

<b>OPERATIONS ADVISORY NOTICE (OAN)</b>		 Transport Malta  Civil Aviation Directorate Flight Operations Inspectorate Transport Malta Centre Trijq Pantar Lija LJA 2021 Malta
OAN Number: <b>01/22</b> <b>Rev 2</b>	Issue Date: <b>17 August 2023</b>	
Subject: <b>Operator Conversion Course (Flight Crew)</b>		

## 1.0 INTRODUCTION

In **2023**, the Flight Operations department will commence an Operations Manual review for all operators. This review will include, but is not limited to, a review of Operator's Conversion Courses.

## 2.0 REGULATORY REQUIREMENTS

### 2.1 ORO.FC.120 Operator Conversion Training

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| <p>(a) In the case of aeroplane or helicopter operations, the flight crew member shall complete the operator conversion training course before commencing unsupervised line flying:</p> <ul style="list-style-type: none"> <li>(1) when changing to an aircraft for which a new type or class rating is required;</li> <li>(2) when joining an operator.</li> </ul> <p>(b) The operator conversion training course shall include training on the equipment installed on the aircraft as relevant to flight crew members' roles.</p> |
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### 2.2 Explanatory Note on ORO.FC.120

This regulation forms part of section 1 of the Operator Requirements for flight crew which means that it applies equally to both non-commercial operations of complex motor-powered aircraft and any commercial operations. This means that if you hire flight crew members to crew an aircraft for a non-commercial operation or a commercial operation, they are required to undergo an operator conversion course (OCC). The regulation does not differentiate between full time, part time or freelance flight crew members. OCCs are required for all flight crew members. The flight operations inspectorate will check all operations manuals to confirm that all operators provide compliant OCCs that **address each of the aircraft types that are or will be operated.**

**AMCs are detailed to type of operation. (NCC, CAT, SPO)**

**NOTE: Crew engaged in Non Commercial Operations with an aircraft on an operator's AOC shall fulfill the requirements as stipulated in the respective operator's OMA 8.7, and ORO.AOC.125 if there are any differences to CAT requirements.**

**Please note also:**

**AMC1 ORO.FC.120&130 Operator conversion training and checking & recurrent training and checking**

FLIGHT PATH MANAGEMENT (MANUAL OR AUTOMATIC, AS APPROPRIATE) DURING UNRELIABLE AIRSPEED INDICATION AND OTHER FAILURES AT HIGH ALTITUDE IN AEROPLANES WITH A MAXIMUM CRUISING ALTITUDE ABOVE FL300

For the operation of aeroplanes with a maximum cruising altitude above FL300, training elements from the following table should be integrated into:

- (a) operator conversion training; and
- (b) recurrent training at least every 12 calendar months, such that all elements are covered over a period not exceeding 3 years:

**2.3 ORO.FC.220 Operator Conversion Training and Checking**

- (a) CRM training shall be integrated into the operator conversion training course.
- (b) Once an operator conversion course has been commenced, the flight crew member shall not be assigned to flying duties on another type or class of aircraft until the course is completed or terminated. Crew members operating only performance class B aeroplanes may be assigned to flights on other types of performance class B aeroplanes during conversion courses to the extent necessary to maintain the operation. Crew members may be assigned to flights on single-engined helicopters during an operator conversion course on a single-engined helicopter, provided that the training is unaffected.
- (c) The amount of training required by the flight crew member for the operator's conversion course shall be determined in accordance with the standards of qualification and experience specified in the operations manual, taking into account his/her previous training and experience.
- (d) The flight crew member shall complete:
  - (1) the operator proficiency check and the emergency and safety equipment training and checking before commencing line flying under supervision (LIFUS); and
  - (2) the line check upon completion of line flying under supervision. For performance class B aeroplanes, LIFUS may be performed on any aeroplane within the applicable class.
- (e) In the case of aeroplanes, pilots that have been issued a type rating based on a zero flight-time training ('ZFTT') course shall:
  - (1) commence line flying under supervision not later than 21 days after the completion of the skill test or after appropriate training provided by the operator. The content of that training shall be described in the operations manual;
  - (2) complete six take-offs and landings in an FSTD not later than 21 days after the completion of the skill test under the supervision of a type rating instructor for aeroplanes ('TRI(A)') occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the operational suitability data

- established in accordance with Regulation (EU) No 748/2012. If those take-offs and landings have not been performed within 21 days, the operator shall provide refresher training the content of which shall be described in the operations manual;
- (3) conduct the first four take-offs and landings of the LIFUS in the aeroplane under the supervision of a TRI(A) occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.
- (f) If operational circumstances, such as applying for a new AOC or adding a new aircraft type or class to the fleet, do not allow the operator to comply with the requirements in (d), the operator may develop a specific conversion course, to be used temporarily for a limited number of pilots.

## 2.4 Explanatory Note on ORO.FC.220

This regulation forms part of section 2 of the Operator Requirements for flight crew which means that it applies to commercial operations. Operator's manuals will be reviewed to ensure that OCCs demonstrate compliance in terms of the extent and nature of the training provided (informed by the previous training and experience of the trainees) and that all aircraft types being operated have been considered. A one size fits all conversion course is not acceptable as the regulation requires that it shall include training on the equipment installed on the aircraft as relevant to flight crew members' roles. You cannot for example include training for NAT HLA for flight crew members who are operating an aircraft that is not fitted with the equipment to fly in this airspace. **Training may only be provided for and within the conditions specified in the Operations Specifications.**

Paragraph (b) of ORO.MLR.100 requires that "The content of the OM shall reflect the requirements set out in this Annex, Annex IV (Part-CAT), Annex V (Part-SPA), Annex VI (Part-NCC) and Annex VIII (Part-SPO), as applicable, **and shall not contravene the conditions contained in the operations specifications** to the air operator certificate (AOC), the SPO authorisation or the declaration and the list of specific approvals, as applicable." The regulation does not permit and **TMCAD** will not allow content in operations manuals that is not approved on your operations specifications.

## 2.5 AMC 1 ORO.FC.220 Operator Conversion Training and Checking

### OPERATOR CONVERSION TRAINING SYLLABUS

(a) **General**

- (1) The operator conversion training should include, in the following order:
  - (i) ground training and checking, including all of the following:
    - (a) aircraft systems;
    - (b) normal procedures, which include flight planning and ground-handling and flight operations, including performance, mass and balance, fuel schemes, selection of alternates, and ground de-icing/anti-icing;
    - (c) abnormal and emergency procedures, which include pilot incapacitation as applicable;
    - (d) a review of relevant samples of accident/incident and occurrences to increase awareness of the occurrences that may be relevant for the intended operation;
  - (ii) emergency and safety equipment training and checking (completed before any flight training in an aircraft commences);
  - (iii) flight training and checking (aircraft and/or FSTD); and
  - (iv) line flying under supervision and line check.
- (2) When the flight crew member has not previously completed an operator's conversion course, he/she should undergo general first-aid training and, if applicable, ditching procedures training using the equipment in water.
- (3) Where the emergency drills require action by the non-handling pilot, the check should additionally cover knowledge of these drills.
- (4) The operator's conversion may be combined with a new type/class rating training, as required by Commission Regulation (EU) No 1178/2011.
- (5) The operator should ensure that:
  - (i) applicable elements of CRM training, as specified in Table 1 of AMC1 ORO.FC.115, are integrated into all appropriate phases of the conversion training; and
  - (ii) the personnel integrating elements of CRM into conversion training are suitably qualified, as specified in AMC2 ORO.FC.146.

Please note that in accordance with paragraph (a)(1), the OCC must follow the order outlined above. The order must be clear in your operations manual.

(b) **Ground training**

- (1) Ground training should comprise a properly organised programme of ground instruction supervised by training staff with adequate facilities, including any necessary audio, mechanical and visual aids. Self-study using appropriate electronic learning aids, computer-based training (CBT), etc., may be used with adequate supervision of the standards achieved. However, if the aircraft concerned is relatively simple, unsupervised private study may be adequate if the operator provides suitable manuals and/or study notes.
- (2) The course of ground instruction should incorporate formal tests.

Your operations manual must clearly include what is covered in the ground course for each type, taking into consideration the equipment installed on the aircraft and the operations you are approved for on the operations specifications. Please take note of the parts of the AMC above that have been underlined. TM-CAD has no objection to use of CBT or sub-contractors, however, provision must be made for the training of operator's standard operating procedures.

If you are using CBT from a sub-contractor such as Flyco or Scandlearn, you need to consider how the SOPs will be trained. If the sub-contractor cannot customise the training for you, then you will need to supplement the training through your own instructions or by other training means.

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**(c) Emergency and safety equipment training and checking**

- (1) Emergency and safety equipment training should take place in conjunction with cabin/technical crew undergoing similar training with emphasis on coordinated procedures and two-way communication between the flight crew compartment and the cabin.
- (2) On the initial conversion course and on subsequent conversion courses as applicable, the following should be addressed:
  - (i) Instruction on first-aid in general (initial conversion course only); instruction on first-aid as relevant to the aircraft type of operation and crew complement, including those situations where no cabin crew is required to be carried (initial and subsequent).
  - (ii) Aero-medical topics, including:
    - (A) hypoxia;
    - (B) hyperventilation;
    - (C) contamination of the skin/eyes by aviation fuel or hydraulic or other fluids;
    - (D) hygiene and food poisoning; and
    - (E) malaria.
  - (iii) The effect of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment.
  - (iv) Actual firefighting, using equipment representative of that carried in the aircraft on an actual or simulated fire except that, with Halon extinguishers, an alternative extinguisher may be used.
  - (v) The operational procedures of security, rescue, and emergency services.
  - (vi) Survival information appropriate to their areas of operation (e.g., polar, desert, jungle or sea) and training in the use of any survival equipment required to be carried.
  - (vii) A comprehensive drill to cover all ditching procedures where flotation equipment is carried. This should include practice of the actual donning and inflation of a lifejacket, together with a demonstration or audio-visual presentation of the inflation of life-rafts and/or slide-rafts and associated equipment. This practice should, on an initial conversion course, be conducted using the equipment in water, although previous certified training with another operator or the use of similar equipment will be accepted in lieu of further wet-drill training.
  - (viii) Instruction on the location of emergency and safety equipment, correct use of all appropriate drills, and procedures that could be required of flight crew in different emergency situations. Evacuation of the aircraft (or a representative training device) by use of a slide where fitted should be included when the operations manual procedure requires the early evacuation of flight crew to assist on the ground.

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(3) Operations where no cabin crew is required

(i) Passenger handling

Other than general training on dealing with people, emphasis should be placed on the following:

- (a) advice on the recognition and management of passengers who appear or are intoxicated with alcohol, under the influence of drugs or aggressive;
- (b) methods used to motivate passengers and the crowd control necessary to expedite an aircraft evacuation; and
- (c) the importance of correct seat allocation with reference to aircraft mass and balance. Particular emphasis should also be given on the seating of special categories of passengers.

(ii) Discipline and responsibilities

Emphasis should be placed on discipline and an individual's responsibilities in relation to:

- (a) his or her ongoing competence and fitness to operate as a crew member with special regard to flight and duty time limitation (FTL) requirements; and
- (b) security procedures.

(iii) Passenger briefing/safety demonstrations

Training should be given in the preparation of passengers for normal and emergency situations.

Please note when combining Type Rating Training with an Operator Conversion Course, Emergency and safety equipment training and checking should be conducted prior to commencing the landing phase of the flight training.

**(d) Flight training**

- (1) Flight training should be conducted to familiarise the flight crew member thoroughly with all aspects of limitations and normal, abnormal, and emergency procedures associated with the aircraft and should be carried out by suitably qualified class and type rating instructors and/or examiners. For specific operations, such as steep approaches, ETOPS, or operations based on QFE, additional training should be carried out, based on any additional elements of training defined for the aircraft type in the operational suitability data in accordance with Commission Regulation (EU) No 748/2012, where they exist.
- (2) In planning flight training on aircraft with a flight crew of two or more, particular emphasis should be placed on the practice of LOFT with emphasis on CRM, and the use of crew coordination procedures, including coping with incapacitation.
- (3) Normally, the same training and practice in the flying of the aircraft should be given to co-pilots as well as commanders. The 'flight handling' sections of the syllabus for commanders and co-pilots alike should include all the requirements of the operator proficiency check required by ORO.FC.230.
- (4) Unless the type rating training programme has been carried out in an FSTD usable for ZFTT, the training should include at least three take-offs and landings in the aircraft.

Most TM-CAD certificated operators operate complex motor-powered aircraft and therefore the flight training is carried out on FSTDs for which TM-CAD issues an FSTD User Approval. The training exercises carried out in the FSTD should include a LOFT exercise.

Sending your crew to an ATO for an OPC does not equate to an OCC that is compliant with EU legislation.

One of the common issues TM-CAD is finding with submitted AOC variations, is that the OSD has not been considered in the planning of the OCC for the new aircraft type. The NPCT is responsible for ensuring that the course covers all applicable requirements, and the Compliance Manager is responsible for conducting a compliance check prior to submission of these documents. The operators' management of change must consider the time taken to document an adequate training programme as well as ensuring you have staff with sufficient expertise on the new equipment to ensure that the training that will be provided and the standard operating procedures to be followed are adequate for the aircraft and equipment that is to be operated.



### **(e) Operator proficiency check**

(1) For aeroplanes, the operator proficiency check that is part of the operator's conversion checking should follow the provisions in AMC1 ORO.FC.230. For EBT, the operator should include either an EBT evaluation module in accordance with ORO.FC.231 or an OPC in accordance with AMC1 ORO.FC.230.

(2) For helicopters, the operator proficiency check that is part of the operator's conversion checking should include at least the following emergency/abnormal procedures as relevant to the helicopter and operations:

- (i) engine fire;
- (ii) interior helicopter fire or smoke;
- (iii) emergency operation of undercarriage;
- (iv) hydraulic failure;
- (v) electrical failure;
- (vi) flight and engine control system malfunctions;
- (vii) recovery from unusual attitudes;
- (viii) landing with one or more engine(s) inoperative;
- (ix) instrument meteorological conditions (IMC) autorotation techniques;
- (x) autorotation to a designated area;
- (xi) pilot incapacitation;
- (xii) directional control failures and malfunctions; and
- (xiii) engine failure and if relevant, relight;

and for multi-engined helicopters:

- (xiv) engine failure during take-off before decision point;
- (xv) engine failure during take-off after decision point;
- (xvi) engine failure during landing before decision point; and
- (xvii) engine failure during landing after decision point.

(3) For helicopter pilots required to engage in IFR operations, the proficiency check should include the following additional normal/abnormal/emergency procedures:

**(f) Line flying under supervision (LIFUS)**

- (4) Following completion of flight training and checking as part of the operator's conversion course, each flight crew member should operate a minimum number of sectors and/or flight hours under the supervision of a flight crew member nominated by the operator.
- (5) The minimum flight sectors/hours should be specified in the operations manual and should be determined by the following:
  - (i) previous experience of the flight crew member;
  - (ii) complexity of the aircraft; and
  - (iii) the type and area of operation.
- (6) For performance class B aeroplanes, the amount of LIFUS required is dependent on the complexity of the operations to be performed.

Following the completion of the FSTD training, LIFUS shall be conducted in accordance with the regulation above. Your operations manuals will be reviewed to ensure that you do not have a one size fits all for LIFUS. In determining the amount of LIFUS, you must consider the requirements of paragraph (f) above from this regulation.

## **2.6 Please also take note of the requirements for AMC1 ORO.FC.220&230 Operator conversion training and checking & recurrent training and checking**

UPSET PREVENTION AND RECOVERY TRAINING (UPRT) FOR COMPLEX MOTOR-POWERED AEROPLANES WITH A MAXIMUM OPERATIONAL PASSENGER SEATING CONFIGURATION (MOPSC) OF MORE THAN 19

- (a) Upset prevention training should:
  - (1) consist of ground training and flight training in an FSTD or an aeroplane;
  - (2) include upset prevention elements from Table 1 for the conversion training course; and
  - (3) include upset prevention elements in Table 1 for the recurrent training programme at least every 12 calendar months, such that all the elements are covered over a period not exceeding 3 years.

For aircraft with a MOPSC of 19 or less, AMC2 ORO.FC.220&230 Operator conversion training and checking & recurrent training and checking applies.

## **3.0 Concluding Notes**

### **Please note: Evidence Based Training (EBT) applies to recurrent training only**

Please ensure that all OCCs demonstrate compliance with all relevant regulations. There are also a number of GMs in Part ORO.FC. Please take note of these and be guided accordingly.

If the content of an associated AMC does not enable you to demonstrate compliance as the nature of your operation would permit, prepare a sound safety case showing an equivalent level of safety and propose an AltMoC.

We understand that when you are operating many different types of aircraft, these requirements can be quite onerous however, if you chose to operate many different types, your management of change and risk assessments must take into account the regulatory requirements, the need to have experienced personnel who are capable of managing such a project and the cost and time required to comply with the regulations. This is why full completion of your management of change process must precede an application for a variation to add a type. Can your company manage the operation safely? Can you afford the addition?

Please take the opportunity to review your manuals to ensure they are fully compliant.

If you are adding new aircraft types, you need to ensure that your schedule of events provides enough time for the manuals to be amended and submitted in time for the OMs to be reviewed by an Inspector. For addition of new types, provision must be made for an FOI to observe the first OCC.

**Flight Operations Inspectorate**