated by the Agency, trained and experienced in the base aircraft and having been given the proposed differences training programme for the candidate aircraft.

Evaluation process: if level B training is appropriate, T3 may be completed by analysis. If level C or D training is appropriate, administer appropriate portions of a proficiency check in system or manoeuvre training devices or in an aircraft, as mentioned in CS FCD.415(a). Following completion of the flight test (proficiency check), a simulated Line Oriented Flying (LOF) check may be administered by the Agency. This LOF check is normally administered in an FFS but may be accomplished in a test aircraft as appropriate.

Successful evaluation: permits assignment of level A, B, C or D training and validates the proposed differences training or checking programmes.

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Failure of evaluation: indicates that either the proposed training is inadequate and is in need of revision to qualify for a re-evaluation opportunity or T3 failure may require the assignment of level E training. With level E training a separate type rating is normally assigned to the candidate aircraft. Re-evaluation may be proposed.

### (h) Evaluation 4 (T4): currency validation

Evaluation purpose: used to evaluate relief from established currency requirements. This currency evaluation addresses system, procedural and manoeuvring differences between aircraft and not the recent experience requirements for take-off, approach and landing as mentioned in FCL.060(b) of Part-FCL.

Evaluation subjects: as established by the Agency based on a proposal by the applicant.

Evaluation process: as established by the Agency based on a proposal by the applicant, but normally involves a process for validating a specific currency proposal made by the applicant or alternative evaluation methods such as direct observation of proficiency checks or LOF simulator sessions.

Successful evaluation: validates that the proposed currency provision(s) is (are) accepted as a means of compliance with the applicable requirements and provides an equivalent level of safety. T4 may be completed as part of an initial certification or evaluation process or as a follow-up of evaluation.

Failure of evaluation: indicates that the proposed currency requirements do not provide an equivalent level of safety and may lead to re-evaluation as determined by the Agency based on a proposal by the applicant, if appropriate.

### (i) Evaluation 5 (T5): initial or transition training programme validation

Evaluation purpose: used to validate training course(s) at level E (new type rating). In accordance with the pilot prerequisites for the subject training course, training course(s) to be evaluated is (are) either a full type rating course(s) or reduced type rating course(s) with credit for previous experience on similar aircraft types.

Evaluation subjects: as established by the Agency based on a proposal by the applicant.

Evaluation process: as established by the Agency based on a proposal by the applicant, but normally involves evaluation subjects receiving the proposed training and the Agency observing or administering the checking upon completion of the training. A T2 and T3 evaluation may be performed if credit for commonality is requested. This evaluation may be structured to evaluate specific commonality objectives as established by the Agency based on a proposal by the applicant.

Successful evaluation: validates that the proposed training satisfies the appropriate requirements.

Failure of evaluation: indicates that the proposed training programme requires modification to satisfy the appropriate requirements. A re-

## CS-FCO BOOK 1

evaluation as established by the Agency based on a proposal by the applicant would normally be required.

T5 evaluation may credit applicable evaluation done during T2 and T3 evaluations in the event of T2 or T3 evaluation failures.

(j) Evaluation 6 (T6): CTLC

Evaluation purpose: to establish credit between the base and candidate aircraft towards the recent experience requirements for take-off and landing.

Evaluation subjects: pilots designated by the Agency, neither trained nor experienced in the candidate aircraft.

Evaluation process: evaluation subjects are first provided with refresher training in the base aircraft to establish a baseline of proficiency. This training may be accomplished in the aircraft or in an approved level C or D FFS. The subject is then evaluated in the candidate aircraft, without any training in it, accomplishing a minimum of three take-offs and landings without use of the autopilot. It may not be practical to conduct some evaluations in an aircraft. A simulator may be used to conduct these evaluations. Evaluation subjects should be evaluated on the ability to fly the aircraft manually through take-off, initial climb, approach and landing (including the establishment of final landing configuration).

Successful evaluation: validates that the proposed training satisfies the appropriate requirements and an equivalent level of safety can be maintained when full or partial credit for take-offs and landings is given between the base and candidate aircraft.

Failure of evaluation: indicates that an equivalent level of safety cannot be maintained when either full or partial credit for take-offs and landings is given between the base and candidate aircraft.

(k) Disposition of evaluation results

Evaluation results should be summarised by the Agency and the outcome documented in the OSD.

Prior to the issuance of the OSD, a statement declaring the results of the type rating determination may be issued.

## CS-FCD BOOK 1

### Appendix to CS FCD.400 Compilation of ODR tables

This appendix specifies the compilation of ODR tables. The applicant conducts a detailed evaluation of the differences and similarities of the aircraft concerned and compiles this into the ODR tables.

(a) ODR 1: General

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

- (1) general dimensions and aircraft design (number and type of rotors, wing span or category);
- (2) flight deck general design;
- (3) cabin layout;
- (4) engines (number, type and position);
- (5) limitations (flight envelope).

(b) 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.

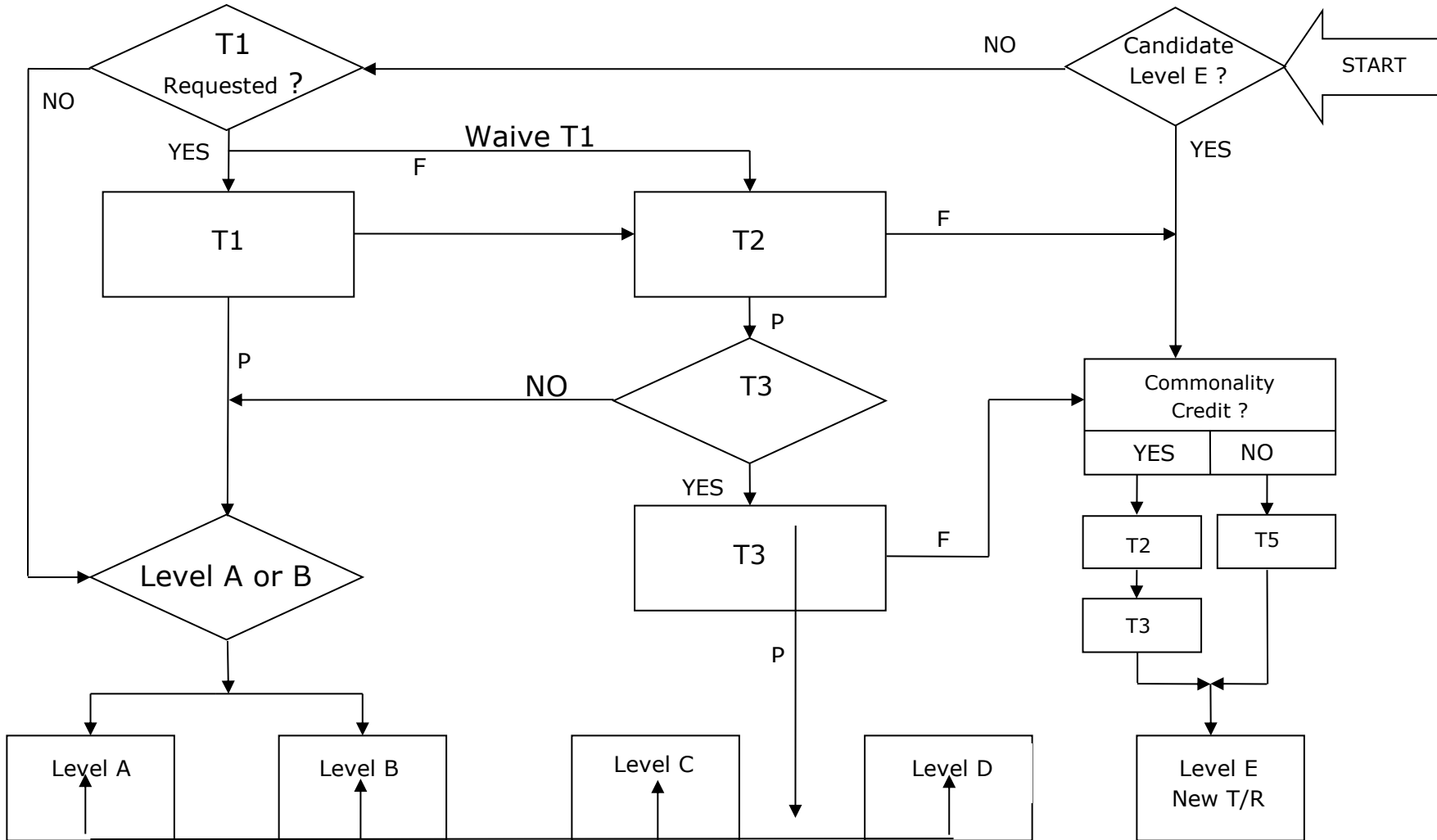
(c) ODR 3: Manoeuvres

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:

- (1) flight deck dimensions (size, cut-off angle and pilot eye height);
- (2) differences in controls (design, shape, location and function);
- (3) additional or altered function (flight controls) in normal or abnormal conditions;
- (4) handling qualities (including inertia) in normal and in abnormal configurations;
- (5) aircraft performance in specific manoeuvres;
- (6) aircraft status following failure;
- (7) management (such as Electronic Centralised Aircraft Monitoring (ECAM), Engine Indication and Crew Alerting System (EICAS), navaid selection and automatic checklists).

Appendix to CS FCD.420 Evaluation process



**CS-FCD**

**Book 2**

**Guidance Material**

## CS-FCD BOOK 2

### SUBPART A

#### GENERAL

##### **GM1 FCD.050 Scope**

- (a) The following is evaluated as appropriate:
  - (1) specific type of operations or specific aircraft missions;
  - (2) use of the aircraft in specific environmental context (special approval);
  - (3) use of optional aircraft equipment.
- (b) Specific type of operations and specific aircraft missions include, but are not limited to:
  - (1) LVO;
  - (2) ETOPS;
  - (3) operations dedicated to helicopters such as HHO, HEMS and off-shore operations;
  - (4) adverse weather such as winter conditions, heavy rain fall, wind shear, thunderstorms, turbulences, volcanic activity and widespread sandstorm;
  - (5) transport of dangerous goods and cargo flights;
  - (6) single-pilot operations.
- (c) Environmental context for operations includes, but is not limited to:
  - (1) specific environment such as mountainous area, desert area, particular airports with short or narrow runways, steep approach, Noise Abatement Departure Procedure and brown-out and white-out conditions;
  - (2) specific airspace such as RVSM, MNPS and BRNAV;
  - (3) security considerations.
- (d) Optional equipment includes, but is not limited to:

New aircraft technology or specific equipment such as HUD, EFB, NVIS, ECL customisation, EVS and SVS.

##### **GM1 CS FCD.100 Applicability**

- (a) The technical requirements and administrative procedures related to civil aviation aircrew and air operations regulations contain references to OSD that may be established in accordance with Commission Regulation (EU) No 1702/2003.

These data may contain mandatory or non-mandatory (recommendations) elements concerning:

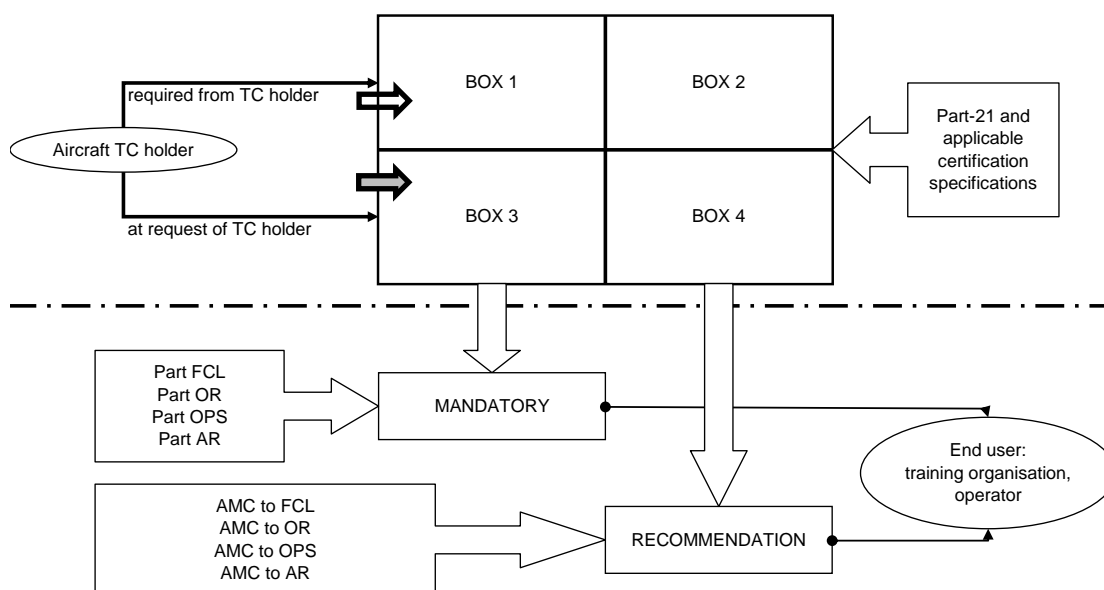
  - (1) type of aircraft categorisation;
  - (2) period of validity for class and type ratings;
  - (3) pilot experience requirements and prerequisites to commence training;
  - (4) theoretical knowledge and flight instruction for the issue of class and type ratings;
  - (5) recent experience for the operation of more than one type of aircraft;

## CS-FCO BOOK 2

- (6) training, checking, and recent experience, as well as alternating proficiency checks, for operation on more than one type or variant;
  - (7) pilot training;
  - (8) crewing of inexperienced flight crew members;
  - (9) the number of take-offs and landings following ZFTT;
  - (10) or the issue of a specific approval.
- (b) The mandatory and non-mandatory (recommendations) OSD may have been established based on data required from an applicant, or based on data provided at the request of an applicant.

Therefore, OSD can be grouped in 'Boxes' as follows:

- (1) Box 1: Data required from the applicant and mandatory for the end user;
- (2) Box 2: Data required from the applicant and non-mandatory (recommendations) for the end user;
- (3) Box 3: Data at the request of the applicant and mandatory for the end user; and
- (4) Box 4: Data at the request of the applicant and non-mandatory (recommendations) for the end user.



Box 1 and 2 combined constitute the minimum syllabus for pilot type rating training as required by Part-21.



## CS-FCD BOOK 2

2. Some practical examples are provided in the following table:

Box 1	Box 2
<p>Aircraft type designation and pilot license endorsement</p> <p>Prerequisites for initial type rating training and checking</p> <p>Training Areas of Special Emphasis (TASE) for initial type rating</p>	<p>Training footprint: (5) for initial type rating</p>
Box 3	Box 4
<p>Level of Differences Determination – ODR &amp; MDR Tables</p> <p>TASE for:</p> <ul style="list-style-type: none"> <li>(6) differences training</li> <li>(7) type rating training based on credit for commonality</li> <li>(8) training for specific operations, procedures or equipment (e.g. steep approaches, RNP AR, EVS/SVS, EFB, NVIS, etc.)</li> </ul> <p>Prerequisites or recent experience requirements for operation on more than one type or variant</p>	<p>Training footprint for:</p> <ul style="list-style-type: none"> <li>• differences training</li> <li>• type rating training based on credit for commonality</li> <li>• training for specific operations, procedures or equipment (e.g. steep approaches, RNP AR, EVS/SVS, EFB, NVIS, etc.)</li> </ul> <p>CTLC</p> <p>Credits for training, checking or currency</p>

### GM1 FCD.105 Definitions

List of acronyms used in CS-FCD

ACARS	Aircraft Communication Addressing and Reporting System
AGNA	Advisory Group of National Authorities
ATA	Air Transport Association
ATQP	Alternative Training and Qualification Programme
BRNAV	Basic Area Navigation
CBT	Computer-Based Training
CTLC	Common Take-off and Landing Credit
CRD	Comment Response Document

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CRT	Comment Response Tool
CS	Certification Specifications
DR	Difference Requirement
ECL	Electronic Check List
EFB	Electronic Flight Bag
EFIS	Electronic Flight Instrument System
ETOPS	Extended range operations with two-engine aeroplane
EVS	Enhanced Vision System
FAA	Federal Aviation Administration
FC	Flight Crew
FCL	Flight Crew Licensing
FD	Flight Director
FFS	Full Flight Simulator
FGCS	Flight Guidance Control System
FMS	Flight Management System
FNPT	Flight and Navigation Procedures Trainer
FSTD	Flight Simulation Training Devices
FTD	Flight Training Device
GM	Guidance Material
GPWS	Ground Proximity Warning System
HEMS	Helicopter Emergency Medical Service
HHO	Helicopter Hoist Operations
HUD	Head Up Display
INS	Inertial Navigation System
JAA	Joint Aviation Authorities
JOEB	Joint Operational Evaluation Board
LBS	Load & Balance and Servicing
LIFUS	Line Flying Under Supervision

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LOF	Line Oriented Flying
LVO	Low Visibility Operations
MDR	Master Difference Requirement
MNPS	Minimum Navigation Performance Specification
MMEL	Master Minimum Equipment List
NAA	National Aviation Authorities
NPA	Notice of Proposed Amendment
NVIS	Night Vision Imaging System
ODR	Operator Difference Requirement
OEB	Operational Evaluation Board
OPT	Operational Performance Tool
OSD	Operational Suitability Data
OTD	Other Training Devices
PIC	Pilot-In-Command
QRH	Quick Reference Handbook
RVSM	Reduced Vertical Separation Minima
SSCC	Safety Standards Consultative Committee
SVS	Synthetic Vision System
TC	Type Certificate
TCAS	Traffic Collision Avoidance System
TCCA	Transport Canada
ToR	Terms of Reference
TRI	Type Rating Instructor
VFR	Visual Flight Rules

## **CS-FCD BOOK 2**

### **SUBPART B**

#### **DETERMINATION OF A PILOT TYPE RATING**

##### **GM1 FCD.200 Determination of a pilot type rating**

For the category of aircraft described in CS FCD.200(a)(3) during the type certification process an assessment will be performed whether the aircraft type requires a pilot type rating. The applicant for a TC is then requested to apply for approval of a minimum syllabus for pilot type rating training unless he/she can show that type training is not required to fly the aircraft safely. This should be based on the considerations listed in that subparagraph.

**CS-FCD BOOK 2**

**SUBPART C**

**PILOT TYPE RATING TRAINING AND OPERATIONAL TRAINING REQUIREMENTS**

**GM1 FCD.300 Pilot type rating training requirements for a specific aircraft**

(a) The following table presents an example of a training footprint for a type rating course. This footprint can be equally applicable to other training courses by adapting the contents and duration.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
<b>Tablet Introduction</b>	<b>CBT MODULE 2</b>	<b>CBT MODULE 3</b>	<b>CBT MODULE 4</b>	<b>Tutorial 1 OPT</b>
<b>CBT Module 1</b> (x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)
			<b>OTD MODULE 1</b> (x:xx hrs)	
<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
<b>CBT MODULE 5</b>	<b>CBT MODULE 6</b>	<b>CBT MODULE 7</b>	<b>CBT MODULE 8</b>	<b>CBT MODULE 9</b>
(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)
<b>OTD MODULE 2</b>	<b>OTD MODULE 3</b>	<b>OTD 4</b>	<b>OTD MODULE 5</b>	<b>OTD MODULE 6</b>
(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)
<b>Day 11</b>	<b>Day 12</b>	<b>Day 13</b>	<b>Day 14</b>	<b>Day 15</b>
<b>CBT MODULE 10</b>	<b>CBT MODULE 11</b>	<b>CBT MODULE 12</b>	<b>CBT MODULE 13</b>	<b>Tutorial 2 EFB, QRH</b>
(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)
<b>OTD MODULE 7</b>	<b>OTD MODULE 8</b>	<b>OTD MODULE 9</b>	<b>OTD MODULE 10</b>	<b>Tutorial 3 LBS</b>
(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)

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<b>Day 16</b>	<b>Day 17</b>	<b>Day 18</b>	<b>Day 19</b>	<b>Day 20</b>
	<b>FFS MODULE 1</b>	<b>FFS MODULE 2</b>	<b>FFS MODULE 3</b>	<b>FFS MODULE 4</b>
<b>Variiances (if needed)</b>	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)
(x:xx hrs)				

<b>Day 21</b>	<b>Day 22</b>	<b>Day 23</b>	<b>Day 24</b>	<b>Day 25</b>
	<b>FFS MODULE 6</b>	<b>FFS MODULE 7</b>	<b>FFS MODULE 8</b>	<b>Skill test</b>
<b>FFS MODULE 5</b>	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)	(x:xx hrs)
(x:xx hrs)				
<b>Wind shear briefing</b>				
(x:xx hrs)				

*Note:* Times for OTD and FFS modules include time for briefing and debriefing.

(b) Reduced training footprint

Type rating training is based on pilot’s prerequisites.

If there is commonality between the base and candidate aircraft, a reduced type rating training footprint may be provided by giving credit to the common characteristics between these types.

If the determination is made that the base and candidate aircraft are considered variants, only differences or familiarisation training is required.

(c) Training methods

For the training methods for pilot type rating training:

- (1) knowledge can be adequately addressed through self-instruction and aided instruction;
- (2) hands-on training can be adequately addressed by part task trainers or system devices (for example for FMS and TCAS);
- (3) demonstration can only be adequately addressed in a flight training device enabling integration of knowledge, skills and abilities. Depending upon the element to be trained, acceptable training media could be an FSTD or aircraft.

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### **GM1 FCD.310 Credit for operation on more than one type or variant**

Credit can be given for common equipment, common procedures, and types of operations which include, but are not limited to:

- (a) TCAS training or GPWS training;
- (b) alternating proficiency checks;
- (c) take-off and landing currency;
- (d) currency in conduct of special operations (e.g. low visibility operations, HUD use, and NVIS operations).

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**SUBPART D**

**OPERATIONAL EVALUATION**

**GM1 FCD.405 Master Difference Requirement (MDR) tables**

**Proposed MDRs**

MDR tables are established when candidate aircraft is evaluated in comparison to base aircraft.



**CS-FCD BOOK 2**

*MDRs example:*

<i>Aircraft type</i>		<b>FROM AIRCRAFT (base)</b>		
		<b>aircraft 1</b>	<b>aircraft 2</b>	<b>aircraft</b>
<b>T O  A I R C R A F T  (candidate)</b>	<b>aircraft 1</b>	n/a	A / A / A	C / B / B
	<b>aircraft 2</b>	A / A / A	n/a	D/B/B
	<b>aircraft</b>	C / B / B	D / B / B	n/a

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### GM1 FCD.415 Difference levels – Training, checking and currency

(a) While particular aircraft are often assigned the same level for training, checking and currency (for example C/C/C), such assignment is not necessary. Levels might be assigned independently. As an example, candidate aircraft may be assigned level C for training, level B for checking, and level D for currency (for example C/B/D).

(b) Difference level – Training

As an example for the use of a device associated with a higher difference level than required, if level C differences have been assessed due to installation of a different FMS, pilots may be trained using the FMS installed in an FFS as a system trainer, if a dedicated part task FMS training device is not available.

(1) Level A training

Compliance with level A training is typically achieved by methods such as issuance of operating manual page revisions, dissemination of flight crew operating bulletins or differences hand-outs to describe minor differences between aircraft.

Level A training is normally limited to situations such as the following:

- (i) the change introduces a different version of a system or component for which the flight crew has already demonstrated the ability to understand and use (for example an updated version of an engine);
- (ii) the change results in minimal or non-procedural changes and does not result in adverse safety effects if the information is not reviewed or is forgotten;
- (iii) information highlighting a difference that, once called to the attention of a crew, is self-evident, inherently obvious and easily understood (for example different location of a communication radio panel, a different exhaust gas temperature limit which is placarded, or changes to abnormal 'read and do' procedures).

(2) Level B training

Level B aided instruction typically employs means such as presentations, tutorials, CBT, stand-up lectures, or videotapes or DVDs.

(3) Level C training

While level C systems knowledge or skills relate to specific rather than fully integrated tasks, performance of steps to accomplish normal, abnormal and emergency procedures or manoeuvres related to particular systems such as INS, FMS, or TCAS trainers, may be necessary.

Examples of devices acceptable for level C training:

- (i) interactive computer-based training to include FMS trainers, and systems trainers;
- (ii) qualified training devices;
- (iii) specific systems incorporated in FFS;
- (iv) a static aircraft;

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- (4) Level D training
- Manoeuvre training devices or an aircraft as mentioned in CS FCD.420(a) may be specified for the conduct of specific manoeuvres or handling differences, such as HUD training or a manoeuvre (for example no-flap landing, tail-rotor control failure, etc.). In such cases, the number of hours required should normally be limited to an appropriate number of hours within Level D training.
- (5) Level E training
- If training is performed in an aircraft, it should be modified for situations like setting the affected engine at idle thrust to simulate an engine failure, for safety reasons.
- (c) Difference level — Checking
- (1) Level A checking
- Differences items should be included as an integral part of subsequent proficiency checks.
- (2) Level B checking
- Level B checking typically applies to particular tasks or systems, such as INS, FMS, TCAS, or other individual systems or related groups of systems.
- (3) Level C checking
- An example of level C checking would be the evaluation of a sequence of manoeuvres demonstrating a pilot's ability to use a flight guidance control system or flight management system. An acceptable scenario would include each relevant phase of flight but would not necessarily address manoeuvres that do not relate to set up or use of the FD or FMS.
- (d) Difference level — Currency
- (1) Level A currency
- Level A currency consists of a self-review as necessary.
- (2) Level B currency
- Self-review is usually accomplished by review of material provided by the operator to pilots. Such currency may be undertaken at an individual pilot's initiative; however, the operator identifies the material and the frequency or other situations in which the material should be reviewed. Self-review may be based on manual information, bulletins, aircraft placards, memos, class hand-outs, videotapes or DVDs, or other memory aids that describe the differences, procedures, manoeuvres, or limits for the aircraft that pilots are flying.
- An example of acceptable compliance with level B currency would be the issuing of a bulletin which directs pilots to review specific operating manual information. Level B currency may be regained by review of pertinent information to include bulletins, if that variant has not been flown within a specified period (for example fly that variant or have completed a review of the differences in limitations and procedures within the past 90 days).
- Another method of compliance would be pilot certification on a dispatch release that they have reviewed pertinent information for a particular variant

## CS-FCO BOOK 2

to be flown on that trip. However, level B currency cannot be achieved solely by review of class notes taken by and at the initiative of an individual pilot, unless the adequacy of those notes is verified by the operator.

### (3) Level C currency

An example of level C currency would be the establishment of INS currency, FMS currency, flight guidance control system currency, or other particular currency that is necessary for safe operation of an aircraft. Establishment of level C currency for an FMS would typically require a pilot to fly the aircraft within a specified period or to re-establish currency. Typically, currency constraints for level C are 90 days. However, some systems or procedures may require shorter time limits while others may be longer than the normal interval for proficiency checks, if the pertinent items are not always addressed by these checks.

Examples of methods acceptable for addressing level C currency are:

- (i) pilot scheduling practices resulting in a pilot being scheduled to fly a variant with the pertinent system or procedure within the specified period;
- (ii) tracking of an individual pilot's flying to ensure that the particular system or procedure has been flown within the specified period;
- (iii) use of a higher level method (level D or E currency).

Re-establishing level C currency

Means to re-establish currency include flights with an appropriately qualified TRI, completion of proficiency training, or a proficiency check. In the case of a non-current co-pilot, a designated PIC may be authorised to accompany a flight crew member to re-establish currency. In some instances, a formal re-familiarisation period in the actual aircraft with the applicable system operating while on ground may be acceptable. Such re-familiarisation periods are completed using an operator-established procedure under the supervision of a pilot designated by the operator.

### (4) Level D currency

A typical application of level D currency is to specify selected manoeuvres, such as take-off, departure, arrival, approach, or landing, which are to be performed using a particular FGCS and instrument display system. A pilot either flies an aircraft equipped with the FGCS and particular display system sufficiently often to retain familiarity and competence within the specified currency period, or re-establishes currency.

Examples of methods acceptable for addressing level D currency are:

- (i) tracking of flights by an individual pilot to assure experience within the specified currency period;
- (ii) tracking of completion of specific manoeuvres based on logbook entries, ACARS data, or other reliable records to assure experience within the specified currency period;
- (iii) scheduling of aircraft or crews to permit currency requirements to be met with verification that each pilot has actually accomplished the assigned or an equivalent schedule;

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- (iv) completion of pilot certification, proficiency check, proficiency training, ATQP evaluations, or other pertinent events in which designated manoeuvres are performed in a device or simulator acceptable for level D currency;
- (v) use of a higher level method (level E currency).

Re-establishing level D currency

Means to re-establish currency include flight with an appropriately qualified TRI during training or in line operations, completion of proficiency training, a proficiency check, or ATQP proficiency evaluation.

### (5) Level E currency

If FGCS, FMS, EFIS, navigation, or other system or manoeuvre experience is the basis for a currency requirement, approval of an operator's programme at level E includes use of those systems in conjunction with satisfactory take-off and landing requirements. In such an instance making three simulator take-offs and landings in VFR closed traffic without using the FGCS, EFIS, or FMS may not be sufficient to meet level E currency requirements.

When credit is permitted between aircraft of common flight characteristics, pertinent currency requirements for knowledge, skills, procedures, or other manoeuvres not related to take-off and landings may be necessary.

Re-establishing level E currency

Means to re-establish currency include flight with an appropriately qualified TRI during training or in line operations, completion of proficiency training, a proficiency check, or ATQP evaluation.

## **GM1 FCD.420 Evaluation process and evaluation descriptions**

Definition of the evaluation process and evaluation descriptions

### (a) Steps in the evaluation process

Normally for level A and B differences a two-way evaluation is not necessary. Typically, T3 evaluation to validate level C and D differences is done in both directions (base to candidate aircraft, and candidate to base aircraft). However, the applicant may request that T3 evaluation be done in only one direction (for example from the base to candidate aircraft). If this is done, the MDR and ODR tables will only reflect findings for this direction. No credit will be given in the MDR or ODR tables for the other direction (candidate to base aircraft).

### (b) T2 evaluation: handling qualities comparison

T2 manoeuvres are flown in the base aircraft or base aircraft simulator, and in the candidate aircraft.

The T2 evaluation profile is subject to the characteristics of the base and candidate aircraft. The evaluation profile should incorporate all relevant handling quality aspects of the candidate aircraft. T2 consists of a comparison between selected pilot type rating check manoeuvres (normal, abnormal; please refer to Part-FCL) performed first in the base aircraft and then in the candidate aircraft. At the discretion of the Agency, an approved FSTD, as defined in CS FCD.420(a) for Level E, can be used for the base aircraft and, when safety considerations dictate, in the candidate aircraft.

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Although T2 evaluations should always be accomplished in the candidate aircraft, some portions that significantly affect aircraft safety (such as flight control failures) may be conducted in a simulator suitable for the test. Subject pilots are observed and provide feedback on performance of required manoeuvres consistent with the standards set in Part-FCL and on the degree of difficulty in performing manoeuvres in the candidate aircraft compared to the base aircraft.

(c) T4 evaluation: currency validation

T4 evaluation is a currency test that can be used when an applicant seeks relief from existing currency provisions as set in the applicable ODR tables. This test may be done before or after the aircraft enters into service.

(d) T6 evaluation: CTLC

Test subjects should be evaluated on their ability to fly the aircraft manually through take-off, initial climb, and approach and landing (including the establishment of final landing configuration). The applicant should consider the effects on the take-off and landing manoeuvres for the following factors when designing the T6 test:

- (1) aircraft weight;
- (2) aircraft centre of gravity;
- (3) take-off and landing crosswinds.