Non-Commercial operations within an AOC and for maintenance check flights, compliance checklist

Operator	
Ärendenummer	Handläggare

Information

Denna compliance checklista är avsett att vara ett stöd vid framtagande av procedurer vid icke-kommersiell flygning med luftfartyg som finns upptaget på Operations Specifications.

Detta ska beskrivas i OM-A kapitel 8.7

Checklistan består av följande delar:

- Definition, complex aircraft (sid 1)
- Definitioner och exempel Non-commercial operations (sid 2)
- ORO.AOC.125 Non-commercial operations of an AOC holder with aircraft listed on its AOC (sid 3)
    - Eventuella skillnader vid icke-kommersiella flygningar inom AOC ska beskrivas i manualverket.
- ORO.CC.100 Number and composition of cabin crew (sid 7)
    - Icke-kommersiella flygningar utan kabinbesättning med luftfartyg med en MOPSC > 19 men med max 19 passagerare kan ansökas om och ska beskrivas i manualverket
- SPO.SPEC.MCF – Maintenance check flights – complex motor-powered aircraft (sid 9)
    - Kontrollflygningar efter underhållsåtgärder ska beskrivas och tränas
- NCO.SPEC.MCF – Maintenance checkflights – other than complex motor-powered aircraft (sid 17)

Complex aircraft, definition

Ref. (EU) 2018/1139, article 140, point 2(b) → (EU) 216/2008, article 3, point (j)
(j) 'complex motor-powered aircraft' shall mean:
(i) an aeroplane:
— with a maximum certificated take-off mass exceeding 5 700 kg, or
— certificated for a maximum passenger seating configuration of more than nineteen, or
— certificated for operation with a minimum crew of at least two pilots, or
— equipped with (a) turbojet engine(s) or more than one turboprop engine, or
(ii) a helicopter certificated:
— for a maximum take take-off mass exceeding 3 175 kg, or
— for a maximum passenger seating configuration of more than nine, or
— for operation with a minimum crew of at least two pilots, or
(iii) a tilt rotor aircraft;

GM1 Article 2(1)(d) Definitions

NON-COMMERCIAL OPERATIONS — EXAMPLES

The following examples of operations are not covered by the definition of commercial operations or by that of specialised operations. They are identified as non-commercial operations. Some of these flights are listed by an AOC holder in its operations manual Part-A, ch. 8.7 as non-commercial operations (as specified in AMC3 ORO.MLR.100) and covered by the provisions of ORO.AOC.125.
Some of these operations are performed on an irregular basis. The operator and its crew members may consider them as non-routine operations, situated outside their operational routine. This constitutes a risk that the operator should include in its risk assessment process.
The operations listed below are performed with aircraft having a certificate of airworthiness or a permit to fly and being already listed on an AOC or on a declaration. They are grouped by the purpose of the flight.

Demonstration flights

(a) A flight performed with the purpose of demonstrating:
(1) an aircraft's handling, performance and functionalities to buyers or lessees;
(2) an aircraft's flying characteristics or the operational procedures to the competent authority, for verification of compliance with the operational requirements, as per ARO.GEN.310(a).
Other terms used: (route) proving flight; operational evaluation flight.
(b) Flight at the end of lease or upon transfer of ownership: a flight performed at the request of the operator to verify compliance of the aircraft with the contractual specifications of the lessee/lessor or buyer.
Other term used: acceptance flight.

(c) 'Public relations (PR) flight': a flight carrying official or media representatives as non-paying passengers. Sometimes personnel of the operator are included. The PR flight is performed in the interest of the operator's own business.

Testing the results of maintenance work is outside the scope of demonstration flights. Such flights are not expected to execute flight manoeuvres where the aircraft might react with an unexpected behaviour. This is covered by a maintenance check flight (listed below).

Maintenance check flights

(d) Maintenance check flight (MCF)
The definition of an MCF is provided in Annex I to Regulation (EU) No 965/2012. The provisions on MCF are developed in Annex VII (Part-NCO), Subpart E Section 6 and Annex VIII (Part-SPO), Subpart E Section 5.

Ferry flights – flights changing the location of the aircraft

A ferry flight could be performed for the following purposes:
(e) The aircraft is moved to and from a maintenance base. The aircraft may be operated under the permit-to-fly conditions.
Examples:
(1) unpressurised flight,
(2) gear-down flight,
(3) flight with one engine inoperative.
(f) The aircraft is moved from one location to another, e.g. from the manufacturer, refurbishment location, previous owner, lessor/lessee, long-term storage to the operator's base.
Other term used: delivery flight.
(g) The aircraft and its aircrew are positioned to an aerodrome from which a further commercial air transport (CAT) operation will be performed.
Other term used: positioning flight.
(h) The aircraft is moved from its current location to a secure location for various reasons (e.g. to remove it from a hazardous area).

Other term used: recovery flight.

Training flights

(i) A flight for instructional purposes for the operator's own flight crew.
Operator training and checking flight: a flight performed by the operator with the purpose of training, checking and/or familiarising a flight crew member with the operator's procedures linked to the aircraft being operated. A training flight is conducted using the procedures detailed in the operator's documentation.
Line flying under supervision (LIFUS), line checks and similar flights are not included in this category, as they are usually performed during commercial operations (CAT flights).

Other non-commercial flights

(j) 'Corporate flight': a flight conducted for business purposes: the operator may carry its own personnel and/or property in the interest of business.
Other terms used: business flight, private flight.

(k) 'Leisure flight': a flight operated by an operator for personal or recreational purposes, not associated with a business or a profession.

Other term used: private flight.

(l) Managed flight: a flight operated by an operator for the business purposes of the aircraft owner, with no remuneration or other valuable consideration involved.

Charity flights, humanitarian flights

(m) 'Charity flight': a flight performed for the benefit of a registered charity organisation, carrying persons and/or goods. For such a flight, the proceeds of the raffled flight go to the charity. Any additional proceeds are limited to the recovery of direct costs of the flight.

(n) 'Humanitarian flight': a flight with the purpose of carrying relief personnel and/or life-saving supplies (basic necessities) during or after an emergency or a natural disaster, or to evacuate persons from an endangered area.

ORO.AOC.125 Non-commercial operations of an AOC holder with aircraft listed on its AOC

(a) The AOC holder may conduct non-commercial operations in accordance with Annex VI (Part-NCC) or Annex VII (Part-NCO) with aircraft listed in the operations specifications of its AOC or in its operations manual, provided that the AOC holder describes such operations in detail in the operations manual, including the following:

Note: according AMC3 ORO.MLR.100 Part A:

8.7 Non-commercial operations. Information as required by ORO.AOC.125 for each type of non-commercial flight performed by the AOC holder. A description of the differences from CAT operations. Procedures and limitations, for example, for the following:
(a) training flights,
(b) flights at the end of lease or upon transfer of ownership,
(c) delivery flights,
(d) ferry flights,
(e) demonstration flights,
(f) positioning flights,
(g) other non-commercial flights.

(1) an identification of the applicable requirements;	Document reference	TS notes
(2) a description of any differences between operating procedures used when conducting CAT operations and non-commercial operations;	Document reference	TS notes
(3) means of ensuring that all personnel involved in the operations are fully familiar with the associated procedures;	Document reference	TS notes
(b) An AOC holder shall comply with: (1) Annex VIII (Part-SPO) when conducting maintenance check flights with complex motor-powered aircraft; (2) Annex VII (Part-NCO) when conducting maintenance check flights with other than complex motor- powered aircraft.		
(c) An AOC holder conducting operations referred to in points (a) and (b) shall not be required to submit a declaration in accordance with this Annex.	Document reference	TS notes

(d) The AOC holder shall specify the type of flight, as listed in its operations manual, in the flight-related documents (operational flight plan, loadsheet and other equivalent documents).	Document reference	TS notes

AMC1 ORO.AOC.125(a) Non-commercial operations of an AOC holder with aircraft listed on its AOC

FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

When aircrew members are assigned to perform a series of flights that combine several types of operation (CAT, NCC/NCO), the operator should: (a) comply at any time with the provisions of ORO.FTL.210 'Flight times and duty periods' or, as applicable, the provisions of Council Regulation (EEC) No 3922/91 (EU-OPS, Subpart Q), to ensure compliance with Subpart FTL for any CAT operation; and	Document reference	TS notes
(b) include any combination of types of operation in its safety risk management process to ensure that the fatigue risks arising from such operations do not affect the CAT operation.	Document reference	TS notes

AMC2 ORO.AOC.125(a) Non-commercial operations of an AOC holder with aircraft listed on its AOC

APPLICABLE REQUIREMENTS

An AOC holder should apply either of the options below to its non-commercial operations:		
(a) the same operational procedures as those used for its CAT operations. In this case, the AOC holder should state this option in the operations manual and ensure that the procedures comply with Part-CAT. No further descriptions are required; or	Document reference	TS notes
(b) different operational procedures from those used for its CAT operations. In this case, the procedures should comply with Part-ORO, except for Subpart-DEC, and Part-NCC for complex motor-powered aircraft or with Part-NCO for other than complex motor-powered aircraft, as appropriate.	Document reference	TS notes

AMC1 ORO.AOC.125(a)(2) Non-commercial operations of an AOC holder with aircraft listed on its AOC

DIFFERENT OPERATING PROCEDURES FOR NON-COMMERCIAL OPERATIONS

When developing operating procedures for non-commercial operations that are different from the ones used for its CAT operations, the AOC holder should identify the hazards and assess and mitigate the risks associated with each specific non-commercial operation, as part of the safety risk management process in compliance with ORO.GEN.200. This process should consider at least the following elements:

(a) Flight profile (including manoeuvres to be performed, any simulated abnormal situations in flight, duties and responsibilities of the crew members);	Document reference	TS notes
(b) Continuing airworthiness, as applicable. This includes the case when the aircraft is returned to the AOC holder after having been used by another operator for operations in accordance with ORO.GEN.310;	Document reference	TS notes
(c) Levels of functional equipment and systems (MEL, CDL);	Document reference	TS notes
(d) Operating procedures, minima, and dispatch criteria;	Document reference	TS notes
(e) Operating a flight with a double purpose (e.g. a relocation flight used as a line training flight or a maintenance check flight used as a line training flight);	Document reference	TS notes
(f) Specific approvals held by the AOC holder;	Document reference	TS notes
(g) Flight and duty time limitations and rest requirements and cumulative fatigue;	Document reference	TS notes
(h) Selection, composition, and training of flight crew and cabin crew;	Document reference	TS notes
(i) Multi-pilot operation as per Part-CAT vs single-pilot operation when operating according to Part-NCC or Part-NCO;	Document reference	TS notes
(j) Flights performed with aircrew that includes aircrew members of another operator, who have not completed a familiarisation training and who may not be familiar with the AOC holder's operational procedures;	Document reference	TS notes
(k) Categories of passengers on board, including when non-commercial operations are performed with no cabin crew.	Document reference	TS notes

AMC2 ORO.AOC.125(a)(2) Non-commercial operations of an AOC holder with aircraft listed on its AOC

PLANNING FLIGHTS WITH AN INCREASED LEVEL OF RISK

(a) Significant aspects such as the ones below should be addressed in the risk assessment and risk mitigation process by any operator conducting such flights: (1) which pilots are involved in their operation;	Document reference	TS notes
(2) what is the purpose of the flight; and	Document reference	TS notes

(3) how it is to be accomplished — what flight procedures are to be applied.	Document reference	TS notes
(b) The AOC holder should prepare the non-commercial operations with an increased level of risk taking into consideration the following elements, as applicable: (1) pre-flight briefing;	Document reference	TS notes
(2) duties and responsibilities of the flight crew members involved, task sharing;	Document reference	TS notes
(3) special operating procedures;	Document reference	TS notes
(4) manoeuvres to be performed in flight, minimum and maximum speeds and altitudes for all portions of the flight;	Document reference	TS notes
(5) operational limitations;	Document reference	TS notes
(6) potential risks and contingency plans;	Document reference	TS notes
(7) adequate available airspace and coordination with the air traffic control (ATC);	Document reference	TS notes
(8) selection of flight crew members; and	Document reference	TS notes
(9) additional flight crew training at regular intervals to ensure recency (considering also a flight of a similar risk profile in the simulator, if needed).	Document reference	TS notes

GM1 ORO.AOC.125(a)(2) Non-commercial operations of an AOC holder with aircraft listed on its AOC

EXAMPLES OF DIFFERENT OPERATING PROCEDURES APPLIED TO NON-COMMERCIAL OPERATIONS

The provisions of ORO.AOC.125 enable an AOC holder to apply the most appropriate requirements when conducting non-commercial operations, based on the risk assessment and risk mitigation processes.

Below is a non-exhaustive list of elements that an AOC holder may identify and describe as being different in its non-commercial operations from those used for its CAT operation and for which the provisions of Part-ORO and Part-NCC or the provisions of Part-NCO should apply as appropriate:

(a) Qualification, training and experience of aircrew members, including aerodrome and route competence requirements.	Document reference	TS notes
(b) Flight crew and cabin crew composition requirements (1) CAT operations contain more stringent requirements for aircrew members, e.g. multi-pilot vs single-pilot requirements.	Document reference	TS notes

(2) The AOC holder should specify the minimum number of flight crew and cabin crew and the applicable aircrew composition.	Document reference	TS notes
(c) Fuel requirements	Document reference	TS notes
(d) Performance requirements	Document reference	TS notes
(e) Serviceable instruments, data and equipment and MEL considerations	Document reference	TS notes
(f) Non-ETOPS/ETOPS ETOPS are applicable to CAT operations only and thus a flight operated according to Part-NCC/Part-NCO may be performed without the ETOPS restrictions.	Document reference	TS notes
(g) Non-commercial flights with no cabin crew (see ORO.CC.100(d) and the associated AMC).	Document reference	TS notes

ORO.CC.100 Number and composition of cabin crew

(a) For the operation of aircraft with an MOPSC of more than 19, at least one cabin crew member shall be assigned when carrying one or more passenger(s).

(d) By way of derogation from point (a), non-commercial operations with aircraft with an MOPSC of more than 19 may be performed without an operating cabin crew member, subject to the prior approval by the competent authority. To obtain the approval, the operator shall ensure that all of the following conditions are fulfilled:

(1) there are maximum 19 passengers on board;	Document reference	TS notes
(2) the operator has developed procedures for that operation.	Document reference	TS notes

AMC1 ORO.CC.100(d)(2) Number and composition of cabin crew

PROCEDURES FOR NON-COMMERCIAL OPERATIONS WITH NO OPERATING CABIN CREW ON BOARD AN AIRCRAFT WITH AN MOPSC OF MORE THAN 19 AND MAXIMUM 19 PASSENGERS

The operator should asses the risk of operating a flight with no cabin crew member and ensure that the following procedures mitigate the risks and provide appropriate level of protection of the aircraft occupants:

(a) Flight crew members assigned to these flights should receive training on operations where no cabin crew is required in accordance with ORO.FC.220 and ORO.FC.230.

(a) Flight crew members assigned to these flights should receive training on operations where no cabin crew is required in accordance with ORO.FC.220 and ORO.FC.230.	Document reference	TS notes

(b) The operator should consider the categories of passengers to be carried on such flights, who may be knowledgeable or not about the aircraft type and procedures in normal, abnormal and emergency situations.	Document reference	TS notes
(c) The procedures should cover at least the following elements, if applicable: (1) communication and coordination between flight crew members and passengers;	Document reference	TS notes
(2) flight crew member incapacitation;	Document reference	TS notes
(3) cabin surveillance;	Document reference	TS notes
(4) rapid egress from the aircraft in case of rapid disembarkation or evacuation;	Document reference	TS notes
(5) operation and use of emergency exits and assisting evacuation means;	Document reference	TS notes
(6) location and use of oxygen;	Document reference	TS notes
(7) location and use of life jackets;	Document reference	TS notes
(8) passenger seating in order to maintain: (i) an easy access to emergency exits;	Document reference	TS notes
(ii) timely communication with flight crew member(s); and	Document reference	TS notes
(iii) the required mass and balance of the aircraft;	Document reference	TS notes
(9) passenger briefing in accordance with Annex IV (Part-CAT), including information on the location and use of equipment not displayed in the operator's safety briefing material, such as a fire extinguisher, first-aid equipment (e.g. first-aid kit, defibrillator), smoke hood, etc.; and	Document reference	TS notes
(10) any additional safety instructions that are deemed necessary to ensure passenger protection.	Document reference	TS notes

GM1 ORO.CC.100(d)(2) Number and composition of cabin crew

CATEGORIES OF PASSENGERS

(a) The operator should adapt the procedures for non-commercial operations with an aircraft with an MOPSC of more than 19 and maximum 19 passengers and no operating cabin crew on board to the categories of passengers to be carried on such flight. This includes but is not limited to the following groups:

(1) Passengers who are already familiar with the aircraft environment, the procedures in normal operations, abnormal and emergency situations or trained on the aircraft type, e.g. non-operating aircrew members, maintenance personnel, etc.	Document reference	TS notes
(2) Passengers who are not familiar with the aircraft environment or procedures in normal operations, abnormal and emergency situations, e.g. operator's guests, employees, etc.	Document reference	TS notes
(3) Passengers who travel frequently on such flights. The operator may consider providing these passengers with training covering all safety and emergency procedures for the given aircraft type as described in AMC1.1 CAT.OP.MPA.170. The operator should be able to show evidence of their training. These passengers may also be provided with an extended briefing to facilitate communication with flight crew and coordination of all passengers in case of an abnormal or emergency situation.	Document reference	TS notes
(4) Special categories of passengers (see CAT.OP.MPA.155).	Document reference	TS notes
(b) The operator may include in its procedures a ratio of the categories of passengers described in (a) above that can travel on the same flight.	Document reference	TS notes

SPO.SPEC.MCF.100 Levels of maintenance check flight

Before conducting a maintenance check flight, the operator shall determine the applicable level of the maintenance check flight as follows:		
(a) "Level A" maintenance check flight for a flight where the use of abnormal or emergency procedures, as defined in the aircraft flight manual, is expected, or where a flight is required to prove the functioning of a backup system or other safety devices;	Document reference	TS notes
(b) a "Level B" maintenance check flight for any maintenance check flights other than a "Level A" maintenance check flight.	Document reference	TS notes

SPO.SPEC.MCF.105 Flight programme for a "Level A" maintenance check flight

Before conducting a Level A maintenance check flight with a complex motor-powered aircraft, the operator shall develop and document a flight programme.	Document reference	TS notes

GM1 SPO.SPEC.MCF.105 Flight programme

DOCUMENTATION WHEN DEVELOPING A FLIGHT PROGRAMME

When developing a flight programme, the operator should consider the applicable documentation available from the type certificate holder or other valid documentation such as the Flight Safety Foundation Functional Check Flight Compendium.

SPO.SPEC.MCF.110 Maintenance check flight manual for a ”Level A” maintenance check flight

The operator conducting a “Level A” maintenance check flight shall:		
(a) describe those operations and associated procedures in the operations manual referred to in point ORO.MLR.100 of Annex III or in a dedicated maintenance check flight manual;	Document reference	TS notes
(b) update the manual when necessary;	Document reference	TS notes
(c) inform all affected personnel of the manual and of its changes that are relevant to their duties;	Document reference	TS notes
(d) provide the competent authority with the manual and its updates.	Document reference	TS notes

AMC1 SPO.SPEC.MCF.110 Maintenance check flight manual

CONTENTS OF THE MAINTENANCE CHECK FLIGHT MANUAL

The items to be covered in the manual for a ‘Level A’ maintenance check flight (MCF) with complex motor-powered aircraft should be as follows: *(Note: according AMC3 ORO.MLR.100 Part A:* *8.7 Non-commercial operations. Information as required by ORO.AOC.125 for each type of non-commercial flight performed by the AOC holder. A description of the differences from CAT operations. Procedures and limitations, for example, for the following:* *(a) training flights,* *(b) flights at the end of lease or upon transfer of ownership,* *(c) delivery flights,* *(d) ferry flights,* *(e) demonstration flights,* *(f) positioning flights,* *(g) other non-commercial flights.)*	Document reference	TS notes
(a) General considerations: (1) conditions requiring a MCF (e.g. heavy maintenance);	Document reference	TS notes
(2) appropriate maintenance release before the MCF;	Document reference	TS notes
(3) flight authorisation by the operator;	Document reference	TS notes
(4) process to develop a flight programme and procedures;	Document reference	TS notes

(5) relevant procedures to document MCFs in the aircraft records; and	Document reference	TS notes
(6) policy for the determination of a 'Level A' or 'Level B' MCF.	Document reference	TS notes
(b) Aircraft status: (1) requirements for the status of the aircraft prior to departure (e.g. MEL, CDL and multiple defects) for the purpose of conducting an MCF;	Document reference	TS notes
(2) fuel loading, if applicable;	Document reference	TS notes
(3) mass and balance, if applicable; and	Document reference	TS notes
(4) specific test and safety equipment.	Document reference	TS notes
(c) Crew selection and other persons on board: (1) qualifications;	Document reference	TS notes
(2) experience and recency;	Document reference	TS notes
(3) training; and	Document reference	TS notes
(4) persons on board.	Document reference	TS notes
(d) Briefings: (1) briefing participants;	Document reference	TS notes
(2) specific pre-flight briefing topics: (i) aircraft status,	Document reference	TS notes
(ii) summary of maintenance,	Document reference	TS notes
(iii) flight programme, specific procedures and limitations,	Document reference	TS notes
(iv) crew members' responsibilities and coordination, and	Document reference	TS notes
(v) documents on board;	Document reference	TS notes
(3) information to ATC; and	Document reference	TS notes
(4) post-flight briefing.	Document reference	TS notes
(e) Contents of the flight programme and procedures: the flight programme should be thoroughly developed by the operator using applicable current data. It should contain the checks to be performed in-flight and may include 'read and do' checklists where practicable. The following items should be included in the overall procedure:		
(1) in-flight briefings;	Document reference	TS notes

(2) limits (not to be exceeded);	Document reference	TS notes
(3) specific entry conditions;	Document reference	TS notes
(4) task-sharing and call-outs;	Document reference	TS notes
(5) potential risks and contingency plans;	Document reference	TS notes
(6) information to additional crew; and	Document reference	TS notes
(7) adequate available airspace and coordination with ATC.	Document reference	TS notes
(f) External conditions: (1) weather and light conditions;	Document reference	TS notes
(2) terrain;	Document reference	TS notes
(3) ATC, airspace; and	Document reference	TS notes
(4) airport (runway, equipment)/operating site.	Document reference	TS notes
(g) Documentation: (1) specific documentation on board;	Document reference	TS notes
(2) in-flight recordings;	Document reference	TS notes
(3) results of the MCF and related data; and	Document reference	TS notes
(4) accurate recording of the required maintenance actions after the flight.	Document reference	TS notes

SPO.SPEC.MCF.115 Flight crew requirements for a ”Level A” maintenance check flight

(a) The operator shall select adequate flight crew members considering the aircraft complexity and the level of the maintenance check flight. When selecting flight crew members for a “Level A” maintenance check flight with a complex motor-powered aircraft, the operator shall ensure all of the following:		
(1) that the pilot-in-command has followed a training course in accordance with point SPO.SPEC.MCF.120; if the training has been conducted in a simulator, the pilot shall conduct at least one “Level A” maintenance check flight as a pilot monitoring or as an observer before flying as a pilot-in-command on a “Level A” maintenance check flight;	Document reference	TS notes

(2) that the pilot-in-command has completed on aircraft of the same aircraft category as the aircraft to be flown a minimum of 1 000 flight hours, of which at least 400 hours as a pilot-in-command in a complex motor-powered aircraft and at least 50 hours on the particular aircraft type. Notwithstanding point (2) of the first paragraph, if the operator introduces a new aircraft type to its operation and has assessed the pilot's qualifications in accordance with an established assessment procedure, the operator may select a pilot having less than 50 hours experience on the particular aircraft type.	Document reference	TS notes
(b) Pilots holding a flight test rating in accordance with Regulation (EU) No 1178/2011 shall be given full credit for the training course stipulated in point (a)(1) of this point, provided that the pilots	Document reference	TS notes
(c) A pilot-in-command shall not perform a “Level A” maintenance check flight on a complex motor-powered aircraft unless the pilot-in-command has carried out a “Level A” maintenance check flight within the preceding 36 months.	Document reference	TS notes
(d) Recency as pilot-in-command on a “Level A” maintenance check flight is regained after performing a “Level A” maintenance check flight as an observer or a pilot monitoring, or after acting as the pilot-in-command in a “Level A” maintenance check flight in a simulator.	Document reference	TS notes

GM1 SPO.SPEC.MCF.115 & SPO.SPEC.MCF.120 Flight crew requirements for a ”Level A” maintenance check flight and Flight crew training course for ”Level A” maintenance check flights

DEFINITION OF AIRCRAFT CATEGORY

In respect of the term ‘aircraft category’ used in the context of point (a) of SPO.SPEC.MCF.115 and point (c) of SPO.SPEC.MCF.120, it should be understood as ‘category of aircraft’ as defined in Commission Regulation (EU) No 1178/2011 (the Aircrew Regulation).

SPO.SPEC.MCF.120 Flight crew training course for ”Level A” maintenance check flights

(a) The training course required for a “Level A” maintenance check flight shall be conducted in accordance with a detailed syllabus.	Document reference	TS notes
(b) The flight instruction for the training course shall be conducted in either of the following ways:		
(1) in a simulator which, for training purposes, adequately reflects the reaction of the aircraft and its systems to the checks being conducted;	Document reference	TS notes

(2) during a flight in an aircraft demonstrating maintenance check flight techniques.	Document reference	TS notes
(c) A training course followed on one aircraft category is considered valid for all aircraft types of that category.	Document reference	TS notes
(d) When considering the aircraft used for the training and the aircraft to be flown during the maintenance check flight, the operator shall specify whether differences or familiarisation training is required and describe the contents of such a training.	Document reference	TS notes

AMC1 SPO.SPEC.MCF.120 Flight crew training course for ”Level A” maintenance check flights

(a) The training course stipulated in point (a) of SPO.SPEC.MCF.120 should comprise ground training followed by a demonstration in a simulator or aircraft of the techniques for the checks in flight and failure conditions. In a demonstration performed in an aircraft, the trainer should not simulate a failure condition that could induce a safety risk.	Document reference	TS notes
(b) The ground training should cover the specified training syllabus (see AMC2 SPO.SPEC.MCF.120).	Document reference	TS notes
(c) The flight demonstration should include the techniques for the most significant checks covered in the ground training. As part of this demonstration, the pilots under training should be given the opportunity to conduct checks themselves under supervision.	Document reference	TS notes
(d) The ground training and flight demonstration should be provided by experienced flight crew with test or MCF experience. Flight demonstrations should be instructed by any of the following persons: (1) a type rating instructor currently authorised by the operator to conduct MCFs; or	Document reference	TS notes
(2) a pilot assigned by an aircraft manufacturer and experienced in conducting pre-delivery check flights; or	Document reference	TS notes
(3) a pilot holding a flight test rating.	Document reference	TS notes
(e) Upon successful completion of the training, a record should be kept and a training certificate issued to the trainee.	Document reference	TS notes

AMC2 SPO.SPEC.MCF.120 Flight crew training course for ”Level A” maintenance check flights

COURSE SYLLABUS

In the case of aeroplanes and helicopters, the training course syllabus should include the following subjects:		
(a) Legal aspects: regulations concerning MCFs.	Document reference	TS notes
(b) Organisation of MCFs: crew composition, persons on board, definition of tasks and responsibilities, briefing requirements for all participants, decision-making, ATC, development of a flight programme.	Document reference	TS notes
(c) Environmental conditions: weather and light requirements for all flight phases.	Document reference	TS notes
(d) Flight preparation: aircraft status, weight and balance, flight profile, airfield limitations, list of checks.	Document reference	TS notes
(e) Equipment and instrumentation: on-board access to various parameters.	Document reference	TS notes
(f) Organisation on board: CRM, crew coordination and response to emergency situations.	Document reference	TS notes
(g) Ground checks and engine runs: review of checks and associated techniques.	Document reference	TS notes
(h) Taxi and rejected take-off: specifications and techniques.	Document reference	TS notes
(i) Techniques for checks of various systems: (1) **aeroplanes**: flight controls, high-speed and low-speed checks, autopilot and autothrottle, depressurisation, hydraulic, electricity, air conditioning, APU, fuel, anti-icing, navigation, landing gear, engine parameters and relight, air data systems.	Document reference	TS notes
(2) **helicopters**: flight controls, engine power topping, track and balance, high-wind start, autopilot, performance measurement, hydraulic, electricity, air conditioning, APU, fuel, anti-icing, navigation, landing gear, engine checks and relight, autorotation, air data systems.	Document reference	TS notes
(j) Review of failure cases specific to these checks.	Document reference	TS notes
(k) Post-flight analysis.	Document reference	TS notes

SPO.SPEC.MCF.125 Crew composition and persons on board

(a) The operator shall establish procedures to identify the need for additional task specialists.	Document reference	TS notes
(b) For a “Level A” maintenance check flight, the operator shall define in its manual the policy for other persons on board.	Document reference	TS notes
(c) For a “Level A” maintenance check flight, a task specialist or additional pilot is required in the flight crew compartment to assist the flight crew members, unless the aircraft configuration does not permit it or the operator can justify, considering the flight crew members workload based on the flight programme, that the flight crew members does not require additional assistance.	Document reference	TS notes

GM1 SPO.SPEC.MCF.125 Crew composition and persons on board

TASK SPECIALIST’S ASSIGNED DUTIES, EQUIPMENT AND TRAINING

(a) The operator should ensure that the task specialist is trained and briefed as necessary to assist the flight crew, including performing functions such as but not limited to: (1) assistance on ground for flight preparation; (2) reading of a MCF checklist; and (3) monitoring and recording of relevant aircraft or systems’ parameters.	Document reference	TS notes
(b) If a task specialist’s assigned duties are not directly related to the flight operation but to the MCF (e.g. reporting from the cabin on a certain vibration or noise), the required training and briefing should be adequate to this function.	Document reference	TS notes
(c) The task specialist should be trained as necessary in crew coordination procedures and emergency procedures and be appropriately equipped.	Document reference	TS notes
(d) Only personnel (crew and task specialists) essential for the completion of the flight should be on board.	Document reference	TS notes

SPO.SPEC.MCF.130 Simulated abnormal or emergency procedures in flight

By way of derogation from point SPO.OP.185 a task specialist may be on board a “Level A” maintenance check flight if the task specialist is required to meet the intention of the flight and has been identified in the flight programme.	Document reference	TS notes

SPO.SPEC.MCF.135 Flight time limitations and rest requirements

When assigning crew members to maintenance check flights, operators subject to Subpart FTL of Annex III (Part-ORO) shall apply the provisions of that Subpart.	Document reference	TS notes

SPO.SPEC.MCF.140 Systems and equipment

When a maintenance check flight is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable and appropriate mitigation measures shall be agreed prior to the flight in order to minimise risks to flight safety.	Document reference	TS notes

SPO.SPEC.MCF.145 Cockpit voice recorder, flight data recorder and data link recording requirements for AOC holders

For a maintenance check flight of an aircraft otherwise used for CAT operations, the provisions for cockpit voice recorders (CVR), flight data recorders (FDR) and data link recorders (DLR) of Annex IV (Part-CAT) shall continue to apply.'.	Document reference	TS notes

NCO.SPEC.MCF.100 Levels of maintenance check flights

Before conducting a maintenance check flight, the operator shall determine the applicable level of the maintenance check flight as follows:		
(a) a "Level A" maintenance check flight for a flight where the use of abnormal or emergency procedures, as defined in the aircraft flight manual, is expected, or where a flight is required to prove the functioning of a backup system or other safety devices;	Document reference	TS notes
(b) a "Level B" maintenance check flight for any maintenance check flight other than a "Level A" maintenance check flight.	Document reference	TS notes

NCO.SPEC.MCF.105 Operational limitations

(a) By way of derogation from point NCO.GEN.105(a)(4) of this Annex, a maintenance check flight may be conducted with an aircraft that has been released to service with incomplete maintenance in accordance with points M.A.801(f) of Annex I (Part-M), 145.A.50(e) of Annex II (Part-145) or ML.A.801(f) of Annex Vb (Part-ML) to Commission Regulation (EU) No 1321/2014.	Document reference	TS notes

(b) By way of derogation from point NCO.IDE.A.105 or NCO.IDE.H.105, the pilot-in-command may conduct a flight with inoperative or missing items of equipment or functions required for the flight if those inoperative or missing items of equipment or functions have been identified in the checklist referred to in point NCO.SPEC.MCF.110.	Document reference	TS notes

NCO.SPEC.MCF.110 Cheklist and safety briefing

(a) The checklist referred to in point NCO.SPEC.105 shall be updated as needed before each maintenance check flight and shall consider the operating procedures that are planned to be followed during the particular maintenance check flight.	Document reference	TS notes
(b) Notwithstanding point NCO.SPEC.125(b), a safety briefing of the task specialist shall be required before each maintenance check flight.	Document reference	TS notes

GM1 NCO.SPEC.MCF.110 Checklist and safety briefing

SPECIFIC PROCEDURES

Specific preparation for a maintenance check flight (MCF) is essential. In addition to the standard considerations before a typical flight (weather, aircraft weight and balance, pre-flight inspection, checklists, etc.), the pilot should:		
(a) inform ATC of the particular MCF;	Document reference	TS notes
(b) if needed, agree on the appropriate airspace;	Document reference	TS notes
(c) understand the airworthiness status of the aircraft;	Document reference	TS notes
(d) assess the complexity of the flight; and	Document reference	TS notes
(e) develop appropriate strategies to mitigate potential risks.	Document reference	TS notes
The operator planning to conduct an MCF should develop checklists for the in-flight assessment of the unreliable systems, considering relevant abnormal and emergency procedures. When developing the checklists, the operator should consider the applicable documentation available from the type certificate holder or other valid documentation.	Document reference	TS notes
The pilot-in-command should only allow on board the persons needed for the purpose of the flight and brief the crew and task specialist on abnormal and emergency procedures relevant for the MCF.	Document reference	TS notes

NCO.SPEC.MCF.120 Flight crew requirements

	Document reference	TS notes
When selecting a flight crew member for a maintenance check flight, the operator shall consider the aircraft complexity and the level of the maintenance check flight as defined in point NCO.SPEC.MCF.100.		

AMC1 NCO.SPEC.MCF.120 Flight crew requirements

SELECTION OF PILOT-IN-COMMAND FOR A LEVEL-A MCF

	Document reference	TS notes
The operator may select a flight instructor to act as pilot-in-command for a 'Level A' MCF on other than complex motor-powered aircraft.		

NCO.SPEC.MCF.125 Crew composition and persons on board

	Document reference	TS notes
(a) The pilot-in-command shall identify the need for additional crew members or task specialists, or both, before each intended maintenance check flight, taking into consideration the expected flight crew member or task specialist workload and the risk assessment.		
(b) The pilot-in-command shall not allow persons on board other than those required under point (a) during a "Level A" maintenance check flight.	Document reference	TS notes

GM1 NCO.SPEC.MCF.125 Crew composition and persons on board

TASK SPECIALIST

	Document reference	TS notes
The task specialist should be trained as necessary in crew coordination procedures as well as emergency procedures and be appropriately equipped.		

NCO.SPEC.MCF.130 Simulated abnormal or emergency procedures in flight

	Document reference	TS notes
By way of derogation from point NCO.SPEC.145, a pilot-in-command may simulate situations that require the application of abnormal or emergency procedures with a task specialist on board if the simulation is required to meet the intention of the flight and if it has been identified in the check list referred to in point NCO.SPEC.MCF.110 or in operating procedures.		

NCO.SPEC.MCF.140 Systems and equipment

	Document reference	TS notes
When a maintenance check flight is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable, and appropriate mitigation measures shall be agreed prior to the flight in order to minimise risks to flight safety.		