

CHECKLIST TEMPLATE

Description:

This template has been extracted from Checklist forms generated by the web environment solution for compliance monitoring for aviation organizations, SICOMO. This document is intended to be a guide for the creation of an efficient report, from which a model can be generated, modifying the basic one to adapt it to the features of the organization that uses it.

Using a form based in this reference document, it is easy to guarantee a good traceability of audits and inspections items and responses within your organization. Some of the fields of this templated have been filled with examples in order to make easier its understanding.

How can you use it?

The structure of this form and its fields are chosen to guarantee the maximum efficiency in the analysis of items and responses of a given Checklist that has been used in an audit or inspection. Some of the fields are directly related to SICOMO functionalities, created with the aim of generating a consistent organization environment.

Adapting SICOMO procedures is a good way to improve the performance of the organization. Given this, some of the fields of this documents based on SICOMO solution functionalities are described below, with the aim of showing how to apply SICOMO's method to the structure of the Checklists of an organization.

Field	Description	Use in SICOMO
Type of item	<p>An item of a checklist can be, depending on its features:</p> <ul style="list-style-type: none"> • Internal Standard Requirement (IR): A piece of an internal standard of the organization, directly extracted from original document. • External Standard Requirement (ER): A piece 	<p>The Standards and the Regulations that affect the organization are organized by Requirements in SICOMO databases. This Requirements are pieces from the Standards' and Regulations' texts that can be audited one by one.</p> <p>An additional database has been created in SICOMO to add Questions, associated to the</p>

	<p>of an external standard of an external organization, directly extracted from original document.</p> <ul style="list-style-type: none"> • Regulation Requirement (RR): A piece of a regulation of an authority, directly extracted from original document. • Internal Standard Question (IQ): A question with a content that equals the one of an Internal Standard Requirement, created for the organization with the aim of making the audits easier to carry out. • External Standard Question (EQ): A question with a content that equals the one of an External Standard Requirement, created for the organization with the aim of making the audits easier to carry out. • Regulation Question (RQ): A question with a content that equals the one of a Regulation Requirement, created for the organization with the aim of making the audits easier to carry out. 	<p>requirements but simpler and easier to audit. These questions can be used in the audits instead of the Requirements, making the audit easier for both auditors and auditees.</p> <p>When a Question is audited, the associated requirement is saved with the response given to its Question, so the traceability is perfectly kept.</p>
Level	Level of the finding.	In SICOMO, the level of the finding can be configured for each organization through the

		configuration settings of the solution. It allows to sort out the level of the finding differentiating them by their impact and the days to solve them.
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The utilization of these fields is completely optional due to, for some organizations, it could be easier to modify the fields at their own criteria.

What do we want to achieve?

With this template it is pretend to collect all the relevant information of a Checklist and guaranty the traceability of the associated processes.

From Improved Climb, we trust that SICOMO´s structure optimize compliance monitoring processes and that the reports associated to it are useful and intuitive documents that facilitate tasks and improve their efficiency.

Document Control



Checklist

Title	Performance Class A		
Version	Reference	Modified	Number of items
v1	CL-00001	10/08/2018	58



CHECKLIST

General

Title	Performance Class A		
Version	Reference	Modified	Number of items
v1	CL-00001	10/08/2018	58

Standards

Number	Type	Standard	Revision
1	Regulation	Regulation 965/2012	M12

Responses

Responses
Compliance
Not applicable
Not assessed
Not compliance

Type of Item Labels

IR	Internal Standard Requirement
ER	External Standard Requirement
RR	Regulation Requirement
IQ	Internal Standard Question
EQ	External Standard Question
RQ	Regulation Question

Summary

Items	Findings	Compliance	Non compliance
58	[Add No.]	[Add No.]	[Add No.]
Preventive Actions	Improve Actions	Findings Open	
[Add No.]	[Add No.]	[Add No.]	

Checklist

GENERAL

Item	1	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.100(a) Performance classes				



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Text
The aeroplane shall be operated in accordance with the applicable performance class requirements.
Auditor comments
[Add Text]

Item	2	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.100(b) Performance classes				
Text					
Where full compliance with the applicable requirements of this Section cannot be shown due to specific design characteristics, the operator shall apply approved performance standards that ensure a level of safety equivalent to that of the appropriate chapter.					
Auditor comments					
[Add Text]					

Item	3	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.105(a) General				
Text					
The mass of the aeroplane: (1) at the start of the take-off; or (2) in the event of in-flight replanning, at the point from which the revised operational flight plan applies, shall not be greater than the mass at which the requirements of the appropriate chapter can be complied with for the flight to be undertaken. Allowance may be made for expected reductions in mass as the flight proceeds and for fuel jettisoning.					
Auditor comments					
[Add Text]					

Item	4	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.105(b) General				
Text					
The approved performance data contained in the AFM shall be used to determine compliance with the requirements of the appropriate chapter, supplemented as necessary with other data as prescribed in the relevant chapter. The operator shall specify other data in the operations manual. When applying the factors prescribed in the appropriate chapter, account may be taken of any operational					



CHECKLIST

factors already incorporated in the AFM performance data to avoid double application of factors.

Auditor comments

Item	5	Type of Item	RR	Response	
Standard	1	Language	English	Level	
Requirement	CAT.POL.A.105(c) General				
Text					
Due account shall be taken of aeroplane configuration, environmental conditions and the operation of systems that have an adverse effect on performance.					
Auditor comments					

Item	6	Type of Item	RR	Response	
Standard	1	Language	English	Level	
Requirement	CAT.POL.A.105(d) General				
Text					
For performance purposes, a damp runway, other than a grass runway, may be considered to be dry.					
Auditor comments					

Item	7	Type of Item	RR	Response	
Standard	1	Language	English	Level	
Requirement	CAT.POL.A.105(e) General				
Text					
The operator shall take account of charting accuracy when assessing the take-off requirements of the applicable chapters.					
Auditor comments					

PERFORMANCE CLASS A

Item	8	Type of Item	RR	Response	
Standard	1	Language	English	Level	
Requirement	CAT.POL.A.200(a) General				
Text					



CHECKLIST

The approved performance data in the AFM shall be supplemented as necessary with other data if the approved performance data in the AFM is insufficient in respect of items such as:

- (1) accounting for reasonably expected adverse operating conditions such as take-off and landing on contaminated runways; and
- (2) consideration of engine failure in all flight phases.

Auditor comments

[Add Text]

Item	9	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.200(b) General				
Text					
For wet and contaminated runways, performance data determined in accordance with applicable standards on certification of large aeroplanes or equivalent shall be used.					
Auditor comments					
[Add Text]					

Item	10	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.200(c) General				
Text					
The use of other data referred to in (a) and equivalent requirements referred to in (b) shall be specified in the operations manual.					
Auditor comments					
[Add Text]					

Item	11	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC1 CAT.POL.A.200 General				
Text					
<p>WET AND CONTAMINATED RUNWAY DATA</p> <p>If the performance data have been determined on the basis of a measured runway friction coefficient, the operator should use a procedure correlating the measured runway friction coefficient and the effective braking coefficient of friction of the aeroplane type over the required speed range for the existing runway conditions.</p>					
Auditor comments					
[Add Text]					



CHECKLIST

TAKE-OFF

Item	12	Type of Item	RR	Response	<i>[Add Text]</i>
Standard	1	Language	English	Level	<i>[Add No.]</i>
Requirement	CAT.POL.A.205(a) Take-off				
Text					
The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.					
Auditor comments					
<i>[Add Text]</i>					

Item	13	Type of Item	RR	Response	<i>[Add Text]</i>
Standard	1	Language	English	Level	<i>[Add No.]</i>
Requirement	CAT.POL.A.205(b) Take-off				
Text					
The following requirements shall be met when determining the maximum permitted take-off mass:					
<ul style="list-style-type: none"> (1) the accelerate-stop distance shall not exceed the accelerate-stop distance available (ASDA); (2) the take-off distance shall not exceed the take-off distance available, with a clearway distance not exceeding half of the take-off run available (TORA); (3) the take-off run shall not exceed the TORA; (4) a single value of V1 shall be used for the rejected and continued take-off; and (5) on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions. 					
Auditor comments					
<i>[Add Text]</i>					

Item	14	Type of Item	RR	Response	<i>[Add Text]</i>
Standard	1	Language	English	Level	<i>[Add No.]</i>
Requirement	CAT.POL.A.205(c) Take-off				
Text					
When showing compliance with (b), the following shall be taken into account:					
<ul style="list-style-type: none"> (1) the pressure altitude at the aerodrome; (2) the ambient temperature at the aerodrome; (3) the runway surface condition and the type of runway surface; (4) the runway slope in the direction of take-off; (5) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component; and (6) the loss, if any, of runway length due to alignment of the aeroplane prior to take-off. 					



CHECKLIST

Auditor comments
[Add Text]

Item	15	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC1 CAT.POL.A.205 Take-off				

Text

LOSS OF RUNWAY LENGTH DUE TO ALIGNMENT

(a) The length of the runway that is declared for the calculation of take-off distance available (TODA), accelerate-stop distance available (ASDA) and take-off run available (TORA) does not account for line-up of the aeroplane in the direction of take-off on the runway in use. This alignment distance depends on the aeroplane geometry and access possibility to the runway in use. Accountability is usually required for a 90°-taxiway entry to the runway and 180°-turnaround on the runway. There are two distances to be considered:

(1) the minimum distance of the main wheels from the start of the runway for determining TODA and TORA, 'L'; and

(2) the minimum distance of the most forward wheel(s) from the start of the runway for determining ASDA, 'N'.

(Figure)

Where the aeroplane manufacturer does not provide the appropriate data, the calculation method given in (b) should be used to determine the alignment distance.

(b) Alignment distance calculation

(Figure)

The distances mentioned in (a)(1) and (a)(2) are:

(Table)

where:

$$RN = A + WN = WB/\cos(90^\circ - \alpha) + WN$$

$$RM = B + WM = WB \tan(90^\circ - \alpha) + WM$$

X = safety distance of outer main wheel during turn to the edge of the runway
 Y = safety distance of outer nose wheel during turn to the edge of the runway

Note: Minimum edge safety distances for X and Y are specified in FAA AC 150/5300-13 and ICAO Annex 14, 3.8.3

RN = radius of turn of outer nose wheel
 RM = radius of turn of outer main wheel
 WN = distance from aeroplane centre-line to outer nose wheel
 WM = distance from aeroplane centre-line to outer main wheel
 WB = wheel base
 α = steering angle.

Auditor comments
[Add Text]

Item	16	Type of Item	RR	Response	[Add Text]
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CHECKLIST

Standard	1	Language	English	Level	[Add No.]
Requirement	GM1 CAT.POL.A.205 Take-off				
Text					
<p>RUNWAY SURFACE CONDITION</p> <p>(a) Operation on runways contaminated with water, slush, snow or ice implies uncertainties with regard to runway friction and contaminant drag and, therefore, to the achievable performance and control of the aeroplane during take-off, since the actual conditions may not completely match the assumptions on which the performance information is based. In the case of a contaminated runway, the first option for the commander is to wait until the runway is cleared. If this is impracticable, he/she may consider a take-off, provided that he/she has applied the applicable performance adjustments, and any further safety measures he/she considers justified under the prevailing conditions.</p> <p>(b) An adequate overall level of safety will only be maintained if operations in accordance with AMC 25.1591 or equivalent are limited to rare occasions. Where the frequency of such operations on contaminated runways is not limited to rare occasions, the operator should provide additional measures ensuring an equivalent level of safety. Such measures could include special crew training, additional distance factoring and more restrictive wind limitations.</p>					
Auditor comments					
[Add Text]					

Item	17	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.210(a) Take-off obstacle clearance				
Text					
<p>The net take-off flight path shall be determined in such a way that the aeroplane clears all obstacles by a vertical distance of at least 35 ft or by a horizontal distance of at least 90 m plus $0,125 \times D$, where D is the horizontal distance the aeroplane has travelled from the end of the takeoff distance available (TODA) or the end of the take-off distance if a turn is scheduled before the end of the TODA. For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m, plus $0,125 \times D$ may be used.</p>					
Auditor comments					
[Add Text]					

Item	18	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.210(b) Take-off obstacle clearance				
Text					
<p>When showing compliance with (a):</p> <p>(1) The following items shall be taken into account:</p> <p>(i) the mass of the aeroplane at the commencement of the take-off run;</p> <p>(ii) the pressure altitude at the aerodrome;</p>					



CHECKLIST

- (iii) the ambient temperature at the aerodrome; and
- (iv) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.
- (2) Track changes shall not be allowed up to the point at which the net take-off flight path has achieved a height equal to one half the wingspan but not less than 50 ft above the elevation of the end of the TORA. Thereafter, up to a height of 400 ft it is assumed that the aeroplane is banked by no more than 15°. Above 400 ft height bank angles greater than 15°, but not more than 25° may be scheduled.
- (3) Any part of the net take-off flight path in which the aeroplane is banked by more than 15° shall clear all obstacles within the horizontal distances specified in (a), (b)(6) and (b)(7) by a vertical distance of at least 50 ft.
- (4) Operations that apply increased bank angles of not more than 20° between 200 ft and 400 ft, or not more than 30° above 400 ft, shall be carried out in accordance with CAT.POL.A.240.
- (5) Adequate allowance shall be made for the effect of bank angle on operating speeds and flight path including the distance increments resulting from increased operating speeds.
- (6) For cases where the intended flight path does not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:
 - (i) 300 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or
 - (ii) 600 m, for flights under all other conditions.
- (7) For cases where the intended flight path requires track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:
 - (i) 600 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or
 - (ii) 900 m, for flights under all other conditions.

Auditor comments

[Add Text]

Item	19	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.210(c) Take-off obstacle clearance				
Text					
The operator shall establish contingency procedures to satisfy the requirements in (a) and (b) and to provide a safe route, avoiding obstacles, to enable the aeroplane to either comply with the enroute requirements of CAT.POL.A.215, or land at either the aerodrome of departure or at a takeoff alternate aerodrome.					
Auditor comments					
[Add Text]					

Item	20	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]



CHECKLIST

Requirement	AMC1 CAT.POL.A.210 Take-off obstacle clearance
Text	
<p>TAKE-OFF OBSTACLE CLEARANCE</p> <p>(a) In accordance with the definitions used in preparing the take-off distance and take-off flight path data provided in the AFM:</p> <p>(1) The net take-off flight path is considered to begin at a height of 35 ft above the runway or clearway at the end of the take-off distance determined for the aeroplane in accordance with (b) below.</p> <p>(2) The take-off distance is the longest of the following distances:</p> <p>(i) 115 % of the distance with all engines operating from the start of the take-off to the point at which the aeroplane is 35 ft above the runway or clearway;</p> <p>(ii) the distance from the start of the take-off to the point at which the aeroplane is 35 ft above the runway or clearway assuming failure of the critical engine occurs at the point corresponding to the decision speed (V1) for a dry runway; or</p> <p>(iii) if the runway is wet or contaminated, the distance from the start of the take-off to the point at which the aeroplane is 15 ft above the runway or clearway assuming failure of the critical engine occurs at the point corresponding to the decision speed (V1) for a wet or contaminated runway.</p> <p>(b) The net take-off flight path, determined from the data provided in the AFM in accordance with (a)(1) and (a)(2), should clear all relevant obstacles by a vertical distance of 35 ft. When taking off on a wet or contaminated runway and an engine failure occurs at the point corresponding to the decision speed (V1) for a wet or contaminated runway, this implies that the aeroplane can initially be as much as 20 ft below the net take-off flight path in accordance with (a) and, therefore, may clear close-in obstacles by only 15 ft. When taking off on wet or contaminated runways, the operator should exercise special care with respect to obstacle assessment, especially if a take-off is obstacle-limited and the obstacle density is high.</p>	
Auditor comments	
[Add Text]	

Item	21	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC2 CAT.POL.A.210 Take-off obstacle clearance				
Text					
<p>EFFECT OF BANK ANGLES</p> <p>(a) The AFM generally provides a climb gradient decrement for a 15° bank turn. For bank angles of less than 15°, a proportionate amount should be applied unless the manufacturer or AFM has provided other data.</p> <p>(b) Unless otherwise specified in the AFM or other performance or operating manuals from the manufacturer, acceptable adjustments to assure adequate stall margins and gradient corrections are provided by the following table:</p> <p>(Table)</p>					
Auditor comments					
[Add Text]					



CHECKLIST

Item	22	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC3 CAT.POL.A.210 Take-off obstacle clearance				
Text					
<p>REQUIRED NAVIGATIONAL ACCURACY</p> <p>(a) Navigation systems</p> <p>The obstacle accountability semi-widths of 300 m and 600 m may be used if the navigation system under OEI conditions provides a two standard deviation accuracy of 150 m and 300 m respectively.</p> <p>(b) Visual course guidance</p> <p>(1) The obstacle accountability semi-widths of 300 m and 600 m may be used where navigational accuracy is ensured at all relevant points on the flight path by use of external references. These references may be considered visible from the flight crew compartment if they are situated more than 45° either side of the intended track and with a depression of not greater than 20° from the horizontal.</p> <p>(2) For visual course guidance navigation, the operator should ensure that the weather conditions prevailing at the time of operation, including ceiling and visibility, are such that the obstacle and/or ground reference points can be seen and identified. The operations manual should specify, for the aerodrome(s) concerned, the minimum weather conditions which enable the flight crew to continuously determine and maintain the correct flight path with respect to ground reference points, so as to provide a safe clearance with respect to obstructions and terrain as follows:</p> <p>(i) the procedure should be well-defined with respect to ground reference points so that the track to be flown can be analysed for obstacle clearance requirements;</p> <p>(ii) the procedure should be within the capabilities of the aeroplane with respect to forward speed, bank angle and wind effects;</p> <p>(iii) a written and/or pictorial description of the procedure should be provided for crew use; and</p> <p>(iv) the limiting environmental conditions (such as wind, the lowest cloud base, ceiling, visibility, day/night, ambient lighting, obstruction lighting) should be specified.</p>					
Auditor comments					
[Add Text]					

Item	23	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	GM1 CAT.POL.A.210 Take-off obstacle clearance				
Text					
<p>CONTINGENCY PROCEDURES FOR OBSTACLES CLEARANCES</p> <p>If compliance with CAT.POL.A.210 is based on an engine failure route that differs from the all engine departure route or SID normal departure, a 'deviation point' can be identified where the engine failure route deviates from the normal departure route. Adequate obstacle clearance along the normal departure route with failure of the critical engine at the deviation point will normally be available.</p>					



CHECKLIST

However, in certain situations the obstacle clearance along the normal departure route may be marginal and should be checked to ensure that, in case of an engine failure after the deviation point, a flight can safely proceed along the normal departure route.

Auditor comments

[Add Text]

EN-ROUTE

Item	24	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.215(a) En-route — one-engine-inoperative (OEI)				
Text					
<p>The OEI en-route net flight path data shown in the AFM, appropriate to the meteorological conditions expected for the flight, shall allow demonstration of compliance with (b) or (c) at all points along the route. The net flight path shall have a positive gradient at 1500 ft above the aerodrome where the landing is assumed to be made after engine failure. In meteorological conditions requiring the operation of ice protection systems, the effect of their use on the net flight path shall be taken into account.</p>					
Auditor comments					
[Add Text]					

Item	25	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.215(b) En-route — one-engine-inoperative (OEI)				
Text					
<p>The gradient of the net flight path shall be positive at least 1 000 ft above all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track.</p>					
Auditor comments					
[Add Text]					

Item	26	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.215(c) En-route — one-engine-inoperative (OEI)				
Text					
<p>The net flight path shall permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with CAT.POL.A.225 or CAT.POL.A.230, as appropriate. The net flight path shall clear vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track in accordance with the following:</p>					



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- (1) the engine is assumed to fail at the most critical point along the route;
- (2) account is taken of the effects of winds on the flight path;
- (3) fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used; and
- (4) the aerodrome where the aeroplane is assumed to land after engine failure shall meet the following criteria:
- (i) the performance requirements at the expected landing mass are met; and
- (ii) weather reports and/or forecasts and field condition reports indicate that a safe landing can be accomplished at the estimated time of landing.

Auditor comments

[Add Text]

Item	27	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.215(d) En-route — one-engine-inoperative (OEI)				
Text					
The operator shall increase the width margins of (b) and (c) to 18,5 km (10 NM) if the navigational accuracy does not meet at least required navigation performance 5 (RNP5).					
Auditor comments					
[Add Text]					

Item	28	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC1 CAT.POL.A.215 En-route — one-engine-inoperative (OEI)				
Text					
ROUTE ANALYSIS					
(a) The high terrain or obstacle analysis required should be carried out by a detailed analysis of the route.					
(b) A detailed analysis of the route should be made using contour maps of the high terrain and plotting the highest points within the prescribed corridor's width along the route. The next step is to determine whether it is possible to maintain level flight with OEI 1 000 ft above the highest point of the crossing. If this is not possible, or if the associated weight penalties are unacceptable, a drift down procedure should be worked out, based on engine failure at the most critical point and clearing critical obstacles during the drift down by at least 2 000 ft. The minimum cruise altitude is determined by the intersection of the two drift down paths, taking into account allowances for decision making (see Figure 1). This method is time-consuming and requires the availability of detailed terrain maps.					
(c) Alternatively, the published minimum flight altitudes (MEA or minimum off-route altitude (MORA)) should be used for determining whether OEI level flight is feasible at the minimum flight altitude, or if it is necessary to use the published minimum flight altitudes as the basis for the drift down construction (see Figure					



CHECKLIST

1). This procedure avoids a detailed high terrain contour analysis, but could be more penalising than taking the actual terrain profile into account as in (b).

(d) In order to comply with CAT.POL.A.215 (c), one means of compliance is the use of MORA and, with CAT.POL.A.215 (d), MEA provided that the aeroplane meets the navigational equipment standard assumed in the definition of MEA.

(Figure)

Note: MEA or MORA normally provide the required 2 000 ft obstacle clearance for drift down. However, at and below 6 000 ft altitude, MEA and MORA cannot be used directly as only 1 000 ft clearance is ensured.

Auditor comments

[Add Text]

Item	29	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.220(a) En-route — aeroplanes with three or more engines, two engines inoperative				
Text					
At no point along the intended track shall an aeroplane having three or more engines be more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met, unless it complies with (b) to (f).					
Auditor comments					
[Add Text]					

Item	30	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.220(b) En-route — aeroplanes with three or more engines, two engines inoperative				
Text					
The two-engines-inoperative en-route net flight path data shall allow the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously to an aerodrome at which it is possible to land and come to a complete stop when using the prescribed procedure for a landing with two engines inoperative. The net flight path shall clear vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track. At altitudes and in meteorological conditions requiring ice protection systems to be operable, the effect of their use on the net flight path data shall be taken into account. If the navigational accuracy does not meet at least RNP5, the operator shall increase the width margin given above to 18,5 km (10 NM).					
Auditor comments					
[Add Text]					

Item	31	Type of Item	RR	Response	[Add Text]
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CHECKLIST

Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.220(c) En-route — aeroplanes with three or more engines, two engines inoperative				
Text					
The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.					
Auditor comments					
[Add Text]					

Item	32	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.220(d) En-route — aeroplanes with three or more engines, two engines inoperative				
Text					
The net flight path shall have a positive gradient at 1 500 ft above the aerodrome where the landing is assumed to be made after the failure of two engines.					
Auditor comments					
[Add Text]					

Item	33	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.220(e) En-route — aeroplanes with three or more engines, two engines inoperative				
Text					
Fuel jettisoning shall be permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.					
Auditor comments					
[Add Text]					

Item	34	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.220(f) En-route — aeroplanes with three or more engines, two engines inoperative				
Text					
The expected mass of the aeroplane at the point where the two engines are assumed to fail shall not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.					



CHECKLIST

Auditor comments

[Add Text]

LANDING

Item	35	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.225(a) Landing – destination and alternate aerodromes				
Text					
The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.					
Auditor comments					
[Add Text]					

Item	36	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC1 CAT.POL.A.225 Landing – destination and alternate aerodromes				
Text					
ALTITUDE MEASURING The operator should use either pressure altitude or geometric altitude for its operation and this should be reflected in the operations manual.					
Auditor comments					
[Add Text]					

Item	37	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC2 CAT.POL.A.225 Landing – destination and alternate aerodromes				
Text					
MISSED APPROACH (a) For instrument approaches with a missed approach climb gradient greater than 2.5 %, the operator should verify that the expected landing mass of the aeroplane allows for a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the OEI missed approach configuration and at the associated speed. (b) For instrument approaches with DH below 200 ft, the operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and					



CHECKLIST

configuration used for a missed approach of at least 2.5 %, or the published gradient, whichever is greater.

Auditor comments

[Add Text]

Item	38	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	GM1 CAT.POL.A.225 Landing – destination and alternate aerodromes				
Text					
<p>MISSED APPROACH GRADIENT</p> <p>(a) Where an aeroplane cannot achieve the missed approach gradient specified in AMC2 CAT.POL.A.225, when operating at or near maximum certificated landing mass and in engine-out conditions, the operator has the opportunity to propose an alternative means of compliance to the competent authority demonstrating that a missed approach can be executed safely taking into account appropriate mitigating measures.</p> <p>(b) The proposal for an alternative means of compliance may involve the following:</p> <p>(1) considerations to mass, altitude and temperature limitations and wind for the missed approach;</p> <p>(2) a proposal to increase the DA/H or MDA/H; and</p> <p>(3) a contingency procedure ensuring a safe route and avoiding obstacles.</p>					
Auditor comments					
[Add Text]					

Item	39	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(a) Landing – dry runways				
Text					
<p>The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and at any alternate aerodrome shall allow a full stop landing from 50 ft above the threshold:</p> <p>(1) for turbo-jet powered aeroplanes, within 60 % of the landing distance available (LDA); and</p> <p>(2) for turbo-propeller powered aeroplanes, within 70 % of the LDA.</p>					
Auditor comments					
[Add Text]					

Item	40	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(b) Landing – dry runways				



CHECKLIST

Text
For steep approach operations, the operator shall use the landing distance data factored in accordance with (a), based on a screen height of less than 60 ft, but not less than 35 ft, and shall comply with CAT.POL.A.245.
Auditor comments
[Add Text]

Item	41	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(c) Landing — dry runways				
Text					
For short landing operations, the operator shall use the landing distance data factored in accordance with (a) and shall comply with CAT.POL.A.250.					
Auditor comments					
[Add Text]					

Item	42	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(d) Landing — dry runways				
Text					
When determining the landing mass, the operator shall take the following into account:					
<ul style="list-style-type: none"> (1) the altitude at the aerodrome; (2) not more than 50 % of the headwind component or not less than 150 % of the tailwind component; and (3) the runway slope in the direction of landing if greater than ± 2 %. 					
Auditor comments					
[Add Text]					

Item	43	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(e) Landing — dry runways				
Text					
For dispatching the aeroplane it shall be assumed that:					
<ul style="list-style-type: none"> (1) the aeroplane will land on the most favourable runway, in still air; and (2) the aeroplane will land on the runway most likely to be assigned, considering the probable wind speed and direction, the ground handling characteristics of the aeroplane and other conditions such as landing aids and terrain. 					
Auditor comments					
[Add Text]					



CHECKLIST

Item	44	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(f) Landing — dry runways				
Text					
<p>If the operator is unable to comply with (e)(1) for a destination aerodrome having a single runway where a landing depends upon a specified wind component, the aeroplane may be dispatched if two alternate aerodromes are designated that permit full compliance with (a) to (e). Before commencing an approach to land at the destination aerodrome, the commander shall check that a landing can be made in full compliance with (a) to (d) and CAT.POL.A.225.</p>					
Auditor comments					
[Add Text]					

Item	45	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.230(g) Landing — dry runways				
Text					
<p>If the operator is unable to comply with (e)(2) for the destination aerodrome, the aeroplane shall be only dispatched if an alternate aerodrome is designated that allows full compliance with (a) to (e).</p>					
Auditor comments					
[Add Text]					

Item	46	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	AMC1 CAT.POL.A.230 Landing — dry runways				
Text					
<p>FACTORING OF AUTOMATIC LANDING DISTANCE PERFORMANCE DATA</p> <p>In those cases where the landing requires the use of an automatic landing system, and the distance published in the AFM includes safety margins equivalent to those contained in CAT.POL.A.230 (a)(1) and CAT.POL.A.235, the landing mass of the aeroplane should be the lesser of:</p> <p>(a) the landing mass determined in accordance with CAT.POL.A.230 (a)(1) or CAT.POL.A.235 as appropriate; or</p> <p>(b) the landing mass determined for the automatic landing distance for the appropriate Surface condition, as given in the AFM or equivalent document. Increments due to system features such as beam location or elevations, or procedures such as use of overspeed, should also be included.</p>					
Auditor comments					
[Add Text]					

Item	47	Type of Item	RR	Response	[Add Text]
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CHECKLIST

Standard	1	Language	English	Level	[Add No.]
Requirement	GM1 CAT.POL.A.230 Landing — dry runways				
Text					
<p>LANDING MASS</p> <p>CAT.POL.A.230 establishes two considerations in determining the maximum permissible landing mass at the destination and alternate aerodromes:</p> <p>(a) Firstly, the aeroplane mass will be such that on arrival the aeroplane can be landed within 60 % or 70 % (as applicable) of the landing distance available (LDA) on the most favourable (normally the longest) runway in still air. Regardless of the wind conditions, the maximum landing mass for an aerodrome/aeroplane configuration at a particular aerodrome cannot be exceeded.</p> <p>(b) Secondly, consideration should be given to anticipated conditions and circumstances. The expected wind, or ATC and noise abatement procedures, may indicate the use of a different runway. These factors may result in a lower landing mass than that permitted under (a), in which case dispatch should be based on this lesser mass.</p> <p>(c) The expected wind referred to in (b) is the wind expected to exist at the time of arrival.</p>					
Auditor comments					
[Add Text]					

Item	48	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.235(a) Landing — wet and contaminated runways				
Text					
<p>When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be at least 115 % of the required landing distance, determined in accordance with CAT.POL.A.230.</p>					
Auditor comments					
[Add Text]					

Item	49	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.235(b) Landing — wet and contaminated runways				
Text					
<p>When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the LDA shall be at least the landing distance determined in accordance with (a), or at least 115 % of the landing distance determined in accordance with approved contaminated landing distance data or equivalent, whichever is greater. The operator shall specify in the operations manual if equivalent landing distance data are to be applied.</p>					
Auditor comments					
[Add Text]					



CHECKLIST

Item	50	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.235(c) Landing — wet and contaminated runways				
Text					
A landing distance on a wet runway shorter than that required by (a), but not less than that required by CAT.POL.A.230(a), may be used if the AFM includes specific additional information about landing distances on wet runways.					
Auditor comments					
[Add Text]					

Item	51	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.235(d) Landing — wet and contaminated runways				
Text					
A landing distance on a specially prepared contaminated runway shorter than that required by (b), but not less than that required by CAT.POL.A.230(a), may be used if the AFM includes specific additional information about landing distances on contaminated runways.					
Auditor comments					
[Add Text]					

Item	52	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.235(e) Landing — wet and contaminated runways				
Text					
For (b), (c) and (d), the criteria of CAT.POL.A.230 shall be applied accordingly, except that CAT.POL.A.230(a) shall not be applied to (b) above.					
Auditor comments					
[Add Text]					

APPROVALS

Item	53	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.240(a) Approval of operations with increased bank angles				
Text					
Operations with increased bank angles require prior approval by the competent authority.					



CHECKLIST

Auditor comments
[Add Text]

Item	54	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.240(b) Approval of operations with increased bank angles				

Text
<p>To obtain the approval, the operator shall provide evidence that the following conditions are met:</p> <p>(1) the AFM contains approved data for the required increase of operating speed and data to allow the construction of the flight path considering the increased bank angles and speeds;</p> <p>(2) visual guidance is available for navigation accuracy;</p> <p>(3) weather minima and wind limitations are specified for each runway; and</p> <p>(4) the flight crew has obtained adequate knowledge of the route to be flown and of the procedures to be used in accordance with Subpart FC of Part-ORO.</p>
Auditor comments
[Add Text]

Item	55	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.245(a) Approval of steep approach operations				

Text
<p>Steep approach operations using glideslope angles of 4,5° or more and with screen heights of less than 60 ft, but not less than 35 ft, require prior approval by the competent authority.</p>
Auditor comments
[Add Text]

Item	56	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.245(b) Approval of steep approach operations				

Text
<p>To obtain the approval, the operator shall provide evidence that the following conditions are met:</p> <p>(1) the AFM states the maximum approved glideslope angle, any other limitations, normal, abnormal or emergency procedures for the steep approach as well as amendments to the field length data when using steep approach criteria;</p> <p>(2) for each aerodrome at which steep approach operations are to be conducted:</p> <p>(i) a suitable glide path reference system comprising at least a visual glide path indicating system shall be available;</p>



CHECKLIST

- (ii) weather minima shall be specified; and
- (iii) the following items shall be taken into consideration:
 - (A) the obstacle situation;
 - (B) the type of glide path reference and runway guidance;
 - (C) the minimum visual reference to be required at decision height (DH) and MDA;
 - (D) available airborne equipment;
 - (E) pilot qualification and special aerodrome familiarisation;
 - (F) AFM limitations and procedures; and
 - (G) missed approach criteria.

Auditor comments

[Add Text]

Item	57	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.250(a) Approval of short landing operations				
Text	Short landing operations require prior approval by the competent authority.				
Auditor comments	[Add Text]				

Item	58	Type of Item	RR	Response	[Add Text]
Standard	1	Language	English	Level	[Add No.]
Requirement	CAT.POL.A.250(b) Approval of short landing operations				
Text	<p>To obtain the approval, the operator shall provide evidence that the following conditions are met:</p> <ul style="list-style-type: none"> (1) the distance used for the calculation of the permitted landing mass may consist of the usable length of the declared safe area plus the declared LDA; (2) the State of the aerodrome has determined a public interest and operational necessity for the operation, either due to the remoteness of the aerodrome or to physical limitations relating to extending the runway; (3) the vertical distance between the path of the pilot's eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 m; (4) RVR/VIS minimum shall not be less than 1 500 m and wind limitations are specified in the operations manual; (5) minimum pilot experience, training and special aerodrome familiarisation requirements are specified and met; (6) the crossing height over the beginning of the usable length of the declared safe area is 50 ft; (7) the use of the declared safe area is approved by the State of the aerodrome; (8) the usable length of the declared safe area does not exceed 90 m; 				



CHECKLIST

(9) the width of the declared safe area is not less than twice the runway width or twice the wing span, whichever is greater, centred on the extended runway centre line;

(10) the declared safe area is clear of obstructions or depressions that would endanger an aeroplane undershooting the runway and no mobile object is permitted on the declared safe area while the runway is being used for short landing operations;

(11) the slope of the declared safe area does not exceed 5 % upward nor 2 % downward in the direction of landing; and

(12) additional conditions, if specified by the competent authority, taking into account

aeroplane type characteristics, orographic characteristics in the approach area, available approach aids and missed approach/balked landing considerations.

Auditor comments

[Add Text]