



Autoridade Nacional da Aviação Civil
Portuguese Civil Aviation Authority

EASA PART-NCO

WORKSHOP FOR G.A.



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PART - NCO

- **PURPOSE**
- **APPLICABILITY**
- **COMMERCIAL OPERATIONS AND EXCEPTIONS**
- **STRUCTUR OF PART-NCO**
- **HARD LAW AND SOFT LAW**
- **REPOSIBILITIES**
- **DOCUMENTS**
- **EMERGENCY AND SURVIVAL EQUIPMENT**
- **MINIMUM EQUIPMENT LIST - MEL**
- **DANGEROUS GOODS**
- **OPERATING PROCEDURES**
- **FLIGHT PLANNING AND FUEL**
- **OXIGEN**
- **NCO-IDE**

PURPOSE

EASA operations regulations “Part-NCO” applicable to most light GA aircraft within EASA scope from 25 August 2016.

- The EASA Air Operations Regulation “[Commission Regulation \(EU\) No 965/2012](#)”, or the “Air Ops Regulation” has been in effect since 2012. It has introduced operational rules progressively, and the European rules applying to Commercial Air Transport have been from 2014.
- On 26 August 2016, two more sets of rules were introduced across the EASA states, replacing national rules. These subparts of the Air Ops Regulation deal with non-commercial operations.

BACKGROUND AND APPLICABILITY

Non-commercial operations of aircraft that are not (by that definition) complex motor powered aircraft fall under **Part-NCO**, though its application to balloons and gliders has been postponed until 2018 and 2019 respectively.

Operator is defined as a “legal or natural person, operating or proposing to operate one or more aircraft”.

COMMERCIAL OPERATIONS AND THE EXCEPTIONS

The Basic Regulation (EU) 2018-1139 of the European Parliament and of the Council of 4 July defines a “commercial operation” as “any operation of an aircraft, in return for remuneration or other valuable consideration, which is **available to the public or, when not made available to the public, which is performed under a contract between an operator and a customer.**”

COMMERCIAL OPERATIONS AND THE EXCEPTIONS

These definitions are very broad, and so the Air Operations Regulation also sets out a number of types of operation that are to be operated under Part-NCO.

These include:

COMMERCIAL OPERATIONS AND THE EXCEPTIONS

- Flight training.
- Cost-shared flights by private individuals, on the condition that the direct cost is shared by all the occupants of the aircraft, pilot included and the number of persons sharing the direct costs **is limited to six.**
- Competition flights or flying displays, on the condition that the remuneration or any valuable consideration given for such flights is limited to recovery of direct costs and a proportionate contribution to annual costs, **as well as prizes of no more than a value specified by the Competent Authority.**

COMMERCIAL OPERATIONS AND THE EXCEPTIONS

Introductory flights, parachute dropping, sailplane towing or aerobatic flights performed either by **[an ATO]**, or by an organisation created with the aim of **promoting aerial sport or leisure aviation**, on the condition that the aircraft is operated by the organisation on the basis of ownership or dry lease, that the flight does not generate profits distributed outside of the organisation.

COMMERCIAL OPERATIONS AND THE EXCEPTIONS

These operations are also treated as non-commercial for the purposes of the Aircrew Regulation, i.e. they are within the privileges of a PPL holder, as well as falling under Part-NCO.

STRUCTURE OF PART-NCO

- GEN**
 - *deals with general requirements, including pilot responsibilities, and documents.*
- OP**
 - *deals with operational procedures, including pre-flight preparation, operating minima and fuel planning.*
- POL**
 - *deals with performance and operating limitations, and is mercifully short.*
- IDE**
 - *deals with instruments, data and equipment*
 - *deals with specific requirements for particular types of “specialised operation”, like towing, competition flights, aerobatics and parachute dropping.*
- SPEC**

STRUCTURE OF PART-NCO

The regulation is addressed to the pilot-in-command, operator and crew members.

Most of Part-NCO is directed at the “pilot-in-command”, defined as **“the pilot designated as being in command and charged with the safe conduct of the flight”**. This differs from the other parts of the Air Ops Regulation where the rules are directed at the **“operator”**.

HARD LAW AND SOFT LAW

EASA regulations consist of IR - Implementing Rules (“Hard Law”) which are mandatory, and Acceptable Means of Compliance (AMC’s) and Guidance Material (GM), which together comprise “Soft Law”. AMC’s serves to set out one way of satisfying the implementing rule. If the AMC is complied with, the rule is satisfied. Guidance Material is generally used to explain terminology.

COMPETENT AUTHORITY

- The “Competent Authority” plays a much less significant role in Part-NCO than in other parts of the rules, as there is little requirement for approval. **The competent authority is, however, responsible for Oversight and Enforcement, so it is important in that context.**
- If an aircraft is registered in an EASA state, the competent authority is the state of registry. If the aircraft is registered in a third country, the competent authority is the state where the operator (who is, probably, the pilot) is established or residing

RESPONSIBILITIES

Pilot-in-command responsibilities and authority under Part-NCO are fairly standard.

The responsibilities include:

- the safety of the aircraft;
- the initiation, continuation, termination or diversion of a flight in the interest of safety;
- ensuring that all operational procedures and checklists are complied with;
- the pilot's fitness to fly and fatigue;
- deciding on acceptance of the aircraft with unserviceabilities;

RESPONSIBILITIES

- recording flight times etc. and all known or suspected defects;
- reporting hazardous weather;
- dealing with emergencies; and
- reporting accidents and unlawful interference.

RESPONSIBILITIES

They also include pre-flight actions, ensuring that:

- the aircraft is registered and airworthy;
- instruments and equipment are serviceable;
- the weight and balance is within limits;
- equipment and baggage is securely stowed; and
- AFM or POH limitations will not be exceeded during the flight.



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Portuguese Civil Aviation Authority

DOCUMENTS

Required documents are essentially divided into two categories: those needed in flight, and those carried for oversight purposes.

For use in flight, the requirement is for:

- the Aircraft Flight Manual, or equivalent document(s);
- current and suitable aeronautical charts for the route or area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;
- procedures and visual signals information for use by intercepting and intercepted aircraft;
- details of the filed ATS flight plan, if applicable
- the Minimum Equipment List, if one has been declared.

DOCUMENTS

For oversight purposes, the requirement is for:

- the original certificate of registration;
- the original certificate of airworthiness (CofA);
- the noise certificate, if applicable;
- the list of specific approvals, if applicable (under Part-SPA, e.g. Low Visibility Operations);
- the aircraft radio licence, if applicable;
- the third party liability insurance certificate(s);
- the journey log, or equivalent, for the aircraft;

MINIMUM EQUIPMENT LIST

- There is no obligation to have an MEL, but under Part-M, which is already in force, without a MEL any defect can only be deferred by an engineer. To give the flight crew some discretion, a MEL can be used.
- MEL's have to be based on a Master MEL (MMEL) for the aircraft type, and must be no less restrictive. For aircraft for which no MMEL is available, a generic GEN-MMEL is published by EASA. The operator must notify the competent authority of its MEL, but it does not have to be approved.

DANGEROUS GOODS

- The carriage of dangerous goods has to be done in accordance with the ICAO Technical Instructions for the Carriage of Dangerous Goods. Dangerous Goods include flammables like:
 - fuel,
 - de-icer,
 - lithium batteries,
 - compressed gases and
 - corrosives.

FUEL PLANNING AND MANAGEMENT

- Fuel planning requirements are much more demanding under Part-NCO. The rules, in effect, introduce the concept of a fuel reserve which must be preserved on landing. The required reserve for aeroplanes is:
 - **10 mins** for local VFR within sight of the aerodrome
 - **30 mins** for other day VFR
 - **45 mins** for IFR and night VFR
- The minutes are at “normal cruising altitude”.

OXYGEN CARRIAGE AND USE (UNPRESSURISED AIRCRAFT)

- Part-NCO originally required the use of oxygen by flight crew members above FL130, or above FL100 for more than 30 mins, with an equivalent requirement for the oxygen supply to be carried.

ALTERNATES

An alternate is required for IFR flights unless the forecast for -/+ 1 hour either side of ETA indicates the approach can be flown in VMC. The alternate must be specified in the flight plan, though it is unclear whether this means the ATS flight plan or the operational flight plan (“OFP”).

For ANAC on both.

PASSENGER BRIEFING

As in most national law, the pilot is responsible for briefing the passengers on emergency procedures. The implementing rule sets out more general requirements than the Portuguese equivalent, but has the same effect.

FLIGHT PREPARATION

Flight preparation requirements are essentially equivalent to those in national law. The requirement is to be familiar with “all available meteorological information appropriate to the intended flight”.

ICING

- Remove of any deposit that *might* adversely affect the performance of the aircraft. Pragmatism is again the order of the day, bearing in mind that even small amounts of ice can have a significant effect on performance.
- For in-flight icing conditions, the language is again quite pragmatic. The aircraft may only be flown intentionally in “***expected or actual icing conditions***” if certified to do so, and should leave, without delay, icing conditions that it is not able to cope with.

SIMULATED SITUATIONS IN FLIGHT

One of the most controversial new rules inserted into Part-NCO is one that forbids the simulation of emergencies/abnormal situations or the simulation of flight in IMC when carrying passengers or cargo.

PERFORMANCE

OPERATING LIMITATIONS AND PERFORMANCE

The operating limitations section of Part-NCO is short, requiring compliance with weight and balance limitations in the AFM and mandating the display of operating limitations by placard. It also requires the pilot-in-command to ensure the performance of the aircraft is adequate for the intended flight, including the aerodromes to be used.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE.

CERTIFICATION OF INSTRUMENTS AND EQUIPMENT

Flight instruments, navigation and communication equipment, as well as any equipment installed in the aircraft (*except spare fuses, torches, clocks, first aid kits, survival equipment and child restraints*) must meet the applicable airworthiness requirements. Other required equipment need not be of an approved type.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

INSTRUMENTS

For VFR by day, a

- compass,
- clock (can be a watch, GPS or phone),
- altimeter and
- airspeed indicator

are required, or rather the means must be available to measure what they measure, e.g. via a flight data computer or other integrated system.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

For VFR at night (or where there is no visual horizon), in addition to the above:

- turn and slip,
- attitude indicator,
- vertical speed indicator and
- direction indicator

For IFR, an OAT indicator and pitot heat are required in addition to the VFR night kit.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

COMMUNICATIONS EQUIPMENT

Communication radios are required to meet airspace requirements for communication.

Duplication is not required.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

NAVIGATION EQUIPMENT

- Navigation radios are required to fly the filed ATS flight plan if applicable, and to meet applicable airspace requirements (i.e. PBN specifications like RNAV 5).
- Additional requirements are imposed for Performance Based Navigation

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

SURVEILLANCE EQUIPMENT

Transponders are required according to the airspace requirements.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

MISCELLANEOUS EQUIPMENT

➤ INTERCOM

- When operating with more than one flight crew member, an intercom with headsets is required. Since all aircraft operated under Part-NCO can be operated by a single pilot, this mainly affects instructional flights.

➤ SEAT BELTS

- Seat belts are required for all passengers, with a shoulder strap for flight crew.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

➤ FIRST-AID KIT

- A first aid kit is required. AMC/GM gives some guidance on contents.

➤ HAND FIRE EXTINGUISHERS

- A fire extinguisher is required in aeroplanes of more than 1200 kg MTOM.

➤ FLIGHT OVER WATER

- Life jackets are required in singles when out of gliding distance of land, or where there is a likelihood of ditching (presumably in the event of an engine failure). Lifejackets are required in all aeroplanes operating more than 50 miles from land, and in addition the pilot-in-command must decide whether other equipment, like life-rafts and flares, are necessary.

INSTRUMENTS, DATA AND EQUIPMENT NCO.IDE

➤ SURVIVAL EQUIPMENT

- Other survival equipment is required over areas in which search and rescue would be especially difficult. These are usually designated by the state concerned.

➤ EMERGENCY LOCATOR TRANSMITTERS

- Emergency Locator Transmitters (ELT's) are required for all aeroplanes and helicopters, but may be replaced by a personal locator beacon (PLB) carried by the pilot for aircraft with 6 or fewer seats.
- **A GPS is strongly recommended.**

SUMMARY

From 25th August 2016, new rules regarding non-commercial air operations with both aeroplanes and helicopters came in force across all 32 EASA states – that's the 28 European Union countries plus Iceland, Liechtenstein, Norway and Switzerland.

SUMMARY

Here's the list of topics covered, much of which will also be covered in the Aircraft's Flight Manual or Pilot's Operating Handbook:

- Pilot-in-Command responsibilities and authority
- Taxying of aeroplanes
- Rotor engagement
- Portable electronic devices
- Emergency and survival equipment
- Documents, manuals and information to be carried
- Transport of dangerous goods

SUMMARY

- Journey log
- Minimum equipment list
- Use of aerodromes and operating sites
- Aerodrome operating minima
- Passenger briefing
- Refuelling
- Carriage of passengers
- Meteorological conditions
- Ice and other contaminants
- Take-off conditions

SUMMARY

- Approach and landing conditions
- Aircraft performance and operating limitations
- Weighing
- Instruments, data and equipment
- Operations under VFR and IFR
- Terrain Awareness Warning System (TAWS)
- Flight crew intercom
- Seats and safety belts

SUMMARY

- First-aid kit
- Supplemental oxygen
- Emergency locator transmitter
- Flight over water
- Radio communications equipment
- Navigation equipment
- Operating lights.

All EASA aircraft to carry an ELT or PLB

SUMMARY

For types with a Certificate of Airworthiness issued after 1 July 2008, the ELT must be automatic, and all ELTs must be capable of transmitting on 121.5 MHz and 406 MHz. In a hard won concession, a PLB is acceptable for aircraft with six seats or less.

SUMMARY

All EASA aircraft to carry a First Aid Kit

The following should be included:

- Bandages (assorted sizes)
- Burns dressings (large and small)
- Wound dressings (large and small)
- Adhesive dressings (assorted sizes)
- Antiseptic wound cleaner
- Safety scissors
- Disposable gloves.

SUMMARY

Cost-sharing

EASA is putting clear space between commercial (for fare-paying passengers) and non-commercial operations and it has recognised that cost-sharing between friends and colleagues is an established practice. So, if you and some mates fly your syndicate-owned Cessna 172 to Sevilha for lunch, you might well want to split the direct costs, i.e. fuel. Part-NCO allows this for non-complex aircraft but the number of occupants is limited to six, including the pilot, and there must be no element of profit.



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SUMMARY

Dangerous goods and oxygen

EASA recognises that pilots of General Aviation aircraft may want to carry on board the aircraft items which would normally be described as Dangerous Goods. Under Part-NCO, you're allowed to carry articles and substances for operational purposes, such as aircraft spare parts, components/substances needed for aircraft repair, oil (for aircraft engine/gearbox), aircraft fuel, de-icing fluid, aircraft battery and an air starter unit.



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Journey Log

- Aircraft nationality and registration
- Date
- Name of crew members
- Duty assignments of crew members, if applicable
- Place of departure
- Place of arrival
- Time of departure
- Time of arrival
- Hours of flight
- Nature of flight
- Incidents and observations (if any)
- Signature of the pilot-in-command.

SUMMARY

So what is an ELT?

An ELT is a battery-powered electronic device which is fitted to the aircraft, usually in the rear of the fuselage, with an external antenna. Modern ELTs have an in-built GPS unit.

The ELT is designed to set itself off during the impact of a crash when it will transmit a distress signal on 406 MHz and a homing signal on 121.5 MHz.

SUMMARY

So what is a PLB?

This is a Personal Locator Beacon (PLB), suitable in place of an ELT in aircraft with six seats or fewer.

A PLB works in a similar way but, as the name suggests, it's a personal device and is activated by whoever is carrying it. It's smaller than an ELT and has its own antenna. It's only acceptable to EASA as an alternative to an ELT in aircraft with maximum passenger seating of six or less.

NCO - ELT



PLB - EPIRB





THANK YOU FOR YOUR ATTENTION

ANAC WISH YOU SAFE FLIGHTS

