

Anexo 1 à CIA 06/2022

Parte A - Fuel/ Energy schemes airplanes

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|---|---------|---------|---|
| CAT.OP.MPA.180 | The operator shall establish, implement, and maintain a fuel/energy scheme that: (1) is appropriate for the type(s) of operation performed; (2) corresponds to the capability of the operator to support its implementation | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(a)(3)(i) | BASIC FUEL/ENERGY SCHEME , all the corresponding AMCs that apply to the basic fuel scheme GM1 CAT.OP.MPA.180 (a) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(a)(3)(ii) | BASIC FUEL/ENERGY SCHEME WITH VARIATIONS , the operator decides to deviate fully or partly from the basic fuel schemes, the AMC for basic fuel schemes with variations apply to the specific deviation GM1 CAT.OP.MPA.180 (b) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(a)(3)(iii) | INDIVIDUAL FUEL/ENERGY SCHEME the operator wishes to apply an individual fuel scheme, the AMC for the individual fuel scheme apply and the part of the basic fuel scheme & basic with variations that are applicable. GM1 CAT.OP.MPA.180 (c) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(b)(1) | The fuel/energy schemes shall comprise a fuel/energy planning and in-flight re-planning policy. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(b)(2) | The fuel/energy schemes shall comprise an aerodrome selection policy. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(b)(3) | The fuel/energy schemes shall comprise an in-flight fuel/energy management policy. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(d)(1) AMC1 CAT.OP.MPA.180(a) | INDIVIDUAL FUEL/ENERGY SCHEME A baseline safety performance for the individual fuel/energy scheme has been established GM2 CAT.OP.MPA.180 | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|--|---------|---------|---|
| CAT.OP.MPA.180(d)(2) AMC1 CAT.OP.MPA.180 (b) AMC1 CAT.OP.MPA.180 (d) AMC1 CAT.OP.MPA.180 (e) | INDIVIDUAL FUEL/ENERGY SCHEME Demonstrate its capability to support the implementation of the proposed individual fuel/energy scheme, including the capability to exercise adequate operational control and to ensure exchange of the relevant safety information between the operational control center personnel and the flight crew GM3 CAT.OP.MPA.180 | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.180(d)(3) AMC1 CAT.OP.MPA.180 (f) | INDIVIDUAL FUEL/ENERGY SCHEME A safety risk assessment that demonstrates how an equivalent level of safety to that of the current fuel/energy scheme is achieved. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(a)(1) | Establish in the OM a fuel/energy planning and in-flight re-planning policy as part of the fuel/energy scheme | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(a)(2) | The fuel/energy planning and in-flight re-planning policy, ensures that the aeroplane carries a sufficient amount of usable fuel/energy to safely complete the planned flight and to allow for deviations from the planned operation. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(a)(3) | All procedures for the fuel/energy planning and in-flight re-planning policy shall be contained in the operations manual (OM). | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(a)(4) | The fuel/energy planning of the flight is based on the current aircraft-specific data derived from a fuel/energy consumption monitoring system or, if not available, from data provided by the aeroplane manufacturer. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(b) | The planning of flights includes the operating conditions under which the flight is to be conducted; the operating conditions shall include at least: GM1 CAT.OP.MPA.181 (b) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(b)(1) | -Aircraft fuel/energy consumption data GM1 CAT.OP.MPA.181 (c) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| AMC8 CAT.OP.MPA.181 | INDIVIDUAL FUEL/ENERGY SCHEME The fuel consumption monitoring system is data driven, and includes the fuel performance monitoring system, a database that contains statistically significant data of at least 2 years, data normalization and data transparency and verification. GM3 CAT.OP.MPA.181 | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(b)(2) | -anticipated masses GM1 CAT.OP.MPA.181 (d) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|---|---------|---------|---|
| CAT.OP.MPA.181(b)(3) | · anticipated meteorological conditions | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| | INDIVIDUAL FUEL/ENERGY SCHEME- When determining the extent of the deviation in the area of operation, the operator should monitor the reliability of the meteorological forecast reports. GM4 CAT.OP.MPA.181 | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(b)(4) | -the effects of deferred maintenance items and/or of configuration deviations | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(b)(5) | -the expected departure and arrival routing and runways | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(b)(6) | -anticipated delays | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(c) | The pre-flight calculation of the usable fuel/energy that is required for a flight was taken into account depending on the airplane: | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(c)(1) AMC1 CAT.OP.MPA.181 (a) AMC2 CAT.OP.MPA.181 (a) | -taxi fuel/energy Not required for airplanes ELA2 or panoramic flights GM1 CAT.OP.MPA.181 (a) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| AMC5 CAT.OP.MPA.181 | BASIC FUEL/ENERGY SCHEME WITH VARIATIONS — TAXI FUEL Calculated using statistical taxi fuel. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(c)(2) AMC1 CAT.OP.MPA.181 (b) AMC2 CAT.OP.MPA.181 (b) AMC3 CAT.OP.MPA.181 | -The fuel/energy for the flight GM1 CAT.OP.MPA.181 (e)-(f) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(c)(3) AMC1 CAT.OP.MPA.181 (c) AMC2 CAT.OP.MPA.181 (c) AMC3 CAT.OP.MPA.181 | -contingency fuel for the flight, highest of: 5 % of the planned trip fuel or, in the event of in-flight re-planning, 5 % of the trip fuel for the remainder of the flight; or an amount to fly for 5 minutes at holding speed at 1 500 ft (450 m) above the destination aerodrome in standard conditions GM1 CAT.OP.MPA.181 (g) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|--|---------|---------|-----------------------------------|
| AMC6 CAT.OP.MPA.181 AMC7 CAT.OP.MPA.181 | <p>BASIC FUEL/ENERGY SCHEME WITH VARIATIONS The operator establishes and maintains a fuel consumption monitoring system for individual aeroplanes, and uses valid data for fuel calculation based on such a system, the operator may use any of the requirements</p> <ul style="list-style-type: none"> - 3% ERA - 20min - a continuous 2-year operation is required during which statistical contingency fuel (SCF) data is recorded <p>GM2 CAT.OP.MPA.181</p> <ul style="list-style-type: none"> - 5min holding at 1500ft - RCF procedure using a decision point and a refueling alternate. | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.181(c)(4) AMC1 CAT.OP.MPA.181 (d) AMC2 CAT.OP.MPA.181 (d) AMC3 CAT.OP.MPA.181 | -destination alternate fuel/energy | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.181(c)(4)(i) | -when a flight is operated with at least one destination alternate aerodrome GM1 CAT.OP.MPA.181 (h) | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.181(c)(4)(ii) | -when a flight is operated with no destination alternate aerodrome, it's required an amount of 15-minute fuel/energy at holding speed at 1500ft, at destination. | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.181(c)(5) AMC1 CAT.OP.MPA.181 (e) AMC2 CAT.OP.MPA.181 (e) AMC3 CAT.OP.MPA.181 | Final reserve fuel/energy that shall be the amount of fuel/energy that is calculated at holding speed at 1 500ft: -for aeroplanes with reciprocating engines, the fuel/energy to fly for 45 minutes -for turbine-engined aeroplanes, the fuel/energy to fly for 30 minutes GM1 CAT.OP.MPA.181(i) | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.181(c)(6) AMC1 CAT.OP.MPA.181 (f) AMC4 CAT.OP.MPA.181 | -additional fuel/energy, for inflight emergency Not required for airplanes ELA2 or panoramic flights. | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.181(c)(7) AMC1 CAT.OP.MPA.181 (g) AMC2 CAT.OP.MPA.181 (f) AMC3 CAT.OP.MPA.181 | -extra fuel/energy to take into account anticipated delays or specific operational constraints GM1 CAT.OP.MPA.181 (j) | | | [] YES [] N/A [] NO [] N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|---|---------|---------|---|
| CAT.OP.MPA.181(c)(8) AMC1 CAT.OP.MPA.181 (h) AMC2 CAT.OP.MPA.181 (g) AMC3 CAT.OP.MPA.181 | -discretionary fuel/energy, if required by the commander GM1 CAT.OP.MPA.181 (k) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.181(d) | -procedures must be established for inflight calculation of amount of fuel described above. GM1 CAT.OP.MPA.181 (l) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182 | Must be established in the OM, a policy of aerodrome selection in accordance with the following requirements: | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| AMC1 CAT.OP.MPA.180 (c) | INDIVIDUAL FUEL/ENERGY SCHEME take into account at least the following elements for the relevant area of operation: -the available aerodrome technologies, capabilities, and infrastructure; -the reliability of meteorological and aerodrome information; the reliability of the aeroplane systems, especially the time-limited ones; and the type of ATS provided and, where applicable, characteristics and procedures of the air traffic flow management and of the airspace management. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182(a) | At the planning stage, the operator shall ensure that once the flight has commenced, there is reasonable certainty that an aerodrome where a safe landing can be made will be available at the estimated time of use of that aerodrome as destination. GM1 CAT.OP.MPA.182 (b) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182(b) AMC1 CAT.OP.MPA.182 AMC3 CAT.OP.MPA.182 | At the planning stage, to allow for a safe landing in case of an abnormal or emergency situation after take-off, the operator shall select and specify in the operational flight plan a take-off alternate aerodrome if either: -the meteorological conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation; or - it would be impossible to return to the aerodrome of departure for other reasons | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182(c) AMC1 CAT.OP.MPA.182 AMC3 CAT.OP.MPA.182 | The take-off alternate aerodrome shall be located within a distance from the departure aerodrome that minimises the risk of exposure to potential abnormal or emergency situations taking into account the actual and forecast meteorological conditions, availability and quality of the aerodrome infrastructure, navigation and landing capabilities of the aircraft in abnormal or emergency conditions, the redundancy of critical systems and navigation and landing capabilities of the aircraft in abnormal or emergency conditions, and the redundancy of critical systems | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|--|---------|---------|---|
| CAT.OP.MPA.182(d)(1) AMC2 CAT.OP.MPA.182 AMC4 CAT.OP.MPA.182 | At the planning stage, for each instrument flight rules (IFR) flight, the operator shall select and specify in the operational and air traffic services (ATS) flight plan one or more aerodromes so that two safe-landing options are available reaching the destination aerodrome GM1 CAT.OP.MPA.182 (c)-(e) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| | <u>INDIVIDUAL FUEL/ENERGY SCHEME</u> In the context of individual fuel schemes, ‘reaching the destination’ means being as close as possible to the destination, but not necessarily overhead the destination, and no farther than IAF of the planned instrument approach procedure for the destination aerodrome GM1 CAT.OP.MPA.182(d)(1) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182(d)(2) AMC7 CAT.OP.MPA.182 | <u>BASIC FUEL/ENERGY SCHEMES WITH VARIATIONS</u> At planning phase and using an isolated aerodrome, one or more alternate aerodromes must be specified in the operational flight plan to have all times two safe landing options at the PNR. Reaching the PNR flight should not continue if a safe landing cannot be assured due to meteorological, traffic or other reasons. Approval required to use isolated aerodromes. GM1 CAT.OP.MPA.182 (f) destination aerodrome as an isolated aerodrome if the alternate fuel plus the FRF that is required to reach the nearest adequate destination alternate aerodrome is more than: for aeroplanes with reciprocating engines, the amount of fuel required to fly either for 45 minutes plus 15 % of the flying time planned for cruising, including FRF or for 2 hours, whichever is less; or for turbine-engined aeroplanes, the amount of fuel required to fly for 2 hours with normal cruise consumption above the destination aerodrome, including the FRF GM2 CAT.OP.MPA.182 If fuel planning policy includes an isolated aerodrome, a PNR should be determined by a computerised flight-planning system and specified in the operational flight plan | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182(e) AMC5 CAT.OP.MPA.182 AMC6 CAT.OP.MPA.182 | Taken into account a possible deterioration of the available forecast meteorological conditions GM1 CAT.OP.MPA.182 (g) GM4 CAT.OP.MPA.182 | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|--|---------|---------|---|
| AMC8 CAT.OP.MPA.182 AMC9 CAT.OP.MPA.182 | BASIC FUEL/ENERGY SCHEME WITH VARIATIONS-PLANNING MINIMA Minima can be reduced as per AMC8 CAT.OP.MPA.182 y AMC9 CAT.OP.MPA.182 if the flight plan is originated automatically, if LVO available for the approach and a flight control system is implemented. GM3 CAT.OP.MPA.182 | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.182(f) AMC1 CAT.OP.MPA.182(f) | For each IFR flight, the operator shall ensure that sufficient means are available to navigate to and land at the destination aerodrome or at any destination alternate aerodrome in the event of loss of capability for the intended approach and landing operation. GM1 CAT.OP.MPA.182(f) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.185(a)(1) AMC1 CAT.OP.MPA.185(a) | The OM establishes procedures for in-flight fuel/energy management that ensures continual validation of the assumptions made during the planning stage | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.185(a)(2) AMC1 CAT.OP.MPA.185(a) (b) | The procedures for in-flight fuel/energy management must include re-analysis and adjustment, if necessary | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| AMC2 CAT.OP.MPA.185(a) | BASIC FUEL/ENERGY SCHEME WITH VARIATIONS If the RCF procedure is used on a flight to proceed to destination 1 aerodrome, the commander should ensure that the remaining usable fuel at the decision point is at least the total of the following: trip fuel from the decision point to destination 1 aerodrome; contingency fuel that is equal to 5 % of the trip fuel from the decision point to destination 1 aerodrome; destination 1 aerodrome alternate fuel if a destination 1 alternate aerodrome is required; additional fuel, if required; and FRF. In case of isolated aerodrome, the commander must have at the PNR, enough fuel to reach the destination aerodrome including contingency and additional fuel. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.185(a)(3) | that the amount of usable fuel/energy remaining on board is protected and not less than the fuel/energy that is required to proceed to an aerodrome where a safe landing can be made | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.185(a)(4) | The procedures for in-flight fuel/energy management must clearly state that data shall be recorded to justify actions taken during flight GM1 CAT.OP.MPA.185 (a)-(c) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.185(b) | Procedures must be in place to require the flight crew to obtain delay information from a reliable source when unforeseen circumstances may result in landing at the destination aerodrome with less than the final reserve fuel/energy plus any fuel/energy to proceed to an alternate aerodrome, if required or fuel/energy required to proceed to an isolated aerodrome. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|------------------------|--|---------|---------|--|
| AMC3 CAT.OP.MPA.185(a) | <p>INDIVIDUAL FUEL/ENERGY SCHEME The operator should provide relevant safety information to the commander before the commander decides to commit to land at a specific aerodrome.</p> | | | <p><input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R</p> |
| CAT.OP.MPA.185(c) | <p>Procedures of declaring 'MINIMUM FUEL' to ATC, are included if once committed to land at a specific aerodrome, any change to the existing clearance to that aerodrome may result in landing with less than the planned final reserve fuel/energy GM1 CAT.OP.MPA.185 (d)-(j)</p> | | | <p><input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R</p> |
| CAT.OP.MPA.185(d) | <p>Procedures are included to broadcast 'MAYDAY MAYDAY MAYDAY FUEL' to ATC when the usable fuel/energy that is calculated to be available upon landing at the nearest aerodrome where a safe landing can be made is less than the planned final reserve fuel/energy. GM1 CAT.OP.MPA.185 (k)-(l)</p> | | | <p><input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R</p> |

Parte B - Fuel/ Energy planning - Helicopters

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|-------------------------|--|---------|---------|---|
| CAT.OP.MPA.190(a)(1) | The operator shall establish, implement, and maintain a fuel/energy scheme that comprises: (1) a fuel/energy planning and in-flight re-planning policy | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.190(a)(2) | (2) an in-flight fuel/energy management policy. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.190(b) | The fuel/energy scheme shall: (1) be appropriate for the type(s) of operation performed; and (2) correspond to the capability of the operator to support its implementation. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.191(a) | As part of the fuel/energy scheme, the operator shall establish a fuel/energy planning and in-flight re-planning policy to ensure that the aircraft carries a sufficient amount of usable fuel/energy to safely complete the planned flight and to allow for deviations from the planned operation | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.191(b)(1) | All procedures for fuel/energy planning are included in the OM | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.191(b)(1)(i) | The operator shall ensure that the fuel/energy planning of flights is based upon at least the following elements: (1) procedures contained in the operations manual as well as: (i) current aircraft-specific data derived from a fuel/energy consumption monitoring system; or (ii) data provided by the aircraft manufacturer | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.191(b)(2) | the operating conditions under which the flight is to be conducted including: (i) aircraft fuel/energy consumption data; (ii) anticipated masses; (iii) anticipated meteorological conditions; (iv) the effects of deferred maintenance items or of configuration deviations, or both; and (v) procedures and restrictions introduced by air navigation service providers. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|---|---------|---------|---|
| CAT.OP.MPA.191(c) AMC1 CAT.OP.MPA.191(b)(c) | The operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes: (1) taxi fuel/energy, which shall not be less than the amount expected to be used prior to take-off; (2) trip fuel/energy; (3) contingency fuel/energy; (4) destination alternate fuel/energy if a destination alternate aerodrome is required; (5) final reserve fuel/energy, which shall not be less than: (i) if flying under visual flight rules (VFR) and navigating by day with reference to visual landmarks, 20-minute fuel/energy at best-range speed; or (ii) if flying under VFR and navigating by means other than by reference to visual landmarks or at night, 30-minute fuel/energy at best-range speed; or (iii) if flying under instrument flight rules (IFR), 30-minute fuel/energy at holding speed at 1 500 ft (450m) above the aerodrome elevation in standard conditions, calculated according to the helicopter estimated mass on arrival at the destination alternate aerodrome or at the destination aerodrome when no destination alternate aerodrome is required; (6) extra fuel/energy, to take into account anticipated delays or specific operational constraints; and (7) discretionary fuel/energy, if required by the commander. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.191(d) | The operator shall ensure that if a flight has to proceed along a route or to a destination aerodrome other than the ones originally planned, in-flight re-planning procedures for calculating the required usable fuel/energy include: (1) trip fuel/energy for the remainder of the flight; (2) reserve fuel/energy consisting of: (i) contingency fuel/energy; (ii) alternate fuel/energy if a destination alternate aerodrome is required; (iii) final reserve fuel/energy; and (iv) additional fuel/energy, if required by the type of operation; (3) extra fuel/energy, to take into account anticipated delays or specific operational constraints; and (4) discretionary fuel/energy, if required by the commander. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.191(e) | For helicopters with MCTOM of 3175kg or less, flying by day or local flights, the final reserve fuel/energy has a relief. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.192(a) AMC1 CAT.OP.MPA.192(a) | For flights under instrument meteorological conditions (IMC), the operator shall select a take-off alternate aerodrome within one-hour flying time at normal cruising speed if it is not possible to return to the site of departure for meteorological reasons. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.192(b) AMC1 CAT.OP.MPA.192 (a) AMC1 CAT.OP.MPA.192 (b) AMC1 CAT.OP.MPA.192 (c) | At the planning stage, for each instrument flight rules (IFR) flight, the operator shall select and specify in the operational and air traffic services (ATS) flight plans one or more aerodromes or operating sites so that two safe-landing options are available during normal operation, except as provided for under point SPA.HOFO.120(b) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|--|---------|---------|---|
| CAT.OP.MPA.192(c) AMC1 CAT.OP.MPA.192 (d) AMC1 CAT.OP.MPA.192 (e) | The operator shall apply appropriate safety margins to flight planning to take into account a possible deterioration of the available forecast meteorological conditions at the estimated time of landing. GM1 CAT.OP.MPA.192(c)&(d) GM2 CAT.OP.MPA.192(c)&(d) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.192(d) AMC1 CAT.OP.MPA.192(d) | For each IFR flight, the operator shall ensure that sufficient means are available to navigate to and land at the destination aerodrome or at any destination alternate aerodrome in the event of loss of capability for the intended approach and landing operation. GM1 CAT.OP.MPA.192(c)&(d) GM2 CAT.OP.MPA.192(c)&(d) GM1 CAT.OP.MPA.192(d) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.195 | The operator shall establish procedures in the OM an in-flight fuel/energy management. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.195(a) AMC1 CAT.OP.MPA.195 | The operator shall establish IN THE OM procedures to ensure that in-flight fuel/energy checks and fuel/energy management are performed. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.195(b) | The commander shall monitor the amount of usable fuel/energy remaining on board to ensure that it is protected and not less than the fuel/energy that is required to proceed to an aerodrome or operating site where a safe landing can be made. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.195(c) | The commander shall advise air traffic control (ATC) of a 'minimum fuel/energy' state by declaring 'MINIMUM FUEL' when the commander has: (1) committed to land at an aerodrome or operating site; and (2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel/energy. GM1 CAT.OP.MPA.195(a) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.195(d) | The commander shall declare a situation of 'fuel/energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the usable fuel/energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel/energy - GM1 CAT.OP.MPA.195 (b)-(d) | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

Parte C – Special Refuelling or defueling of fuel/ energy - Airplanes

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|--|---------|---------|---|
| | <u>REFUELLING WITH ONE ENGINE RUNNING</u> | | | |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(1) AMC1 CAT.OP.MPA.200 (b) CAT.OP.MPA.200(c) | Special refuelling or defuelling shall only be conducted if the operator: (1) has performed a risk assessment; (2) has developed procedures; and (3) has established a training program for its personnel involved in such operations | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(1) AMC1 CAT.OP.MPA.200 (a) CAT.OP.MPA.200(c) | Refuelling with an engine running should only be conducted: (1) when there are no other sources of electrical or pneumatic power to start the engine if shut down; (2) in accordance with the specific procedures established by the type certificate (TC) holder of the aeroplane; (3) with aeroplanes that use JET A, JET A-1 or TS-1 fuel types or any other fuel type that has a flash point above 38 °C and is approved by the operators' competent authority; (4) with no passengers embarking, on board, or disembarking; (5) with permission from the aerodrome operator; and (6) in the presence of the aerodrome rescue and firefighting services (RFFSs). | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(2) AMC1 CAT.OP.MPA.200 (b) GM1 CAT.OP.MPA.200 CAT.OP.MPA.200(c) | For the purpose of refuelling with an engine running, the operator's procedures need to be aligned with the specific procedures laid down in the AFM. In case there are no specific procedures for refuelling with an engine running available in the AFM, the operator and the manufacturer may wish to cooperate to establish such procedures in the OM. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(2) AMC2 CAT.OP.MPA.200 (a) CAT.OP.MPA.200(c) | To reduce the likelihood of conducting refuelling with an engine running, the operator should include in the MEL an operational procedure for dispatch criteria in case of an unserviceable APU, if applicable, to prevent a flight from being dispatched to an aerodrome where no suitable ground support equipment is available. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(3) AMC2 CAT.OP.MPA.200 (b) CAT.OP.MPA.200(c) | Appropriate training should be provided to flight crew and maintenance/ground operations personnel that are involved in refuelling with one engine running, as well as to cabin crew, if present on board. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|--|---------|---------|---|
| | <u>REFUELLING OR DEFUELLING WITH PASSENGERS EMBARKING, ON BOARD OR DISEMBARKING</u> | | | |
| CAT.OP.MPA.200(b)(2) CAT.OP.MPA.200(a)(1) CAT.OP.MPA.200(c) | a risk assessment was established for refuelling/defuelling with passengers embarking, on board, or disembarking | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(2) CAT.OP.MPA.200(a)(1) AMC5 CAT.OP.MPA.200 AMC6 CAT.OP.MPA.200 (a) AMC6 CAT.OP.MPA.200 (b) CAT.OP.MPA.200(c) | <p>When passengers are embarking, on board, or disembarking, an aircraft should not be refuelled/defuelled with avgas (aviation gasoline) or wide-cut type fuel or a mixture of these types of fuel.</p> <p>For all other types of fuel, the necessary precautions should be taken, and the aircraft should be properly manned by qualified personnel that should be ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.</p> <p>When refuelling/defuelling with passengers on board, ground servicing activities and work inside the aeroplane, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and allow emergency evacuation through those aisles and exits that are intended for emergency evacuation</p> <p>The deployment of integral aeroplane stairs or the opening of emergency exits are not necessarily a prerequisite to refueling</p> | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|--|---------|---------|---|
| CAT.OP.MPA.200(b)(2) CAT.OP.MPA.200(a)(2) AMC6 CAT.OP.MPA.200 (c) CAT.OP.MPA.200(c) | Operational procedures should specify that at least the following precautions are taken in the OM (1) one qualified person should remain at a specified location during refuelling/defuelling operations with passengers on board, and be capable of using emergency procedures for fire protection and firefighting, communications, as well as for initiating and directing an evacuation; (2) two-way communication should be established and remain available through the aeroplane's intercommunications system, or other suitable means, between the ground crew that supervises the refuelling and the qualified personnel on board the aeroplane; all involved personnel should remain within easy reach of the intercommunications system (3) crew, personnel, and passengers should be warned that refuelling/defuelling will take place; (4) the 'FASTEN SEAT BELT' signs should be off; (5) 'NO SMOKING' signs should be on, together with interior lighting to allow the identification of emergency exits; (6) passengers should be instructed to unfasten their seat belts and refrain from smoking; (7) the minimum required number of cabin crew should be on board and prepared for an immediate emergency evacuation; (8) if fuel vapour is detected inside the aeroplane, or any other hazard arises, refuelling/defuelling should be stopped immediately (9) the ground area beneath the exits that are intended for emergency evacuation, as well as slide deployment areas, should be kept clear where stairs are not in position for use in the event of evacuation; and (10) provision is made for a safe and rapid evacuation. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(2) CAT.OP.MPA.200(a)(3) CAT.OP.MPA.200(c) | It has been established a training program for the personnel involved in the operations of refueling or defueling with passengers are embarking, on board, or disembarking. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| | <u>REFUELLING/DEFUELLING WITH WIDE-CUT FUEL</u> | | | |
| CAT.OP.MPA.200(b)(3) CAT.OP.MPA.200(a)(1) CAT.OP.MPA.200(c) | Risk assessment has been performed for refueling/defueling with wide-cut fuel | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|---|---------|---------|---|
| CAT.OP.MPA.200(b)(3) CAT.OP.MPA.200(a)(2) AMC8 CAT.OP.MPA.200 GM3 CAT.OP.MPA.200 CAT.OP.MPA.200(c) | Refuelling/defuelling with wide-cut fuel should be conducted only if the operator has established appropriate procedures in the OM, taking into account the high risk of using wide-cut fuel types. In the development of the procedures was taken into account the high risk of the use of this type of fuel and: Wherever possible, the operator should avoid the use of wide-cut fuel types Wide-cut fuel is considered to be 'involved' when it is being supplied or when it is already present in aircraft fuel tanks. When wide-cut fuel has been used, this should be recorded in the technical log. The next two uplifts of fuel should be treated as though they too involved the use of wide-cut fuel. Extra care to avoid static charges and splashing | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| CAT.OP.MPA.200(b)(3) CAT.OP.MPA.200(a)(3) CAT.OP.MPA.200(c) | It has been established a training program for the personnel involved in the operations of fueling/defueling of wide-cut fuel. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

Parte D – Special Fuelling/ Defueling - Helicopters

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|--|---------|---------|-----------------------------------|
| | <u>FUELLING WITH ROTORS TURNING</u> | | | |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(1) GM2 CAT.OP.MPA.200 CAT.OP.MPA.200(d) | Risk assessment for refueling with rotors turning was made The risk assessment should explain why it is not practical to refuel with the engine(s) and rotors stopped, identify any additional hazards, and describe how the additional risks are controlled. Helicopter emergency medical services (HEMS) and helicopter offshore operations (HOFO) are typical operations where the benefits should outweigh the risks if mitigation measures are taken. Guidance on safe refuelling practices is contained in ICAO Doc 9137 Airport Services Manual, Parts 1 and 8. The operators’ risk assessment may include, but not be limited to, the following risks, hazards and mitigation measures: (a) risk related to refuelling with rotors turning; (b) risk related to the shutting down of the engines, including the risk of failures during start-up; (c) environmental conditions, such as wind limitations, displacement of exhaust gases, and blade sailing; (d) risk related to human factors and fatigue management, especially for single-pilot operations for long periods of time; (e) risk mitigation, such as the safety features of the fuel installation, RFF capability, number of personnel members available, ease of emergency evacuation of the helicopter, etc.; (f) assessment of the use of radio transmitting equipment; (g) determination of the use of passenger seat belts; (h) review of the portable electronic device (PED) policy; and (i) if passengers are to disembark, consideration of their disembarking before rather than after the refuelling; and (j) if passengers are to embark, consideration of their embarking after rather than before the refuelling | | | [] YES [] N/A [] NO [] N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|--|---------|---------|-----------------------------------|
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(1) AMC3 CAT.OP.MPA.200 (a) CAT.OP.MPA.200(d) | Refuelling with the engine(s) running and/or rotors turning should only be conducted: (1) with no passengers or technical-crew members embarking or disembarking; (2) if the operator of the aerodrome/operating site allows such operation; (3) in accordance with any specific procedures and limitations in the AFM; (4) using JET A or JET A-1 fuel types; and (5) in the presence of the appropriate rescue and firefighting (RFF) facilities or equipment. | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(2) AMC3 CAT.OP.MPA.200 (b) CAT.OP.MPA.200(d) | operational procedures in the OM should specify that at least the following precautions are taken: (1) all necessary information should be exchanged in advance with the aerodrome operator, operating-site operator, and refuelling operator; (2) the procedures to be used by crew members should be defined; (3) the procedures to be used by the operator's ground operations personnel that may be in charge of refuelling or assisting in emergency evacuations should be described; (4) the operator's training programs for crew members and for the operator's ground operations personnel should be described; (5) the minimum distance between the helicopter turning parts and the refuelling vehicle or installations should be defined when the refuelling takes place outside an aerodrome or at an aerodrome where there are no such limitations; (6) besides any RFFSs that are required to be available by aerodrome regulations, an additional handheld fire extinguisher with the equivalent of 5 kg of dry powder should be immediately available and ready for use; (7) a means for a two-way communication between the crew and the person in charge of refuelling should be defined and established; (8) if fuel vapour is detected inside the helicopter, or any other hazard arises, refuelling/defuelling should be stopped immediately; (9) one pilot should stay at the controls, constantly monitor the refuelling, and be ready to shut off the engines and evacuate at all times; and (10) any additional precautions should be taken, as determined by the risk assessment. | | | [] YES [] N/A [] NO [] N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|--|--|---------|---------|-----------------------------------|
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(2) AMC4 CAT.OP.MPA.200 CAT.OP.MPA.200(d) | In addition to AMC3 CAT.OP.MPA.200, for refuelling with passengers on board, operational procedures in the OM should specify that at least the following precautions are taken: (a) the positioning of the helicopter and the corresponding helicopter evacuation strategy should be defined taking into account the wind as well as the refuelling facilities or vehicles; (b) on a heliport, the ground area beneath the exits that are intended for emergency evacuation should be kept clear (c) an additional passenger briefing as well as instructions should be defined, and the 'No smoking' signs should be on unless 'No smoking' placards are installed; (d) interior lighting should be set to enable identification of emergency exits (e) the use of doors during refuelling should be defined: doors on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open, unless otherwise specified in the AFM; (f) at least one suitable person capable of implementing emergency procedures for firefighting, communications, as well as for initiating and directing an evacuation, should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and (g) unless passengers are regularly trained in emergency evacuation procedures, an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers. | | | [] YES [] N/A [] NO [] N/R |
| CAT.OP.MPA.200(b)(1) CAT.OP.MPA.200(a)(3) AMC3 CAT.OP.MPA.200(b)(4) CAT.OP.MPA.200(d) | It has been established a training program for the personnel involved in the operations of fueling with rotors turning | | | [] YES [] N/A [] NO [] N/R |

Parte E – Refuelling Helicopters with Engine(s) running and/ or rotors turning - NCC

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|---|---------|---------|--|
| <p>NCC.OP.157(a) NCC.OP.157(e)</p> | <p>Refuelling with engine(s) and/or rotors turning shall only be conducted: (1) with no passengers embarking or disembarking; (2) if the operator of the aerodrome/operating site allows such operations; (3) in accordance with any specific procedures and limitations in the aircraft flight manual (AFM); (4) with JET A or JET A-1 fuel types; and (5) in the presence of the appropriate rescue and firefighting (RFF) facilities or equipment.</p> | | | <p>[] YES [] N/A [] NO [] N/R</p> |
| <p>NCC.OP.157(b) GM1 NCC.OP.157 NCC.OP.157(e)</p> | <p>The operator shall assess the risks associated with refuelling with engine(s) and/or rotors turning. The risk assessment should explain why it is not practical to refuel with the engine(s) and rotors stopped, identify any additional hazards, and describe how the additional risks are controlled. Helicopter offshore operations (HOFO) are typical operations where the benefits should outweigh the risks if mitigation measures are taken. The operator’s risk assessment may include, but not be limited to, the following risks, hazards and mitigation measures: (a) risk related to refuelling with rotors turning; (b) risk related to the shutting down of the engines, including the risk of failures during start-up; (c) environmental conditions, such as wind limitations, displacement of exhaust gases, and blade sailing; (d) risk related to human factors and fatigue management, especially for single-pilot operations for long periods of time; (e) risk mitigation, such as the safety features of the fuel installation, rescue and firefighting (RFF) capability, number of personnel members available, ease of emergency evacuation of the helicopter, etc.; (f) assessment of the use of radio transmitting equipment; (g) determination of the use of passenger seat belts; (h) review of the portable electronic device (PED) policy; and (i) if passengers are to disembark, consideration of their disembarking before rather than after the refuelling; and (j) if passengers are to embark, consideration of their embarking after rather than before the refuelling.</p> | | | <p>[] YES [] N/A [] NO [] N/R</p> |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|----------------------------------|--|---------|---------|---|
| NCC.OP.157(c) AMC1 NCC.OP.157 | The operator shall train its crew members and ensure that the involved ground operations personnel is trained appropriately to refuel with rotors turning in the OM. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| NCC.OP.157(e) AMC1 NCC.157 | Operational procedures in the OM should specify that at least the following precautions are taken: T (a) all necessary information should be exchanged in advance with the aerodrome operator, operating-site operator, and refuelling operator; (b) the procedures to be used by crew members should be defined; (c) the procedures to be used by the operator's ground operations personnel that may be in charge of refuelling or assisting in emergency evacuations should be described (d) the operator's training programs for crew members and for the operator's ground operations personnel should be described; (e) the minimum distance between the helicopter turning parts and the refuelling vehicle or installations should be defined when the refuelling takes place outside an aerodrome or at an aerodrome where there are no such limitations; (f) besides any rescue and firefighting services (RFFSs) that are required to be available by aerodrome regulations, an additional handheld fire extinguisher with the equivalent of 5 kg of dry powder should be immediately available and ready for use; (g) a means for a two-way communication between the crew and the person in charge of refuelling should be defined and established; (h) if fuel vapour is detected inside the helicopter, or any other hazard arises, refuelling/defuelling should be stopped immediately; (i) one pilot should stay at the controls, constantly monitor the refuelling, and be ready to shut off the engines and evacuate at all times; and (j) any additional precautions should be taken, as determined by the risk assessment | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |

| REQUIREMENT | CONTENT | Ref. OM | REMARKS | EVALUATION |
|---|--|---------|---------|---|
| NCC.OP.157(c) AMC2 NCC.OP.157 NCC.OP.157(e) | In addition to AMC1 NCC.OP.157, for refuelling with passengers on board, operational procedures in the OM should specify that at least the following precautions are taken: (a) the positioning of the helicopter and the corresponding helicopter evacuation strategy should be defined taking into account the wind as well as the refuelling facilities or vehicles; (b) on a heliport, the ground area beneath the exits that are intended for emergency evacuation should be kept clear; (c) an additional passenger briefing as well as instructions should be defined, and the 'No smoking' signs should be on unless 'No smoking' placards are installed; (d) interior lighting should be set to enable identification of emergency exits; (e) the use of doors during refuelling should be defined: doors on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open, unless otherwise specified in the AFM; (f) at least one suitable person capable of implementing emergency procedures for firefighting, communications, as well as for initiating and directing an evacuation, should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and (g) unless passengers are regularly trained in emergency evacuation procedures, an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |
| NCC.OP.157(d) AMC1 NCC.OP.157 (d) NCC.OP.157(e) | . The operator shall train its crew members and ensure that the involved ground operations personnel is trained appropriately to refuel with rotors turning in the OM. | | | <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> NO <input type="checkbox"/> N/R |