Anexo 2 à CIA 06/2022

Parte ORO

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUACTION
ORO.FC.145.(d); AMC1 ORO.FC.145(d)	**FULL FLIGHT SIMULATORS (FFS)** The operator should classify any differences between the aircraft and FFS in accordance with the Air Transport Association (ATA) chapters as follows: Compliance Levels (a) Level A differences: (1) no influence on flight characteristics; (2) no influence on procedures (normal and/or abnormal); (3) differences in presentation; and (4) differences in operation. Method: self-instruction via the operations manual or flight crew information. (b) Level B differences: (1) no influence on flight characteristics; (2) influence on procedures (normal and/or abnormal); and (3) possible differences in presentation and operation. Method: flight crew information, computer-based training, system device training or special instruction by instructor. (c) Level C differences: (1) influence on flight characteristics; (2) influence on procedures (normal and/or abnormal); and (3) eventually differences in presentation and operation. Method: special instruction by instructor, a selected partial training on another FSTD or aircraft or a waiver because of previous experience, special instruction or training programme. (d) Level D differences: (1) influence on flight characteristics; and/or (2) influence on procedures (normal and/or abnormal); and/or (3) differences in presentation and/or operation; and (4) FSTD is level D qualified and is used for zero flight-time training (ZFTT). Method: a specified partial training on another FSTD or aircraft or a waiver because of previous experience, special instruction or training programme.			[ ]YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUACTION
ORO.FC.145.(e)	**FSTD change monitoring** The operator shall establish a system to adequately monitor changes to the FSTD and to ensure that those changes do not affect the adequacy of the training programmes			[ ]YES [ ] N/A [ ] NO [ ] N/R
ORO.FC.145.(f)	**Monitoring the validity of recurrent training and checking** The operator shall monitor the validity of each recurrent training and checking.			[ ]YES [ ] N/A [ ] NO [ ] N/R
ORO.FC.146.(a)	**Appropriately qualified personnel** All training, checking and assessment required in this Subpart shall be conducted by appropriately qualified personnel.			[ ] YES [ ] N/A [ ] NO [ ] N/R
ORO.FC.146.(b)	**Qualification in accordance with (Part-FCL)** In the case of flight and flight simulation training, checking and assessment, the personnel that provide the training and conduct the checking or assessment shall be qualified in accordance with Annex I (Part- FCL) to Regulation (EU) No 1178/2011. Additionally, the personnel providing training and conducting checking towards specialised operations shall be suitably qualified for the relevant operation.			[ ] YES [ ] N/A [ ] NO [ ] N/R
ORO.GEN.160; AMC3 ORO.GEN.160	**REPORTABLE EVENTS OF LVO** (a) A reportable event should include: (1) significant deviations from the flight path not caused by flight crew input; (2) misleading information without flight deck alerts; (3) loss of airborne navigation equipment functions necessary for the operation; (4) loss of functions or facilities at the aerodrome necessary for the operation, including aerodrome operating procedures, ATC operation, navigation facilities, visual aids and electrical power supply; (5) loss of other functions related to external infrastructure necessary for the operation; and (6) any other event causing the approach or landing to be abandoned if occurring repeatedly. (b) The reports should be submitted to the aerodrome involved when relevant and in addition to the recipients prescribed in ORO.GEN.160(b).			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUACTION
ORO.GEN.160; GM1 ORO.GEN.160	**REPORTABLE EVENTS OF LVOs — OTHER EVENTS OCCURRING REPEATEDLY** (a) The purpose of point (a)(6) of AMC3 ORO.GEN.160 is to share the information with aviation stakeholders other than the operator of the aircraft to identify yet unknown systemetic safety-related issues. The main focus is thus on a series of similar events rather that an isolated single event. (b) Other events causing the approach or landing to be abandoned may include but are not limited to: (1) erroneous or inadequate flight crew action or aircraft handling; or (2) meteorological phenomena or human-made disturbances (e.g. road crossing final approach in an EFVS approach, laser strikes, etc.) or emissions from infrastructures (e.g. 5G) which require flight crews to take corrective action to an extent to which the LVO cannot be terminated successfully or completed as planned, leading to a go-around, a balked landing or an unplanned manual intervention by the pilot during the landing manoeuvre. (c) Possible causes may be human-factor-related issues when employing newly introduced LVO equipment technologies or procedures or when changes take place in the runway environment or aerodrome vicinity.			[ ] YES [ ] N/A [ ] NO [ ] N/R

Parte SPA.GEN

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUACTION
SPA.GEN.105; AMC1 SPA.GEN.105(a).(a)	**Operations manual** Operating procedures should be documented in the operations manual.			[ ]YES [ ] N/A [ ] NO [ ] N/R
SPA.GEN.105; AMC1 SPA.GEN.105(a).(b)	**Procedures manual** If an operations manual is not required, operating procedures may be described in a manual specifying procedures (procedures manual). If the aircraft flight manual (AFM) or the pilot operating handbook (POH) contains such procedures, they should be considered as acceptable means to document the procedures.			[ ]YES [ ] N/A [ ] NO [ ] N/R
SPA.GEN.110.(a)	**Operations specifications** The scope of the activity that an operator is approved to conduct shall be documented and specified: (a) for operators holding an air operator certificate (AOC) in the operations specifications to the AOC;			[ ]YES [ ] N/A [ ] NO [ ] N/R
SPA.GEN.110.(b)	**List of specific approvals** The scope of the activity that an operator is approved to conduct shall be documented and specified: (a) for operators holding an air operator certificate (AOC) in the operations specifications to the AOC;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.GEN.115	**Changes to a specific approval** When the conditions of a specific approval are affected by changes, the operator shall provide the relevant documentation to the competent authority and obtain prior approval for the operation.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.GEN.120	**Continued validity of a specific approval** Specific approvals shall be issued for an unlimited duration and shall remain valid subject to the operator remaining in compliance with the requirements associated with the specific approval and taking into account the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.			[ ] YES [ ] N/A [ ] NO [ ] N/R

Parte SPA.LVO.100

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUACTION</th></tr>
<tr><td>SPA.LVO.100; GM2
SPA.LVO.100.2:LVC</td><td>LOW-VISIBILITY CONDITIONS
(b) Low visibility conditions means meteorological conditions with a runway visual range (RVR) less than 550 m.</td><td></td><td></td><td>[ ]YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(a);
AMC1 SPA.LVO.100(a)
1:LVTO<400.(a)(1)</td><td>Minimum RVR (LVTO) for multi-engined aeroplanes with sufficient performance
(a) Required RVR
(1) For multi-engined aeroplanes which, in the event of a critical engine failure at any point during take-off, can either stop or continue the take-off to a height of 1 500 ft above the aerodrome while clearing obstacles by the required margins, the criteria in Table 1 should apply:
Table 1
LVTO operations with aeroplanes — RVR versus facilities
<table><tr><th>Minimum RVR</th><th>Facilities</th></tr><tr><td>300 m (day)</td><td>Centre line markings; and Runway edge lights.</td></tr><tr><td>300 m (night)</td><td>Centre line markings; and
Runway edge lights; and
Runway end lights or centre line lights.</td></tr><tr><td>150 m</td><td>Centre line markings; and
Runway end lights; and
Runway edge lights; and
Runway centre line lights.</td></tr><tr><td>125 m</td><td>Centre line markings; and
Runway end lights; and
Runway edge lights (spaced 60 m or less); and
Runway centre line lights (spaced 15 m or less).</td></tr></table></td><td></td><td></td><td>[ ]YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.100.(a)
AMC1 SPA.LVO.100(a)
1:LVTO<400.(a)(2)</td><td>Minimum RVR (LVTO) for multi-engined aeroplanes with lower performance
(a) Required RVR
(2) For multi-engined aeroplanes not complying with the conditions in (a)(1), there may be a need to land immediately and to see and avoid obstacles. Such aeroplanes may be operated to the take-off minima shown in Table 2 and the marking and lighting criteria shown in Table 1, provided that they are able to comply with the applicable obstacle clearance criteria, assuming engine failure at the height specified:
Table 2
LVTO operations with aeroplanes — assumed engine failure height versus RVR<table><tr><td colspan="2">Assumed engine failure height above the take-off runway (ft) versus RVR (m)</td></tr><tr><td>Less than 50</td><td>Not less than 200</td></tr><tr><td>More than 50 but less than 100</td><td>Not less than 300</td></tr></table></td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(a)
AMC1 SPA.LVO.100(a)
1:LVTO<400.(b)</td><td>Pilot assessment (LVTO)
The reported RVR value representative of the initial part of the take-off run can be replaced by pilot assessment.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(a)
AMC1 SPA.LVO.100(a)
1:LVTO<400.(c)</td><td>Achievement of min. RVR for relevant points (LVTO)
The minimum RVR value specified in Table 1 or 2 should be achieved for all reporting points representative of the parts of the runway from the point at which the aircraft commences the take-off until the calculated accelerate-stop distance from that point.;</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(a)
AMC1 SPA.LVO.100(a)
2:LVTO<125.(d)(1)</td><td>Centre line lights spacing
(d) For LVTO operations with an RVR of less than 125 m, the following additional elements should apply:
(1) The runway has centre line lights spaced at intervals of 15 m or less;</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(a)
AMC1 SPA.LVO.100(a)
2:LVTO<125.(d)(2)</td><td>ILS localiser signal to meet the requirements for category III those stated in the AFM
(d) For LVTO operations with an RVR of less than 125 m, the following additional elements should apply:
(2) If an ILS signal is used for lateral guidance, the ILS localiser signal meets the requirements for category III operations, unless otherwise stated in the AFM;</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(a) AMC1 SPA.LVO.100(a) 2:LVTO<125.(d)(3)	**Low-visibility procedures (LVPs)** (d) For LVTO operations with an RVR of less than 125 m, the following additional elements should apply: (3) If an ILS signal is to be used, low-visibility procedures (LVPs) include protection of the runway and, where an ILS localiser signal is used, it should include protection of the ILSsensitive area unless otherwise stated in the AFM; and			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(a) AMC1 SPA.LVO.100(a) 2:LVTO<125.(d)(4)	**GAST D for GLS** (d) For LVTO operations with an RVR of less than 125 m, the following additional elements should apply: (4) If a GLS signal is used for lateral guidance, the GLS performance type meets the requirements for category III operations (GAST D and to GBAS point to which guidance is required), unless otherwise stated in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(a) AMC1 SPA.LVO.100(a) 2:LVTO<125.(e)	**Minimum RVR** For LVTO operations with an RVR of less than 125 m, the reported RVR should be not less than the minimum specified in the AFM or, if no such minimum is specified, not less than 75 m.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(a) AMC1 SPA.LVO.100(a) 2:LVTO<125.(f) (g)	**Achievement of minimum required RVR for all representative reporting points/ reported RVR** (f) The minimum required RVR should be achieved for all reporting points representative of the parts of the runway from the point at which the aircraft commences the take-off until the greater of the calculated take-off distance or accelerate-stop distance from that point. (g) The reported RVR value representative of the initial part of the take-off run can be replaced by pilot assessment.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(a) GM1 SPA.LVO.100(a)	**CLASSIFICATION OF LVTO OPERATIONS** Take-off operations are classified as 'normal take-off operations' with an RVR at or above 550 m and 'LVTO operations' with an RVR below 550 m. Only LVTO operations in an RVR of less than 400 m require a specific approval.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(a) GM2 SPA.LVO.100(a)	**VISUAL SEGMENT FOR TAKE-OFF** The value of 125 m RVR for take-off with 15 m centre line light spacing has been selected because flight deck geometry means that this will provide at least a 90-m visual segment for the large majority of aircraft types. In a 90-m visual segment the pilot is expected to be able to see six centre line light intervals (seven centre line lights) at 15 m spacing once lined up on the runway centre line.			[ ] YES [ ] N/A [ ] NO [ ] N/R

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.100.(b)
AMC1 SPA.LVO.100(b).(a)</td><td>DH (CAT II)
For CAT II operations, the following should apply:
The DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance and be not lower than the highest of:
(1) the minimum DH specified in the AFM, if stated;
(2) the applicable obstacle clearance height (OCH) for the category of aircraft;
(3) the DH to which the flight crew is qualified to operate; or (4) 100 ft.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(b)
AMC1 SPA.LVO.100(b).(b)</td><td>RVR (CAT II)
For CAT II operations, the following should apply:
(b) The lowest RVR minima to be used are specified in Table 4:
Table 4
CAT II operation minima: RVR (m) versus DH (ft):
<table><tr><th colspan="2" rowspan="2">Aircraft categories</th><th colspan="2">Auto-coupled or HUD to below DH*</th></tr><tr><th>A,B,C</th><th>D</th></tr><tr><td rowspan="3">DH (ft)</td><td>100-120</td><td>300</td><td>300/350*</td></tr><tr><td>121-140</td><td>400</td><td>400</td></tr><tr><td>141-199</td><td>450</td><td>450</td></tr></table>*: An RVR of 300 m may be used for a Category D aeroplane conducting an autoland or using HUDLS to touchdown.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(b)
AMC2 SPA.LVO.100(b).(a)</td><td>DH (CAT III)
For operations in which a DH is used, the DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance and be not lower than:
(1) the minimum DH specified in the AFM, if stated;
(2) the DH to which the flight crew is qualified to operate.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(b)
AMC2 SPA.LVO.100(b).(b)</td><td>CAT III operations with no DH
Operations with no DH should only be conducted if:
(1) operation with no DH is specified in the AFM;
(2) there is no published information indicating that the approach aid or aerodrome facilities cannot support operations with no DH; and
(3) the flight crew is qualified to operate with no DH.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.100.(b)
AMC2 SPA.LVO.100(b).(c)</td><td>RVR (CAT III)
The lowest RVR minima to be used are specified in Table 5. should be determined in accordance with Table 5:
Table 5
CAT III operation minima: RVR (m) versus DH (ft)
<table><tr><th>DH (ft)</th><th>Roll-out control/ guidance System</th><th>RVR (m)*</th></tr><tr><td>50-99</td><td>Not required</td><td>175</td></tr><tr><td rowspan="2">0-49 or no DH</td><td>Fail-passive</td><td>125</td></tr><tr><td>Fail-operational</td><td>75</td></tr></table>* Note: For a fail-passive or HUD roll-out control system, a lower RVR value (no lower than 75 m) can be used if stated in the AFM provided that the equipment demonstrated such capability as part of the certification process. This is provided that the operator has implemented the appropriate operating procedures and training.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(b)
AMC3 SPA.LVO.100(b)</td><td>INSTRUMENT APPROACH OPERATIONS IN LOW-VISIBILITY CONDITIONS — EFFECT ON LANDING MINIMA OF TEMPORARILY FAILED OR DOWNGRADED EQUIPMENT FOR APPROACH OPERATIONS WITH A DH BELOW 200 ft
(a) Only those facilities mentioned in Table 6 should be acceptable to be used to determine the effect of temporarily failed of downgraded equipment on the required RVR for CAT II/III approach operations.
(b) The following conditions should be applied to Table 6:
(1) multiple failures of runway/FATO lights other than those indicated in Table 6 are not acceptable;
(2) failures of approach and runway/FATO lights are acceptable at the same time and the most demanding consequence should be applied;
(3) for approach operations with a DH below 200 ft, a combination of deficiencies in runway/FATO lights and RVR assessment equipment are not permitted; and
(4) failures other than ILS, GLS and MLS affect the RVR only and not the DH.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION

SPA.LVO.100.(b)
AMC3 SPA.LVO.100(b)
(Cont.)

Table 6
Failed or downgraded equipment — effect on landing minima CAT II/III operations

Failed or downgraded equipment		Effect on landing minima			
		CAT III no DH	CAT III DH<50 ft	CAT III DH>=50 ft	CAT II
Failed or downgraded equipment	Navaid stand-by transmitter	Not allowed	RVR 200 m	No effect	
	Outer marker (ILS)	No effect if the required height versus glide path can be checked using other means, e.g. DME fix			
	Middle marker (ILS)	No effect			
	DME	No effect if replaced by RNAV (GNSS) information or the outer marker.			
	RVR assessment systems	At least one RVR value to be available on the aerodrome	On runways equipped with two or more RVR assessment units, one may be inoperative		
	Approach lights	No effect	Not allowed for operations with DH >50 ft		Not allowed
	Approach lights except the last 210 m	No effect			Not allowed
	Approach lights except the last 420 m	No effect			
	Standby power for approach lights	No effect			
	Standby power for runway lights with 1-second switchover time	No effect	Not allowed	Day: RVR 550 m	Day: RVR 550 m
		No effect		Night: RVR 550 m	Night: RVR 550 m
	Edge lights	No effect	Day: No effect	Day: No effect	Day: No effect
			Night: RVR 550 m	Night: RVR 550 m	Night: not allowed
	Threshold lights	No effect	No effect	Day: No effect	Day: No effect
				Night: RVR 550 m	Night: not allowed
	Runway end lights	No effect if centre line lights are serviceable			
	Centre line lights	Day: RVR 200 m	Not allowed	Day: RVR 300 m	Day: RVR 350 m
		Night: not allowed		Night: RVR 400 m	Night: RVR 550 m (400 m with HUD or autoland)
	Centre line lights spacing increased to 30 m	RVR 150 m		No effect	
	TDZ lights	No effect	Day: RVR 200 m	Day: RVR 300 m	
			Night: RVR 300 m	Night: RVR 550 m, 350 m with HUD or autoland	
	Taxiway light system	No effect			

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(b) AMC3 SPA.LVO.100(b) (Cont.)	**Table 7** **Failed or downgraded equipment — effect on landing minima Operational credits**			

Failed or downgraded equipment		Effect on landing minima			
		SA CAT I	SA CAT II	EFVS-A	EFVS-L
Failed or downgraded equipment	Navaid stand-by transmitter	No effect			
	Outer marker (ILS)	No effect if replaced by height check at 1 000 ft			
	Middle marker (ILS)	No effect			
	RVR assessment systems	On runways equipped with two or more RVR assessment units, one may be inoperative			
	Approach lights	Not allowed	Not allowed	As per IAP	As per IAP
	Approach lights except the last 210 m	Not allowed	No effect	As per IAP	As per IAP
	Approach lights except the last 420 m	No effect	No effect	As per IAP	As per IAP
	Standby power for approach lights	No effect			
	Edge lights	Day: No effect	Day: No effect	As per IAP	As per IAP
		Night: not allowed	Night: RVR 550 m	As per IAP	As per IAP
	Threshold lights	Day: No effect	Day: No effect	As per IAP	As per IAP
		Night: not allowed	Night: RVR 550 m	As per IAP	As per IAP
	Runway end lights	No effect if centre line lights are serviceable		As per IAP	
	Centre line lights	Day: RVR 400 m	Day: RVR 300 m	As per IAP	As per IAP
		Night: RVR 550 m	Night: RVR 400 m	As per IAP	As per IAP
	Centre line lights spacing increased to 30 m	No effect	No effect	As per IAP	As per IAP
	TDZ lights	Day: No effect	Day: RVR 300 m	As per IAP	
		Night: no effect	Night: RVR 350 m	As per IAP	
	Taxiway light system	No effect			

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(b) GM3 SPA.LVO.100(b).(b)	**CAT II operations** The selection of the dimensions of the required visual segments that are used for CAT II operations is based on the following visual provisions: (1) a visual segment of not less than 90 m will need to be in view at and below DH for pilot to be able to monitor an automatic system; (2) a visual segment of not less than 120 m will need to be in view for a pilot to be able to maintain the roll attitude manually at and below DH; and (3) for a manual landing using only external visual cues, a visual segment of 225 m will be required at the height at which flare initiation starts in order to provide the pilot with sight of a point of low relative movement on the ground. Before using a CAT II ILS for landing, the quality of the localiser between 50 ft and touchdown should be verified.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(b) GM3 SPA.LVO.100(b).(c)	**CAT III fail-passive operations** (1) CAT III operations utilising fail-passive automatic landing equipment were introduced in the late 1960s and it is desirable that the principles governing the establishment of the minimum RVR for such operations be dealt with in some detail. (2) During an automatic landing the pilot needs to monitor the performance of the aircraft system, not in order to detect a failure that is better done by the monitoring devices built into the system, but so as to know precisely the flight situation. In the final stages the pilot should establish visual contact and, by the time the pilot reaches DH, the pilot should have checked the aircraft position relative to the approach or runway centre line lights. For this the pilot will need sight of horizontal elements (for roll reference) and part of the touchdown area. The pilot should check for lateral position and cross-track velocity and, if not within the pre-stated lateral limits, the pilot should carry out a missed approach procedure. The pilot should also check longitudinal progress and sight of the landing threshold is useful for this purpose, as is sight of the TDZ zone lights. Where a fail-operational automatic landing and roll-out system is used, it is not considered necessary for the pilot to check the lateral position and cross-track velocity, and thus it is not necessary for the visual reference requirements to include horizontal elements of the lighting system. (3) In the event of a failure of the automatic flight guidance system below DH, there are two possible courses of action; the first is a procedure that allows the pilot to complete the landing manually if there is adequate visual reference for him/her to do so, or to initiate a missed approach procedure if there is not; the second is to make a missed approach procedure mandatory if there is a system disconnect regardless of the pilot's assessment of the visual reference available:			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(b) GM3 SPA.LVO.100(b).(c) (Cont.)	(i) If the first option is selected then the overriding rule in the determination of a minimum RVR is for sufficient visual cues to be available at and below DH for the pilot to be able to carry out a manual landing. Data presented in ECAC Doc 17 showed that a minimum value of 300 m would give a high probability that the cues needed by the pilot to assess the aircraft in pitch and roll will be available and this should be the minimum RVR for this procedure. (ii) The second option, to require a missed approach procedure to be carried out should the automatic flight-guidance system fail below DH, will permit a lower minimum RVR because the visual reference provision will be less if there is no need to provide for the possibility of a manual landing. However, this option is only acceptable if it can be shown that the probability of a system failure below DH is acceptably low. It should be recognised that the inclination of a pilot who experiences such a failure would be to continue the landing manually but the results of flight trials in actual conditions and of simulator experiments show that pilots do not always recognise that the visual cues are inadequate in such situations and present recorded data reveal that pilots' landing performance reduces progressively as the RVR is reduced below 300 m. It should further be recognised that there is some risk in carrying out a manual missed approach procedure from below 50 ft in very low visibility and it should therefore be accepted that if an RVR lower than 300 m is to be approved, the flight deck procedure should not normally allow the pilot to continue the landing manually in such conditions and the aircraft system should be sufficiently reliable for the missed approach procedure rate to be low. (4) These criteria may be relaxed in the case of an aircraft with a fail-passive automatic landing system that is supplemented by a head-up display that does not qualify as a fail-operational system but that gives guidance that will enable the pilot to complete a landing in the event of a failure of the automatic landing system. In this case it is not necessary to make a missed approach procedure mandatory in the event of a failure of the automatic landing system when the RVR is less than 300 m.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(b) GM3 SPA.LVO.100(b).(d)	**CAT III fail-operational operations - with a DH** (1) For CAT III operations utilising a fail-operational landing system with a DH, a pilot should be able to see at least one centre line light. (2) For CAT III operations utilising a fail-operational hybrid landing system with a DH, a pilot should have a visual reference containing a segment of at least three consecutive lights of the runway centre line lights.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(b) GM3 SPA.LVO.100(b).(e)	**CAT III fail operational operations - with no DH** (1) For CAT III operations with no DH the pilot is not required to see the runway prior to touchdown. The permitted RVR is dependent on the level of aircraft equipment. (2) A CAT III runway may be assumed to support operations with no DH unless specifically restricted as published in the AIP or NOTAM.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(b) GM4 SPA.LVO.100(b)	**INSTRUMENT APPROACH OPERATIONS IN LOW-VISIBILITY CONDITIONS — EFFECT ON LANDING MINIMA OF TEMPORARILY FAILED OR DOWNGRADED EQUIPMENT FOR APPROACH OPERATIONS WITH A DH BELOW 200 ft** The instructions for the effect on landing minima of temporarily failed or downgraded equipment are intended for use both before flight and during flight. It is, however, not expected that the pilot-incommand/commander would consult such instructions after passing 1 000 ft above the aerodrome. If failures of ground aids are announced at such a late stage, the approach could be continued at the pilot-in-command/commander's discretion. If failures are announced before such a late stage in the approach, their effect on the approach should be considered as described in Table 6, and the approach may have to be abandoned.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) AMC1 SPA.LVO.100(c).(a)	**DH (SA CAT I)** For special authorisation category I (SA CAT I) operations, the following should apply: (a) The DH of an SA CAT I operation should not be lower than the highest of: (1) the minimum DH specified in the AFM, if stated; (2) the applicable OCH for the category of aeroplane; (3) the DH to which the flight crew is qualified to operate; or (4) 150 ft.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) AMC1 SPA.LVO.100(c).(b)	**Determination of DH by radio altimeter (SA CAT I)** For special authorisation category I (SA CAT I) operations, the following should apply: (b) Where the DH for an SA CAT I operation is less than 200 ft, it should be determined by the use of a radio altimeter or other device capable of providing equivalent performance.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) AMC1 SPA.LVO.100(c).(c)	**Required visual aids (SA CAT I)** For special authorisation category I (SA CAT I) operations, the following should apply: (c) The following visual aids should be available: (1) approach lights as specified in Table 8; (2) precision approach (PA) runway markings; (3) category I runway lights.			[ ] YES [ ] N/A [ ] NO [ ] N/R

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.100.(c)
AMC1 SPA.LVO.100(c).(d)</td><td>RVR (SA CAT I)
For special authorisation category I (SA CAT I) operations, the following should apply:
(d) The lowest RVR should not be lower than the higher of:
(1) the minimum RVR specified in the AFM, if stated; or
(2) the RVR specified in Table 8.
Table 8
SA CAT I operation minima RVR (m) versus approach lighting system
<table>
<tr><th colspan="2">Class of light facility</th><th>FALS</th><th>IALS</th><th>BALS</th><th>NALS</th></tr>
<tr><td rowspan="7">DH (ft)</td><td>150-160</td><td>400</td><td>500</td><td>600</td><td>700</td></tr>
<tr><td>161-200</td><td>450</td><td>550</td><td>650</td><td>750</td></tr>
<tr><td>201-210</td><td>450</td><td>550</td><td>650</td><td>750</td></tr>
<tr><td>211-220</td><td>500</td><td>550</td><td>650</td><td>800</td></tr>
<tr><td>221-230</td><td>500</td><td>600</td><td>700</td><td>900</td></tr>
<tr><td>231-240</td><td>500</td><td>650</td><td>750</td><td>1000</td></tr>
<tr><td>241-219</td><td>550</td><td>100</td><td>800</td><td>1100</td></tr>
</table>
Note: For class of approach lighting facility, see GM2 CAT.OP.MPA.110.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(c)
AMC2 SPA.LVO.100(c).(a)</td><td>DH (SA CAT II)
For special authorisation category II (SA CAT II) operations, the following should apply:
(a) The DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance, if so determined by the aircraft certification process, and be not lower than the highest of:
(1) the minimum DH specified in the AFM, if stated;
(2) the applicable OCH for the category of aeroplane;
(3) the DH to which the flight crew is qualified to operate; or
(4) 100 ft.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(c)
AMC2 SPA.LVO.100(c).(b)</td><td>Required visual aids (SA CAT II)
For special authorisation category II (SA CAT II) operations, the following should apply:
(b) The following visual aids should be available:
(1) approach lights as specified in Table 9;
(2) precision approach runway markings;
(3) category I runway lights.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.100.(c)
AMC2 SPA.LVO.100(c).(c)</td><td>RVR (SA CAT II)
For special authorisation category II (SA CAT II) operations, the following should apply:
(c) The lowest RVR minima to be used are specified in Table 9:
Table 9
SA CAT II operation minima: RVR (m) versus DH (ft)
<table>
<tr><th colspan="2">Class of light facility</th><th>FALS</th><th>IALS</th><th>BALS</th><th>NALS</th></tr>
<tr><td rowspan="4">DH (ft)</td><td>100-120</td><td>350</td><td>450</td><td>600</td><td>700</td></tr>
<tr><td>121-140</td><td>400</td><td>500</td><td>600</td><td>700</td></tr>
<tr><td>141-160</td><td>400</td><td>500</td><td>600</td><td>750</td></tr>
<tr><td>161-199</td><td>400</td><td>550</td><td>650</td><td>750</td></tr>
</table></td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
<tr><td>SPA.LVO.100.(c)
AMC3 SPA.LVO.100(c).(a)</td><td>DH (EFVS)
When conducting EFVS operations to a runway:
(a) the DA/H used should be the same as for operations without EFVS;</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.100.(c)
AMC3 SPA.LVO.100(c).(b)</td><td>
Lowest RVR (EFVS)
When conducting EFVS operations to a runway:
(b) the lowest RVR minima to be used should be determined:
(1) in accordance with criteria specified in the AFM for the expected weather conditions; or
(2) if no such criteria are specified, by reducing the RVR determined for operation without the use of EFVS/CVS in accordance with Table 10;
Table 10
Operations using EFVS/CVS — RVR/CMV reduction
<table>
<tr><th>RVR/CMV (m) required without the use of EFVS</th><th>RVR/CMV (m) with the use of EFVS</th></tr>
<tr><td>550</td><td>350*</td></tr>
<tr><td>600</td><td>400*</td></tr>
<tr><td>650</td><td>450*</td></tr>
<tr><td>700</td><td>450*</td></tr>
<tr><td>750</td><td>500*</td></tr>
<tr><td>800</td><td>550</td></tr>
<tr><td>900</td><td>600</td></tr>
<tr><td>1000</td><td>650</td></tr>
<tr><td>1100</td><td>750</td></tr>
<tr><td>1200</td><td>800</td></tr>
<tr><td>1300</td><td>900</td></tr>
<tr><td>1400</td><td>900</td></tr>
<tr><td>1500</td><td>1000</td></tr>
<tr><td>1600</td><td>1100</td></tr>
<tr><td>1700</td><td>1100</td></tr>
<tr><td>1800</td><td>1200</td></tr>
<tr><td>1900</td><td>1300</td></tr>
<tr><td>2000</td><td>1300</td></tr>
<tr><td>2100</td><td>1400</td></tr>
<tr><td>2200</td><td>1500</td></tr>
<tr><td>2300</td><td>1500</td></tr>
<tr><td>2400</td><td>1600</td></tr>
<tr><td colspan="2">* Reported RVR should be available (no CMV conversion).</td></tr>
</table>
</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(c) AMC3 SPA.LVO.100(c).(c)	**Increase of RVR without LVP** When conducting EFVS operations to a runway: c) where the lowest RVR to be used, determined in accordance with (b), is less than 550 m, then this should be increased to 550 m unless LVPs are established at the aerodrome of intended landing;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) AMC3 SPA.LVO.100(c).(d)	**Creditability of EFVS in CVS** When conducting EFVS operations to a runway: d) where the EFVS is part of a CVS, it is only the EFVS element that should provide the operational credits. The other part of the CVS, the synthetic vision system (SVS), should not provide operational credits.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(a)	**EFVS concept** EFVS operations, if approved, exploit the improved visibility provided by the EFVS to allow an operational credit applied to the visual segment of an instrument approach. An EFVS cannot be used to extend the instrument segment of an approach and thus the DH for operation with an EFVS is always the same as for the same approach conducted without an operational credit.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(c)	**Equipment for EFVS operations** (1) In order to conduct EFVS operations, a certified EFVS is used. An EFVS is an enhanced vision system (EVS) that also incorporates a flight guidance system and displays the image on a HUD or an equivalent display. The flight guidance system will incorporate aircraft flight information and flight symbology. (2) For operations for which a minimum flight crew of more than one pilot is required, the aircraft will also be equipped with a suitable display of EFVS sensory imagery for the pilot monitoring the progress of the approach. (3) Legacy systems may be certified as 'EVS with an operational credit'. Such a system may be considered an EFVS used for approach (EFVS-A). (4) Aircraft holding a type certificate issued by a third country may be certified for operations equivalent to EFVS operations. Specific approval for an operational credit for EFVS operations will be available only if the operator can demonstrate that the equipment meets all the requirements for certification in accordance with CS-AWO. (5) For approaches for which natural visual reference is not required prior to touchdown, the EFVS (EFVS used for landing (EFVS-L)) will additionally display: (i) flare prompt or flare guidance information; and (ii) height AGL.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(d)	**Suitable approach procedures** (1) For types of approach operation, refer to AMC1 SPA.LVO.110 'Additional verification of the suitability of runways for EFVS operations'. EFVS operations may be used for 3D approach operations. These may include operations based on non-precision approach (NPA) procedures, approach procedures with vertical guidance and PA procedures including approach operations requiring specific approvals, provided that the operator holds the necessary approvals. An NPA procedure flown using vertical guidance from computer-generated navigation data from ground-based, space-based, self-contained navigation aids, or a combination of these may be considered a 3D instrument approach operation, so EFVSs may be used for NPA procedures provided that vertical guidance is available to the pilot. (2) Offset approaches The extent to which EFVSs can be used for offset approaches will depend on the FOV of the specific system. Where an EFVS has been demonstrated to be usable with a final approach track offset more than 3 degrees from the runway centre line, this will be stated in the AFM. Instrument approach procedures (IAPs) may have the final approach course significantly offset from the centre line of the runway and still be considered 'straight-in approaches'. Many approach procedures with an offset final approach course are constructed so that the final approach course crosses the runway centre line extended well out from the runway. Depending on the construction of a particular procedure, the wind conditions and the available FOV of a specific EFVS installation, the required visual references may not come into view before the aircraft reaches the DH. (3) Circling approaches EFVSs incorporate a HUD or an equivalent system so that the EFVS image is visible in the pilot's forward external FOV. Circling operations require the pilot to maintain visual references which may not be directly ahead of the aircraft and may not be aligned with the current flight path. EFVSs cannot therefore be used in place of natural visual reference for circling approaches.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(f)	**Conditions for commencement and continuation of the approach** The conditions for commencement and continuation of the approach are in accordance with CAT.OP.MPA.305, NCC.OP.230, NCO.OP.210 and SPO.OP.215 as applicable. Pilots conducting EFVS operations may commence an approach and continue that approach below 1 000 ft above the aerodrome or into the final approach segment (FAS) if: (1) the reported RVR or converted meteorological visibility (CMV) is equal to or greater than the lowest RVR minima determined; and (2) all the conditions for conducting EFVS operations are met. If any equipment required for EFVS operations is unserviceable or unavailable, then the conditions for conducting EFVS operations would not be satisfied, and the approach cannot be commenced. Operators may develop procedures for flight crew to follow in the event of unserviceability arising after the aircraft descends below 1 000 ft above the aerodrome or into the FAS. Such procedures should ensure that the approach is not continued unless the RVR is sufficient for the type of approach that can be conducted with equipment that remains available. In the event of failure of the equipment required for EFVS operations, a go-around would be executed unless the RVR reported prior to commencement of the approach was sufficient for the approach to be flown without the use of EFVS in lieu of natural vision.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(g)	**EFVS image requirements at the DA/H** EFVS image requirements at the DA/H are specified in AMC7 SPA.LVO.105(c) The requirements for features to be identifiable on the EFVS image in order to continue approach below DH are more stringent than the visual reference requirements for the same approach flown without EFVS. This is necessary because the EFVS might not display the colour of lights used to identify specific portions of the runway and might not consistently display the runway markings. Any visual approach path indicator using colour-coded lights may be unusable.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(h)	**Obstacle clearance in the visual segment** The 'visual segment' is the portion of the approach between the DH and the runway threshold. In the case of EFVS operations, this part of the approach may be flown using the EFVS image as the primary reference and there may be obstacles that are not always identifiable on an EFVS image. Approach procedures designed in accordance with PANS-OPS criteria is required to ensure that the visual segment is protected for obstacles by the visual segment surface (VSS) that extends from 60 m before the threshold to the location of the OCH. Procedures not designed in accordance with PANS-OPS may have not been assessed for terrain or obstacle clearance below the OCH and may not provide a clear vertical path to the runway at the normally expected descent angle. SA CAT I and CAT II/III runways subject to EU aerodrome regulations are required to provide an OFZ, which offers protection from obstacles in the visual segment. Standard CAT I runways may also provide an OFZ and if not, the lack of an OFZ shall be indicated, according to ICAO Annex 4, normally on the approach chart.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(i)	**Visual reference requirements at minimum height to continue approach without natural visual reference** For operations other than EFVS to touchdown, natural visual reference is required before landing. The objective of this requirement is to ensure that the pilot will have sufficient visual reference to land. The visual reference should be the same as the one required for the same approach flown without the use of EFVS. The specific height at which this is required will depend on the capability of the aircraft installation and will be specified in the AFM. For aircraft certified for EFVS operations but where no such height is specified in the AFM, natural visual reference is required by a height of 100 ft above the threshold elevation. Specific EFVSs may have additional requirements that must be fulfilled at this height to allow the approach to continue, such as a requirement to check that the elements of the EFVS display remain correctly aligned and scaled to the external view. Any such requirements will be detailed in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(j)	**Use of EFVS to touchdown** In order for the use of EFVS to touchdown to be approved, the EFVS will provide flare prompt or flare guidance (EFVS-L). This mitigates the fact that a 2D image and a narrow FOV displayed by the EFVS may cause erroneous perceptions of depth or height. The EFVS will also display height above the runway by the use of a radio altimeter or other device capable of providing equivalent performance. Unless the operator has verified that the terrain ahead of the threshold and landing system assessment area (LSAA) slope is suitable for the use of a radio altimeter, such a system should not be relied upon to provide accurate information about the height of the aircraft above the runway threshold until the aircraft is over the runway surface.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.100.(c) GM4 SPA.LVO.100(c).(k)	**Go-around** A go-around will be promptly executed if the required visual references are not maintained on the EFVS image at any time after the aircraft has descended below the DA/H or if the required visual references are not distinctly visible and identifiable using natural vision after the aircraft is below the minimum height to continue approach without natural visual reference (if applicable). It is considered more likely that an operation with EFVS could result in initiation of a go-around below the DA/H than the equivalent approach flown without EFVS. According to AMC1 SPA.LVO.105(f), operators involved in EFVS operations should keep records of the number of successful and unsuccessful approaches using EFVS in order to detect and act on any undesirable trends. For category II and III PA procedures designed in accordance with PANS-OPS criteria, obstacle protection is provided for a go-around initiated below the DH (balked landing) by means of an obstacle free zone (OFZ). An OFZ may also be provided for category I PA procedures. Where an OFZ is not provided for a category I PA, this may be indicated on the approach chart. NPA procedures and approach procedures with vertical guidance provide obstacle clearance for the missed approach based on the assumption that the missed approach is executed at or above the DH. The DH should be located at or before the MAPt.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.100.(c) GM5 SPA.LVO.100(c)	**OPERATIONS WITH OPERATIONAL CREDITS — COMBINED VISION SYSTEMS** A combined vision system (CVS) consisting of an EFVS and an SVS can be approved for EFVS operations if it meets all the certification requirements for an EFVS.			[ ] YES [ ] N/A [ ] NO [ ] N/R

Parte SPA.LVO.105

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(a) AMC1 SPA.LVO.105(a).(a)	**Equipment certification for LVTO operations (RVR<125 m)** Aircraft used for LVTO in an RVR of less than 125 m should be equipped with a system certified for the purpose.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(a) AMC1 SPA.LVO.105(a).(b)(1)	**Equipment certification for CAT II operations** (b) Aircraft used for low-visibility approach operations should be equipped in accordance with the applicable airworthiness requirements and certified as follows: (1) For CAT II operations, the aircraft should be certified for CAT II operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(a) AMC1 SPA.LVO.105(a).(b)(2)	**Equipment certification for CAT III operations** (b) Aircraft used for low-visibility approach operations should be equipped in accordance with the applicable airworthiness requirements and certified as follows: (2) For CAT III operations, the aircraft should be certified for CAT III operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(a) AMC1 SPA.LVO.105(a).(b)(3)	**Equipment certification for SA CAT I operations** (b) Aircraft used for low-visibility approach operations should be equipped in accordance with the applicable airworthiness requirements and certified as follows: (3) For SA CAT I, the aircraft should be certified for SA CAT I operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(a) AMC1 SPA.LVO.105(a).(b)(4)	**Equipment certification for SA CAT II operations** (b) Aircraft used for low-visibility approach operations should be equipped in accordance with the applicable airworthiness requirements and certified as follows: (4) For SA CAT II, the aircraft should be certified for CAT II operations and be equipped with HUDLS or fail-passive autoland or better.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(a) AMC1 SPA.LVO.105(a).(b)(5)	**Equipment certification for EFVS operations** Aircraft used for low-visibility approach operations should be equipped in accordance with the applicable airworthiness requirements and certified as follows: (5) For EFVS operations, the aircraft should be equipped with a certified EFVS-A or EFVS-L.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(b)	**Competency and training and checking programme** To obtain a specific approval as required by SPA.LVO.100, the operator shall demonstrate that: (b) the flight crew members are competent to conduct the intended operation and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation has been established, in accordance with SPA.LVO.120;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC1 SPA.LVO.105(c).(a)	**Operating procedures - PIC/CMD satisfied with status of facilities** Prior to commencing an LVO, the pilot-in-command/commander should be satisfied that: (a) the status of visual and non-visual facilities is as required;			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC1 SPA.LVO.105(c).(b)	**Operating procedures - PIC/CMD satisfied with LVPs in effect** Prior to commencing an LVO, the pilot-in-command/commander should be satisfied that: (b) if LVPs are required for such operations, LVPs are in effect; and			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC1 SPA.LVO.105(c).(c)	**Operating procedures - PIC/CMD satisfied with flight crew member training** Prior to commencing an LVO, the pilot-in-command/commander should be satisfied that: (c) the flight crew members are appropriately qualified.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(a)(1)	**Operating procedures - consistency with AFM** (a) Operating procedures should be established for all types of LVOs and operations with operational credits for which an operator is seeking approval. The operating procedures should: (1) be consistent with the AFM;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(a)(2)	**Operating procedures - appropriateness to technology and equipment** (a) Operating procedures should be established for all types of LVOs and operations with operational credits for which an operator is seeking approval. The operating procedures should: (2) be appropriate to the technology and equipment to be used;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(a)(3)	**Operating procedures - duties and responsibilities in each flight phase** (a) Operating procedures should be established for all types of LVOs and operations with operational credits for which an operator is seeking approval. The operating procedures should: (3) specify the duties and responsibilities of each flight crew member in each relevant phase of flight;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(a)(4)	**Operating procedures - manage flight crew workload** (a) Operating procedures should be established for all types of LVOs and operations with operational credits for which an operator is seeking approval. The operating procedures should: (4) ensure that flight crew workload is managed to facilitate effective decision-making and monitoring of the aircraft; and			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(a)(5)	**Operating procedures - minimise deviation from normal procedures** (a) Operating procedures should be established for all types of LVOs and operations with operational credits for which an operator is seeking approval. The operating procedures should: (5) minimise, as much as practical, the deviation from normal procedures used for routine operations (non-LVOs).			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(01)	**Operating procedures - checks of the aircraft equipment before departure and in flight** (b) Operating procedures should include: (1) the required checks for the satisfactory functioning of the aircraft equipment, both before departure and in flight;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(02)	**Operating procedures - correct seating and eye position** (b) Operating procedures should include: (2) the correct seating and eye position;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(03)	**Operating procedures - determination of aerodrome operating minima** (b) Operating procedures should include: (3) determination of aerodrome operating minima;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(04)	**Operating procedures - increment for unexperienced PIC/CMDR** (b) Operating procedures should include: (4) the increment to be added to minima for use by pilots-in-command/commanders who are new to the aircraft type, if applicable;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(05)	**Operating procedures - effect of failed / downgraded ground equipment** (b) Operating procedures should include: (5) the effect on aerodrome operating minima of temporarily failed or downgraded ground equipment;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(06)	**Operating procedures - effect of status of aircraft systems** (b) Operating procedures should include: (6) the effect on aerodrome operating minima of the failure or change of the status of any aircraft systems;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(07)	**Operating procedures - LVP in effect** (b) Operating procedures should include: (7) when the LVPs at the aerodrome are required. LVPs are required: for low-visibility flight approach operations; for LVTOs with RVR less than 400 m. If an operator selects an aerodrome with equivalent procedures, where the term 'LVPs' is not used (e.g. regional procedures), the operator should verify that suitable procedures are established to ensure an equivalent level of safety to that achieved at approved aerodromes. This situation should be clearly noted in the operations manual or procedures manual, including guidance to the flight crew on how to determine that the suitable procedures are in effect at the time of an actual operation. Note: the AFM may state that some elements of LVPs are not required and therefore the equivalent level of safety may be established on that basis;			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(08)	**Operating procedures - 'approaching minima' call-out** (b) Operating procedures should include: (8) a requirement for an 'approaching minima' call-out to prevent inadvertent descent below the DA/H;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(09)	**Operating procedures - height call-outs based on radio altimeter** (b) Operating procedures should include: (9) the requirement for height call-outs below 200 ft to be based on the use of a radio altimeter or other device capable of providing equivalent performance, if applicable;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(10)	**Operating procedures - required visual references** (b) Operating procedures should include: (10) the required visual references;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(11)	**Operating procedures - action following a loss of visual references** (b) Operating procedures should include: (11) the action to be taken in the event of loss of the required visual references; and			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(b)(12)	**Operating procedures - allowable flight path deviations and corrective actions** (b) Operating procedures should include: (12) the maximum allowable flight path deviations and action to be taken in the event that such deviations occur.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC2 SPA.LVO.105(c).(c)	**Operating procedures - inclusion in manual** Operators required to comply with the requirements of Annex III (Part-ORO) to this Regulation should include operating procedures in the operations manual as required by ORO.MLR.100. The operators to which Part-ORO does not apply should include the operating procedures in a 'procedures manual'.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC3 SPA.LVO.105(c).(a)	**Operating procedures - flight crew composition (CAT II)** For CAT II operations, the following should apply: (a) The flight crew should consist of at least two pilots.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC3 SPA.LVO.105(c).(b)	**Operating procedures - use of certified system (CAT II)** For CAT II operations, the following should apply: (b) The approach should be flown using a certified system as identified in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC3 SPA.LVO.105(c).(c)	**Operating procedures - autopilot use (CAT II)** For CAT II operations, the following should apply: (c) If the approach is flown using autopilot, for a manual landing the autopilot should remain engaged until after the pilot has achieved visual reference.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC3 SPA.LVO.105(c).(d)	**Operating procedures - height call-outs based on radio altimeter (CAT II)** For CAT II operations, the following should apply: (d) All height call-outs below 200 ft above the runway threshold elevation should be determined by the use of a radio altimeter or other device capable of providing equivalent performance.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC3 SPA.LVO.105(c).(e)	**Operating procedures - DH determination by radio altimeter (CAT II)** For CAT II operations, the following should apply: (e) The DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance, if so determined by the aircraft certification process.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC3 SPA.LVO.105(c).(f)	**Operating procedures - visual references at DH (CAT II)** For CAT II operations, the following should apply: (f) At DH, the following visual references should be distinctly visible and identifiable to the pilot: (1) a segment of at least three consecutive lights, which are the centre line of the approach lights or TDZ lights or runway centre line lights or edge lights or a combination of these; and (2) a visual reference that should include a lateral element of the ground pattern, such as an approach lighting crossbar, or the landing threshold, or a barrette of the TDZ lighting unless the operation is conducted using a HUD or an equivalent system to touchdown.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC4 SPA.LVO.105(c).(a)	**Operating procedures - flight crew composition (CAT III)** For CAT III operations, the following should apply: (a) The flight crew should consist of at least two pilots.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC4 SPA.LVO.105(c).(b)	**Operating procedures - use of certified system (CAT III)** For CAT III operations, the following should apply: (b) The approach should be flown using a certified system as identified in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC4 SPA.LVO.105(c).(c)	**Operating procedures - height call-outs based on radio altimeter (CAT III)** For CAT III operations, the following should apply: (c) All height call-outs below 200 ft above the runway threshold elevation should be determined by the use of a radio altimeter or other device capable of providing equivalent performance.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC4 SPA.LVO.105(c).(d)	**Operating procedures - DH determination by radio altimeter (CAT III)** For CAT III operations, the following should apply: (d) For operations in which a DH is used, the DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance, if so determined by the aircraft certification process.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC4 SPA.LVO.105(c).(e)	**Operating procedures - visual references at DH (CAT III)** For CAT III operations, the following should apply: (e) At DH, the following visual references should be distinctly visible and identifiable to the pilot: (1) for operations conducted either with fail-passive flight control systems or with the use of an approved HUD or equivalent display system: a segment of at least three consecutive lights, which are the centre line of the approach lights, or TDZ lights, or runway centre line lights, or runway edge lights, or a combination of these; and (2) for operations conducted either with fail-operational flight control systems or with a fail-operational hybrid landing system using a DH: at least one centre line light to be attained and maintained by the pilot.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC4 SPA.LVO.105(c).(f)	**Operating procedures - specification of no DH operations (CAT III)** For CAT III operations, the following should apply: (f) For operations with no DH, there is no specification for visual reference with the runway prior to touchdown.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC5 SPA.LVO.105(c).(a)	**Operating procedures - use of certified system (SA CAT I)** For SA CAT I operations, the following should apply: (a) The approach should be flown using a certified system as identified in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC5 SPA.LVO.105(c).(b)	**Operating procedures - height call-outs based on radio altimeter (SA CAT I)** For SA CAT I operations, the following should apply: (b) All height call-outs below 200 ft above the runway threshold elevation should be determined by the use of a radio altimeter or other device capable of providing equivalent performance.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC5 SPA.LVO.105(c).(c)	**Operating procedures - DH determination by radio altimeter (SA CAT I)** For SA CAT I operations, the following should apply: (c) The DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance, if so determined by the aircraft certification process.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC5 SPA.LVO.105(c).(d)	**Operating procedures - visual references at DH (SA CAT I)** For SA CAT I operations, the following should apply: (d) At DH the following visual references should be visible to the pilot: (1) a segment of at least three consecutive lights, which are the centre line of the approach lights, or TDZ lights, or runway centre line lights, or runway edge lights, or a combination of these; and (2) a visual reference that should include a lateral element of the ground pattern, such as an approach lighting crossbar, or the landing threshold, or a barrette of the TDZ lighting unless the operation is conducted utilising an approved HUD or an equivalent system usable down to 120 ft above the runway threshold.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC6 SPA.LVO.105(c).(a)	**Operating procedures - flight crew composition (SA CAT II)** For SA CAT II operations, the following should apply: (a) The flight crew should consist of at least two pilots.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC6 SPA.LVO.105(c).(b)	**Operating procedures - use of certified system (SA CAT II**) For SA CAT II operations, the following should apply: (b) The approach should be flown using a certified HUDLS or autoland system as identified in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC6 SPA.LVO.105(c).(c)	**Operating procedures - height call-outs based on radio altimeter (SA CAT II)** For SA CAT II operations, the following should apply: (c) All height call-outs below 200 ft above the runway threshold elevation should be determined by the use of a radio altimeter or other device capable of providing equivalent performance.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC6 SPA.LVO.105(c).(d)	**Operating procedures - DH determination by radio altimeter (SA CAT II)** For SA CAT II operations, the following should apply: (d) The DH should be determined by the use of a radio altimeter or other device capable of providing equivalent performance, if so determined by the aircraft certification process.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC6 SPA.LVO.105(c).(e)	**Operating procedures - visual references at DH (SA CAT II)** For SA CAT II operations, the following should apply: (e) At DH the visual references should be distinctly visible and identifiable to the pilot: (1) a segment of at least three consecutive lights, which are the centre line of the approach lights or TDZ lights, or runway centre line lights, or runway edge lights or a combination of these; (2) a visual reference that should include a lateral element of the ground pattern, such as an approach lighting crossbar, or the landing threshold, or a barrette of the TDZ lighting.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC7 SPA.LVO.105(c).(a)	**Operating procedures - use of certified system (EFVS)** For EFVS operations to a runway, the following should apply: (a) The approach should be flown using a certified EFVS-A or EFVS-L as identified in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC7 SPA.LVO.105(c).(b)	**Operating procedures - use of EFVS throughout the approach** For EFVS operations to a runway, the following should apply: (b) The pilot flying should use the EFVS throughout the approach.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) AMC7 SPA.LVO.105(c).(c)	**Operating procedures - pilot monitoring duties (EFVS)** For EFVS operations to a runway, the following should apply: (c) In multi-pilot operations, the pilot monitoring should monitor the EFVS-derived information.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC7 SPA.LVO.105(c).(d)	**Operating procedures - use of vertical flight path guidance mode (EFVS)** For EFVS operations to a runway, the following should apply: (d) The approach between the final approach fix (FAF) and the DA/H should be flown using vertical flight path guidance mode (e.g. flight director).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC7 SPA.LVO.105(c).(e)	**Operating procedures - EFVS image information below DA/H** For EFVS operations to a runway, the following should apply: (e) The approach may be continued below the DA/H provided that the pilot can identify on the EFVS image either: (1) the approach light system; or (2) both of the following: (i) the runway threshold identified by the beginning of the runway landing surface, the threshold lights or the runway end identifier lights; and (ii) the TDZ identified by the TDZ lights, the TDZ runway markings or the runway edge lights.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(c) AMC7 SPA.LVO.105(c).(f)	**Operating procedures - visual references below a specific height (EFVS)** For EFVS operations to a runway, the following should apply: (f) Unless the aircraft is equipped with a certified EFVS-L, a missed approach should be executed promptly if the required visual reference is not distinctly visible and identifiable to the pilot without reliance on the EFVS by the following height above the threshold: (1) the height below which an approach should not be continued if natural visual reference is not acquired by the crew as stated in the AFM; or (2) if the AFM does not specify such a height, 100 ft.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(c) GM1 SPA.LVO.100(c)	**FLIGHT CREW ACTIONS IN CASE OF AUTOPILOT FAILURE AT OR BELOW DH IN FAIL-PASSIVE CAT III OPERATIONS** For operations to actual RVR values less than 300 m, a missed approach procedure is assumed in the event of an autopilot failure at or below DH. This means that a missed approach procedure is the normal action. However, the wording recognises that there may be circumstances where the safest action is to continue the landing. Such circumstances include the height at which the failure occurs, the actual visual references, and other malfunctions. This would typically apply to the late stages of the flare. In conclusion, it is not forbidden to continue the approach and complete the landing when the pilot-in-command/commander determines that this is the safest course of action. The operator's policy and the operational instructions should reflect this information.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(d)	**Relevant changes to minimum equipment list (MEL)** To obtain a specific approval as required by SPA.LVO.100, the operator shall demonstrate that: (d) any relevant changes to the minimum equipment list (MEL) have been made;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(e)	**Relevant changes to the maintenance programme** To obtain a specific approval as required by SPA.LVO.100, the operator shall demonstrate that: (e) any relevant changes to the maintenance programme have been made;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(f)	**Establishment of procedures to ensure the suitability of aerodromes** To obtain a specific approval as required by SPA.LVO.100, the operator shall demonstrate that: (f) procedures have been established to ensure the suitability of aerodromes, including instrument flight procedures, for the intended operations, in accordance with SPA.LVO.110; and			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g)	**Safety assessment and performance indicators** To obtain a specific approval as required by SPA.LVO.100, the operator shall demonstrate that: (g) for the intended operations, a safety assessment has been carried out, and performance indicators have been established to monitor the level of safety.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(a)	**Safety assessment and performance indicators - LVO monitoring** The operator should monitor LVOs and operations with operational credits in order to validate the effectiveness of the applicable aircraft flight guidance systems, training, flight crew procedures, and aircraft maintenance programme, and to identify hazards.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(b)	**Safety assessment and performance indicators - gathering LVO data** Data should be collected whenever an LVO or an operation with an operational credit is attempted regardless of whether the approach is abandoned, is unsatisfactory, or is concluded successfully. The data should include records of the following: (1) occasions when it was not possible to commence an approach due to deficiencies or unserviceabilities of related airborne equipment; (2) occasions when approaches were discontinued, including the reasons for discontinuing the approach and the height above the runway at which the approach was discontinued; (3) occasions when system abnormalities required pilot intervention to ensure a continued approach or safe landing; (4) landing performance, whether or not the aircraft landed satisfactorily within the desired touchdown area with acceptable lateral velocity or cross-track error. The approximate lateral and longitudinal position of the actual touchdown point in relation to the runway centre line and the runway threshold, respectively, should be recorded.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(c)	**Safety assessment and performance indicators - primary means of gathering data** Data about LVOs should be collected by means of the operator's flight data monitoring programme supplemented by other means including reports submitted by flight crew. Operators that do not have a flight data monitoring programme should use reports submitted by flight crew as the primary means of gathering data.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(d)(1)	**Safety assessment and performance indicators - rate of unsuccessful low-visibility approaches** (d) Performance indicators should include the following: (1) the rate of unsuccessful low-visibility approaches, i.e. the number of attempted approaches terminating in discontinued approaches, approaches where pilot intervention was required to ensure a continued approach or safe landing or where landing performance was unsatisfactory, compared to the number of low-visibility approaches attempted;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(d)(2)	**Safety assessment and performance indicators - Measures of performance of the airborne equipment** (d) Performance indicators should include the following: (2) measures of performance of the airborne equipment for low-visibility approaches or operations with operational credits;			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(d)(3)	**Safety assessment and performance indicators - safety performance indicators related to specific risks** (d) Performance indicators should include the following: (3) safety performance indicators related to other specific risks associated with LVOs.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) AMC1 SPA.LVO.105(g).(e)	**Safety assessment and performance indicators - retention of LVO data** The following information should be retained for at least 5 years: (1) the total number of low-visibility approaches or operations with an operational approval attempted or completed, including practice approaches, by aircraft type; and (2) reports of unsatisfactory approaches and/or landings, by runway and aircraft registration, in the following categories: (i) airborne equipment faults; (ii) ground facility difficulties; (iii) missed approaches because of air traffic control (ATC) instructions; or (iv) other reasons.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC2 SPA.LVO.105(g).(a)	**Safety assessment - demonstration of acceptable LOS** Prior to commencing LVOs or operations with operational credits, an operator should demonstrate to the competent authority that such operations will achieve an acceptable level of safety. This requires the operator to gather data from operations using the relevant systems and procedures and conduct safety assessments taking that data into account.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC2 SPA.LVO.105(g).(b)	**Safety assessment - determination of the minimum number of approaches** The operator applying for the approval of low-visibility approach operations should determine the minimum number of approaches required to gather sufficient data to demonstrate an acceptable level of safety and the time period over which such data should be gathered.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC2 SPA.LVO.105(g).(c)	**Safety assessment - data to support another classification** If an operator is applying for more than one LVO approval or an approval for operation with operational credits for a particular aircraft type, then data gathered from operations using the systems and procedures designed for one classification of operations or operation with operational credits may be used to support the application for another classification of operations or operation with operational credits provided the following elements are similar: (1) type of technology, including: (i) flight control/guidance system (FGS) and associated displays and controls; (ii) flight management system (FMS) and level of integration with the FGS; (iii) use of HUD or an equivalent display system; and (iv) use of EFVS; (2) operational procedures, including: (i) alert height; (ii) manual landing/automatic landing; (iii) no DH operations; (iv) use of HUD or an equivalent display system in hybrid operations; and (v) use of EFVS to touchdown; and			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) AMC2 SPA.LVO.105(g).(c) (Cont.)	(3) handling characteristics, including: (i) manual landing from automatic or HUD or an equivalent display system guided approach; (ii) manual missed approach procedure from automatic approach; and automatic/manual roll-out.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) AMC2 SPA.LVO.105(g).(d)	**Safety assessment - scope of use of collected data** An operator holding an approval for low-visibility approach operations or operations with operational credits may use data gathered from approaches conducted using one aircraft type to support an application for approval for a different aircraft type or variants provided the following elements are similar: (1) type of technology, including the following: (i) FGS and associated displays and controls; (ii) FMS and level of integration with the FGS; (iii) use of HUD or an equivalent display system; and (iv) use of EFVS; (2) operational procedures, including: (i) alert height; (ii) manual landing/automatic landing; (iii) no DH operations; (iv) use of HUD or an equivalent display system in hybrid operations; and (v) use of EFVS to touchdown; and (3) handling characteristics, including: (i) manual landing from automatic or HUD or an equivalent display system guided approach; (ii) manual missed approach procedure from automatic approach; and (iii) automatic/manual roll-out.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM1 SPA.LVO.105(g)	**SPECIFIC APPROVAL CRITERIA — SUCCESSFUL APPROACH AND AUTOMATIC LANDING** (a) The purpose of this GM is to provide operators with supplemental information regarding the criteria for a successful approach and landing. (b) An approach may be considered to be successful if: (1) from 500 ft to start of the flare: (i) speed is maintained within +/- 5 kt of the intended speed, disregarding rapid fluctuations due to turbulence; (ii) no relevant system failure occurs; and (2) from 300 ft to the DH: (i) no excess deviation occurs; and (ii) no centralised warning gives a missed approach procedure command (if installed).			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) GM1 SPA.LVO.105(g) (Cont.)	(c) A landing may be considered to be successful if: (1) no relevant system failure occurs; (2) no flare failure occurs; (3) no de-crab failure occurs (if installed); (4) longitudinal touchdown is beyond a point on the runway 150 m after the threshold and before the end of the touchdown zone (TDZ) (750 m from the threshold); (5) lateral touchdown with the outboard landing gear is not outside the TDZ light edge; (6) sink rate is not excessive; (7) bank angle does not exceed a bank angle limit; and (8) no roll-out failure or deviation (if installed) occurs. (d) More details can be found in CS AWO.A.ALS.106, CS AWO.B.CATII.113 and AMC AWO.B.CATII.113.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(a)	**Safety performance monitoring - sufficient information to identify hazards and assess risks** Data gathering for safety performance monitoring of LVOs and operations with operational credits will need to include sufficient information for the operator to identify hazards and assess the risks associated with LVOs and operations with operational credits.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(b)	**Safety performance monitoring - data to collect** The following data relating to LVOs and operations with operational credits may be gathered via flight crew reports, flight data monitoring or other means, as appropriate: (1) date and time; (2) aircraft details (type and registration); (3) airport, approach procedure, final approach and take-off area (FATO) and/or runway used; (4) the type of LVO or operation with operational credits attempted or completed; (5) weather conditions including wind, reported RVR and natural phenomena that restrict visibility; (6) the reason for a discontinued approach (if applicable); (7) details of any pilot intervention to ensure a continued approach or safe landing; (8) adequacy of speed control; (9) trim at time of automatic flight control system disengagement (if applicable); (10) compatibility of automatic flight control system, flight director and raw data;			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(b) (Cont.)	(11) an indication of the position of the aircraft relative to the centre line when descending through to 100 ft; (12) touchdown position relative to the TDZ; (13) an assessment of the sink rate, lateral velocity and bank angle at touchdown; (14) the nature of any problems encountered by the crew in relation to operating procedures or training; and (15) any human factors issues that arose in relation to the operation.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(c)	**Safety performance monitoring - procedure for ensuring availability of information for flight crew** Where data is gathered as part of the operator's flight data monitoring programme, procedures should be established to ensure that information that is only available directly from the flight crew or other sources (e.g. weather information) is captured.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(d)	**Safety performance monitoring - hazards with potential to unacceptable safety outcome** In order to assess the risks associated with LVOs and operations with operational credits, operators may consider hazards with the potential to result in the following unacceptable safety outcomes: (1) loss of control in flight; (2) runway overrun or excursion; (3) controlled flight into terrain; (4) runway incursion and ground collision; and (5) airborne conflict.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(e)	**Safety performance monitoring - objecitves of operators' safety control processes** Operators' safety control processes will ensure that LVOs and operations with operational credits: (1) meet the safety objectives and performance standards established in the operator's safety policy; (2) achieve at least the same level of safety as operations other than LVOs and operations without operational credits; and (3) have a continuously improving safety performance.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(f)	**Safety performance monitoring - rate of unsuccessful low-visibility approaches** Two methods to determine the rate of unsuccessful low-visibility approaches are described below: (1) Fail/pass method (binary): the rate of unsuccessful low-visibility approaches determined in accordance with GM1 SPA.LVO.105(g) should not exceed 5 %. If the unsuccessful operations appear to occur on a given aircraft, aircraft series or runway, specific mitigation measures need to be established and a separate specific rate may need to be calculated and monitored. Note: the term 'aircraft series' is explained in GM5 SPA.LVO.110. Operators may choose to apply a lower rate than 5 %.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) GM2 SPA.LVO.105(g).(f) (Cont.)	(2) Continuous method: this method may be selected by operators with a flight data monitoring programme. This methodology is more refined and allows identifying undesirable trends earlier and possibly before they become severe. This method applies an event monitoring methodology in which the deviations from the nominal performance are categorised according to their severity (severity index). For each event (criterion), a level of deviation may be defined as follows: (i) Low ('green'): the deviation is small and within the limits of nominal behaviour. No action is required. (ii) Medium ('yellow'): the deviation is above the criteria for low ('green') and below the criteria for high ('red'). No corrective action should be required based on an isolated occurrence; however, a corrective action should be taken if the situation does not improve, or a negative trend is identified. The monitoring should then focus on the particular runway or aircraft series or combination of those. (iii) High ('red'): the deviation is undesirably high. Investigation and corrective action should be undertaken even based on an isolated occurrence. The threshold for level high ('red') may be based on the criteria of GM1 SPA.LVO.105(g).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(a)	**Data gathering for safety assessment prior approval - general** The intention of the safety assessment is to validate the use and effectiveness of the applicable aircraft flight control and guidance systems, procedures, flight crew training and aircraft maintenance programme. The intention is not to repeat the statistical analysis required for certification of equipment, but rather to demonstrate that the various elements of the 'total system' for LVOs work together for a particular operator.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(c)	**Data gathering for safety assessment prior approval - operations with DH < 200ft** The data required for the safety assessment needs to be gathered from approaches conducted in a representative sample of expected operating conditions. The operator needs to take seasonal variations in operating conditions such as prevalent weather, planned destinations and operating bases, and ensure that the approaches used for data gathering are conducted over a sufficient period of time to be representative of the planned operation. In order to ensure that the data is representative of planned operations, approaches are conducted at a variety of airports and runways. If more than 30 % of the approaches are conducted to the same runway, the operator may increase the number of approaches required and take measures to ensure that the data is not distorted.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(c) (Cont.)	The number of approaches used for data gathering will depend on the performance indicators and analysis methods used by the operator. The operator will need to demonstrate that the operation for which approval is sought will achieve an acceptable level of safety. The following figures may be considered a minimum for an operator without previous experience of low-visibility approach operations: (1) for approval of operations with a DH of not less than 50 ft: 30 approaches; (2) for approval of operations with a DH of less than 50 ft: 100 approaches. Approaches conducted for the purpose of gathering data in order to conduct a safety assessment prior to obtaining an LVO approval may be conducted in line operations or any other flight where the operator's procedures are used. Approaches may also be conducted in an FSTD if the operator is satisfied that this would be representative of the operation. The data gathered from these approaches will only be representative if all required elements of the total system for LVOs are in place. These include not only operating procedures and airborne equipment, but also airport and ATC procedures and ground- or space-based navigation facilities. If the operator chooses to collect data from approaches conducted without all required elements in place, then the data analysis takes into account the effect of at least the following: (1) air traffic services (ATS) factors including situations where a flight conducting an instrument approach is vectored too close to the FAF for satisfactory lateral and vertical path capture, lack of protection of ILS sensitive areas or ATS requests to discontinue the approach; (2) misleading navigation signals such as ILS localiser irregularities caused by taxiing aircraft or aircraft overflying the localiser array; (3) other specific factors that could affect the success of LVOs that are reported by the flight crew.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(b)	**Data gathering for safety assessment prior approval - LVTOs** (1) If the procedures used for LVTOs are not significantly different from those used for standard take-offs, it may be sufficient for operators to conduct only a small number of take-offs using the procedures established for LVTOs for the purpose of data gathering. The following could be considered as a minimum: (i) For LVTOs in an RVR of 125 m or more if procedures are similar to those used for standard take-offs: 1 take-off; (ii) For LVTOs in an RVR of less than 125 m or any other LVTOs using specific procedures: 10 take-offs.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(b) (Cont.)	(2) An operator holding an approval for LVTOs on one aircraft type and applying the approval for LVTOs on another type or variant may use data from LVTOs conducted on the first type if the following are similar: (i) level of technology, including flight deck displays, HUD or an equivalent guidance system; (ii) operational procedures; and (iii) handling characteristics.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(d)	**Safety considerations for approaches used for data gathering** If an operator chooses to collect data from approaches conducted without all required elements of the total system for LVOs in place, then the operator takes actions to ensure an acceptable level of safety.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(e)	**Data gathering for safety assessment prior approval - sharing of data** Sharing of data: operators may use data from other operators or aircraft manufacturers to support the safety assessment required to demonstrate an acceptable level of safety. The operator applying for a specific approval would need to demonstrate that the data used was relevant to the proposed operation.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.105.(g) GM3 SPA.LVO.105(g).(f)	**Data gathering for safety assessment prior approval - operational experience on aircraft model** It is expected that operators will have more than 6 months or at least 1 000 hours of total operational experience on the aircraft model before they can have sufficient data to set up meaningful performance indicators and establish whether planned LVOs would achieve an acceptable level of safety.			[ ] YES [ ] N/A [ ] NO [ ] N/R

Parte SPA.LVO.110

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 AMC1 SPA.LVO.110.1:GEN.(a)	**Suitable aerodromes - subjects of the suitability assessment** (a) The assessment of the suitability of an aerodrome, including instrument flight procedures, for the intended operations comprises the availability of: (1) suitable navigation facilities and associated instrument flight approach procedures; (2) suitable aerodrome operating procedures, including LVPs, and the compatibility with the intended aircraft operations; and (3) suitable runway and runway environment characteristics and facilities.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC1 SPA.LVO.110.1:GEN.(b)	**Suitable aerodromes - assessment methods** (b) The assessment of the suitability of an aerodrome, including instrument flight procedures, for the intended operations should be made by means of one or a combination of the following: (1) An assessment of previous operational data for the particular aerodrome, runway and instrument flight procedures. This entails the verification of the availability of previous operational data, such as records of approaches flown in the same aerodrome, with the same procedures and aircraft type. (2) A desktop assessment of the: (i) aerodrome data; (ii) instrument flight procedures; and (iii) the aircraft data and capabilities. This desktop assessment compares aircraft data and capabilities and the aerodrome and instrument approach characteristics. If the aircraft data is compatible with the aerodrome and instrument approach procedure characteristics, the aerodrome and runway should be considered suitable for the intended LVO; (3) An operational assessment This is meant to be used if the suitability of the aerodrome for the intended operations could not be positively assessed by means of the other methods. In that case, an operational assessment becomes necessary, and actual flights should be performed. The operational assessment should consider the level of complexity of the aerodrome characteristics.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 AMC1 SPA.LVO.110.2: PREV-DAT	**ASSESSMENT OF PREVIOUS OPERATIONAL DATA** (c) Previous operational data refers to data from: (1) the operator itself, or when not available; (2) the following entities: (i) the State of the aerodrome or the competent authority issuing the operator's LVO approval; (ii) the type certificate holder of the aircraft; or (iii) other operators. (d) Previous operational data should only be used if: (1) it concerns the same runway and there were no relevant changes to the runway and runway environment; (2) it is derived in accordance with Table 14 below for the intended operation; and (3) there is no safety concern for such operation. (e) Previous operational data may be credited to an aircraft if it is from: (1) the same aircraft make and model, unless the credit from the same aircraft make and model is restricted by any of the entities in point (c)(2); or (2) another aircraft model, if stated in the AFM or additional data from the TC/STC holder. **Table 14**			[ ] YES [ ] N/A [ ] NO [ ] N/R

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr>
<td>SPA.LVO.110
AMC1 SPA.LVO.110.2:
PREV-DAT
(Cont.)</td>
<td>
<table>
<tr><th>Intended Operation</th><th>Operation from which previous operational data was derived – subject to the conditions specified in points (c), (d) and (e)</th><th>Remark</th></tr>
<tr><td>SA CAT I – automatic landing</td><td>CAT I/II/III — automatic landing
SA CAT I — automatic landing
SA CAT II — automatic landing
LTS CAT I — automatic landing.</td><td>Automatic landing in hybrid systems may also be used</td></tr>
<tr><td>SA CAT I — HUDLS</td><td>CAT II/III — HUDLS
SA CAT I — HUDLS
SA CAT II — HUDLS
LTS CAT I — HUDLS</td><td></td></tr>
<tr><td>SA CAT II — automatic landing</td><td>CAT II/III — automatic landing
SA CAT II — automatic landing</td><td>Automatic landing in hybrid systems may also be used</td></tr>
<tr><td>SA CAT II — HUDLS</td><td>SA CAT II — HUDLS
CAT II/III — HUDLS</td><td></td></tr>
<tr><td>CAT II — HUD to below DH with manual landing</td><td>CAT II — HUD to below DH with manual landing
CAT II or CAT III — automatic landing
CAT II or CAT III HUDLS
SA CAT II HUDLS</td><td>Data related to the LSAA should only be used in the case of HUDLS or automatic landing</td></tr>
<tr><td>CAT II — auto-coupled to below DH with manual landing</td><td>CAT II — auto-coupled to below DH with manual landing
CAT II or CAT III — automatic landing
SA CAT II automatic landing</td><td></td></tr>
<tr><td>CAT II — automatic landing</td><td>CAT II — automatic landing
SA CAT II — automatic landing
CAT III automatic landing</td><td>Automatic landing in hybrid systems may also be used</td></tr>
<tr><td>CAT II — HUDLS</td><td>CAT II or CAT III — HUDLS
SA CAT II — HUDLS</td><td></td></tr>
<tr><td>CAT III — HUDLS</td><td>CAT III — HUDLS</td><td></td></tr>
<tr><td>CAT III— automatic landing</td><td>CAT III — automatic landing</td><td>If the hybrid system uses automatic landing, then the data may be used as any CAT III system.</td></tr>
<tr><td>CAT III — hybrid system</td><td>CAT III — hybrid system based on same components</td><td></td></tr>
<tr><td>EFVS operations requiring flare prompt or flare command, i.e. EFVS-L</td><td>EFVS operations requiring flare prompt or flare commands</td><td></td></tr>
</table>
</td>
<td></td>
<td></td>
<td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td>
</tr>
</table>

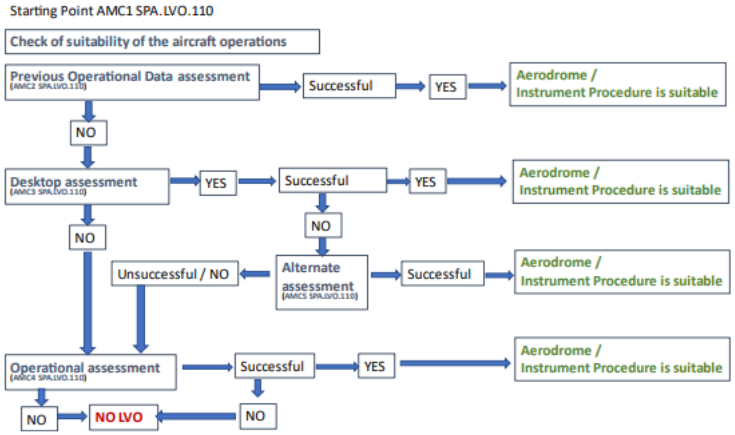
REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 AMC1 SPA.LVO.110.2: PREV-DAT (Cont.)	Note: Previous operational data should be based on the same kind of xLS (e.g. ILS to ILS, MLS to MLS or GLS to GLS). Data related to anding system performance derived from infrastructure systems with lower performance may be used on systems with higher performance (e.g. data derived from a CAT II ILS may be used on a CAT III ILS). However, an ILS may qualify a GLS operation under the following conditions: - The performance of the ILS installation on which the data is based can only be credited to the ILS point promulgate. - An ILS facility performance category II installation can only be credited an operation using GAST C. - An ILS facility performance category III installation can only be credited to an operation GAST C or GAST D.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC1 SPA.LVO.110.3:DESK	**DESKTOP ASSESSMENT — AERODROME DATA, INSTRUMENT FLIGHT PROCEDURE AND AIRCRAFT DATA AND CAPABILITIES** (f) The desktop assessment should correspond to the nature and complexity of the operation intended to be carried out and should take into account the hazards and associated risks inherent in these operations. (g) The assessment should include the AFM or additional data from the TC/STC holder, instrument flight procedures and aerodrome data. For landing systems, the runway or airport conditions should include as a minimum: (1) the approach path slope; (2) the runway elevation; (3) the type of xLS navigation means intended to be used; (4) the average slope of the LSAA; and (5) the ground profile under the approach path (pre-threshold terrain). The distance should be calculated from the published threshold. It should be 300 metres, unless otherwise stated by the AFM or additional data from the TC/STC holder, the State of the aerodrome or AIP data, or the competent authority issuing the operator's LVO approval. Note: The above points assume a CAT II or CAT III runway. For other types of runways, the operator may need to consider other factors. (h) In addition to (g), additional elements may need to be included in the assessment if stated by: (1) the AFM, or additional data from the TC/STC holder; or (2) the State of the aerodrome or AIP data; or (3) the competent authority issuing the operator's LVO approval. (i) For EFVS operations, the following applies: If the system used to perform an EFVS operation contains a flare cue, each aircraft type/equipment/runway combination should be verified before authorising the use of EFVS-L, on any runway with irregular pre-threshold terrain (not within the certification assumption for pre- threshold terrain), if the LSAA presents significant slope change.			[ ] YES [ ] N/A [ ] NO [ ] N/R

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.110
AMC1 SPA.LVO.110.4:OP-ASSESS</td><td>OPERATIONAL ASSESSMENT
(j) When performing an operational assessment, the operator should verify each aircraft type and runway combination by successfully completing the determined number of approaches and landings according to the process in point (l) below and the conditions determined in Table 15.
Table 15
<table><tr><th>Type of approach</th><th>RVR/VIS</th></tr><tr><td>CAT III</td><td>CAT II conditions if the approach was previously successfully assessed in CAT II operations</td></tr><tr><td>CAT II & CAT III</td><td>CAT I conditions</td></tr><tr><td>EFVS-A</td><td>As per instrument approach no EFVS credits</td></tr><tr><td>SA CAT I & SA CAT II</td><td>CAT I conditions</td></tr></table>(k) The operational assessment should validate the use and effectiveness of the aircraft flight guidance systems, and operating procedures for the intended operation applicable to a specific instrument flight procedure and runway.
(l) The process to determine the number of approaches and landings should be based on identified risks and agreed with the competent authority, and comprise the following steps:
(1) Identify the risks related to the landing system (based on the AFM or additional data from the TC/STC holder) which may include limitations in the conditions during the operational assessment (e.g. to perform the assessment under a non-commercial flight).
(2) Determine complexity of the runway based on:
(i) a set of criteria based on the certification assumptions identified in the AFM or additional data from the TC/STC holder;
(ii) availability and quality of runway data supporting the risk assessment;
(iii) other known factors identified.
(3) Scale the number of required approaches based on complexity.
(m) The operational assessment may be performed in a commercial flight.
(n) If the operator has different variants of the same type of aircraft, utilising the same landing systems, the operator should show that the variants have satisfactory operational performance, but there is no need to conduct a full operational assessment for each variant/runway combination.</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 AMC1 SPA.LVO.110.4:OP-ASSESS (Cont.)	(o) The operator may replace partially or completely the approaches and landings to a particular runway, if approved by the competent authority, with: (1) simulations made by the aircraft manufacturer or approved design organisations, if the terrain is properly modelled in the simulation; (2) a verification using an FSTD, if the FSTD is suitable for the operational assessment.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC1 SPA.LVO.110.5:ADD-EFVS	**ADDITIONAL VERIFICATION OF THE SUITABILITY OF RUNWAYS FOR EFVS OPERATIONS** (p) The assessment of the suitability of the aerodrome should include whether the approach and runway lights installed (notably incandescent or LED lights) are adequate for the EFVS equipment used by the operator. (q) Additionally, the operator should assess obstacles for the following operations: (1) NPA procedures; (2) APV; (3) category I PA procedures on runways where an OFZ is not provided; and (4) approach procedures not designed in accordance with PANS-OPS or equivalent criteria. (r) The assessment in point (q) should determine whether: (1) obstacle protection can be ensured in the visual segment from DA/H to landing, without reliance on visual identification of obstacles or in the event of a balked landing; and (2) obstacle lights installed (notably incandescent or LED lights) are adequate for the EFVS equipment used by the operator. (s) If the assessment determines that: (1) obstacle clearance cannot be ensured in the visual segment without reliance on visual identification of obstacles, the operator should not authorise EFVS operations to that runway or restrict the operation to the type and/or category of instrument approach operations where obstacle protection is ensured. Note: Obstacles of a height of less than 50 ft above the threshold may be disregarded when assessing the VSS. (2) obstacle protection is not assured in the event of a go-around initiated at any point prior to touchdown, the operator should not authorise the operation unless procedures to mitigate the risk of inadequate obstacle protection are developed and implemented. (t) If the AFM stipulates specific requirements for approach procedures, the operational assessment should include a determination of whether these requirements can be met.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 AMC2 SPA.LVO.110.(a)	**Suitable instrument approach procedure (CAT II)** CAT II instrument approach operations should only be conducted using a CAT II IAP.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC2 SPA.LVO.110.(b)	**Suitable instrument approach procedure (CAT III)** CAT III instrument approach operations should only be conducted using a CAT III IAP.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC2 SPA.LVO.110.(c)	**Suitable instrument approach procedure (SA CAT I)** SA CAT I operations should only be conducted using a SA CAT I IAP or, if not available, a CAT I IAP that includes an OCH based on radio altimeter.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC2 SPA.LVO.110.(d)	**Suitable instrument approach procedure (SA CAT II)** SA CAT II operations should only be conducted using a SA CAT II IAP or, if not available, a CAT II IAP.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC2 SPA.LVO.110.(e)	**Suitable instrument approach procedure (EFVS)** (e) EFVS operations should only be conducted using an IAP which is offset by a maximum of 3 degrees unless a different approach offset is stated in the AFM.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC3 SPA.LVO.110.(a)	**Required facilities (CAT II)** For CAT II instrument approach operations, a PA runway category II or category III should be used. The following visual aids should be available: (1) category II approach lights; (2) standard runway markings; (3) category II runway lights.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC3 SPA.LVO.110.(b)	**Required facilities (CAT III)** For CAT III instrument approach operations, a PA runway category III should be used. The following visual aids should be available: (1) category III approach lights; (2) standard runway markings; (3) category III runway lights			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 AMC3 SPA.LVO.110.(c)	**Required facilities (SA CAT I)** For SA CAT I operations: (1) where an ILS or MLS or GLS is used, it should not be promulgated with any restrictions affecting its usability and should not be offset from the extended centre line; (2) where an ILS or GLS is used, it should be at least the minimum ILS or GLS classification stated in the AFM and meet any of the required minimum performance parameters stated in the AFM; (3) the glide path angle is 3.0o; a steeper glide path, not exceeding 3.5 o and not exceeding the limits stated in the AFM, can be approved provided that an equivalent level of safety is achieved; and (4) runway markings, category I approach lights as well as runway edge lights, runway threshold lights, and runway end lights should be available.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC3 SPA.LVO.110.(d)	**Required facilities (SA CAT II)** For SA CAT II operations: (1) where an ILS or MLS or GLS is used, it should not be promulgated with any restrictions affecting its usability and should not be offset from the extended centre line; (2) where an ILS or GLS is used, the following applies: (i) if the AFM provides such data, the minimum ILS or GLS classification stated in the AFM; or (ii) when such data is not provided: (A) where an GLS is used, it should be certified to at least GAST-C and to the GBAS point D; (B) where an ILS is used, it should be certified to at least class II/D/2; (3) the glide path angle is 3.0o; a steeper glide path, not exceeding 3.2o, can be approved provided that the operator demonstrates an equivalent level of safety; and (4) the following visual aids should be available: (i) standard runway markings, category I approach lights as well as runway edge lights, runway threshold lights and runway end lights; and (ii) for operations with an RVR of less than 400 m, centre line lights.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 AMC4 SPA.LVO.110	**COLLECT AND DEVELOP AIRPORT DATA NOT CONTAINED IN THE AIP — AEROPLANES** When the operator wishing to use an aerodrome where its relevant data for the purpose of LVO is not provided or some data is not provided, the operator should develop procedures to collect or develop the necessary data. The procedure should be specific to the State of the aerodrome or the area of operation and should be approved by competent authority.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM 1 SPA.LVO.110	**ASSESSMENT OF AERODROMES FOR THE INTENDED OPERATIONS — AEROPLANES** A diagram with a schematic of the assessment described in AMC1 SPA.LVO.110 Aerodrome-related requirements, including instrument flight procedures is provided below: DIAGRAM  			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM3 SPA.LVO.110.1:RWY-ENV.(a)	**Runway environment - assessment subjects** As detailed in point (a) of AMC1 SPA.LVO.110, the assessment of the suitability of an aerodrome, including instrument flight procedures, for the intended operations comprises the availability of suitable runway and runway environment characteristics.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM3 SPA.LVO.110.1:RWY-ENV.(b)	**Runway environment - suitability of DH indication** For operations based on radio altimeter or other device measuring the height over the ground: (1) the suitability of the indication of the DH should be based on data covering the actual DH location. This indication should be expected to be stable and continuous; (2) The suitability of the indication of the alert height (where applicable) should be based on data covering the actual alert height location. This indication should be expected to be stable and continuous. (3) The primary source of information to determine the suitability should be the precision approach terrain chart (PATC). If the information is not conclusive, the operator may collect and develop airport data not contained in the AIP. More information can be found in GM10 SPA.LVO.110.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM03 SPA.LVO.110.1:RWY-ENV.(c)	**Runway environment - provision of PATC** For runways intended to be used for CAT III, CAT II, SA CAT II and SA CAT I operations, the State of aerodrome should provide a PATC. More information is provided in GM7 SPA.LVO.110.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM3 SPA.LVO.110.1:RWY-ENV.(d)	**Runway environment - radio altimeter operating area** There should be a radio altimeter operating area for runways intended to be used for EFVS-L, CAT III, CAT II, SA CAT II and SA CAT I operations. The ICAO aerodrome provisions detail that the radio altimeter operating area extends to at least 300 m from the runway threshold with a width of 60 metres on either side of the extended centre line of the runway. The width may be reduced to not less than +/- 30 metres if such a reduction does not affect the safety of aircraft operations as assessed by the aerodrome operator in cooperation with affected stakeholders. Slope changes should be kept to a minimum.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM3 SPA.LVO.110.2:PREV-DAT	**SUITABLE AERODROMES — ASSESSMENT — PREVIOUS OPERATIONAL DATA — RUNWAY AND RUNWAY ENVIRONMENT** (f) As detailed in point (d)(1) of AMC1 SPA.LVO.110, previous operational data should only be used to assess the suitability of an aerodrome for the intended operations when it concerns the same runway and there were no relevant changes to the runway and runway environment. (g) Relevant changes to the runway and runway environment may include changes to: (1) the pre-threshold terrain, including the radio altimeter operating area; (2) runway dimensions; (3) the average slope of the landing system assessment area (LSAA);			[ ] YES [ ] N/A [ ] NO [ ] N/R

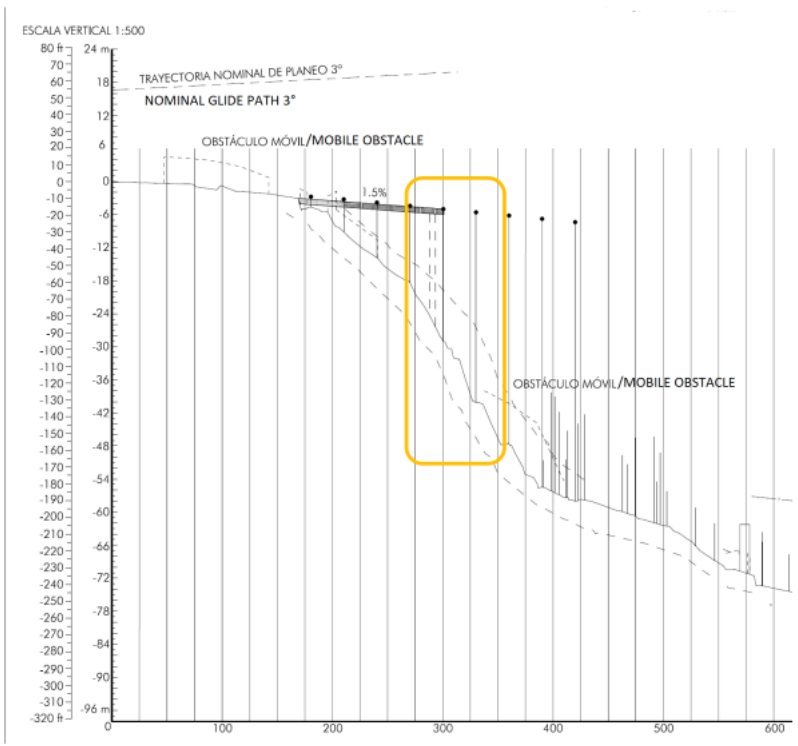
REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM3 SPA.LVO.110.2:PREV-DAT (Cont.)	(4) visual aids including approach lights and runway lights; (5) the obstacle free zone (OFZ); (6) the visual segment surface (VSS) — only relevant for operational credits in the visual segment (EFVS).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM4 SPA.LVO.110	**SUITABLE AERODROMES — ASSESSMENT — PREVIOUS OPERATIONAL DATA PROVIDED BY THE STATE OF THE AERODROME** (a) As detailed in point (b)(1) of AMC1 SPA.LVO.110, the assessment of the suitability of an aerodrome, including instrument flight procedures, for the intended operations, may be made considering previous operational data for the particular aerodrome, runway and instrument flight procedures. (b) The following guidance is provided for the assessment of suitability of aerodromes for LVOs or operations with operational credits. (1) If a State provides data related to airports or runways in its territory that are suitable for CAT II or CAT III operations with a specific aircraft model or group of aircraft models, those airports or runways may be considered suitable for the purpose of AMC2 SPA.LVO.110. Note: A CAT II or CAT III approved runway does not necessarily mean that the airport is suitable for the purpose of AMC2 SPA.LVO as the aerodrome's provisions may not ensure that the requirements for certain aircraft models are fulfilled. (2) If a State provides data related to airports or runways in its territory that are found suitable for SA CAT I or SA CAT II, those airports or runways may be considered suitable for the purpose of AMC2 SPA.LVO.110. Note: In some States the concept of SA CAT I and SA CAT II may be different from the EU concept. The operator should consider these differences. (3) If a State provides data related to airports or runways in its territory that are approved for CAT II/III operations but are designated as restricted or non-standard or irregular, those designated runways should be considered not suitable. The remaining CAT II/III runways of that State may be considered regular. (4) A competent authority may provide data related to airport or runways that can be considered suitable for defined LVOs. The suitability statement could be credited by operators under the oversight of that authority.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM5 SPA.LVO.110	**SUITABLE AERODROMES — ASSESSMENT — PREVIOUS OPERATIONAL DATA — TERMINOLOGY: MAKE, MODEL, SERIES AND VARIANT** The following terms, in accordance with the ICAO Commercial Aviation Safety Team (CAST) taxonomy, are often used (e.g. AMC1 SPA.LVO.110):			[ ] YES [ ] N/A [ ] NO [ ] N/R

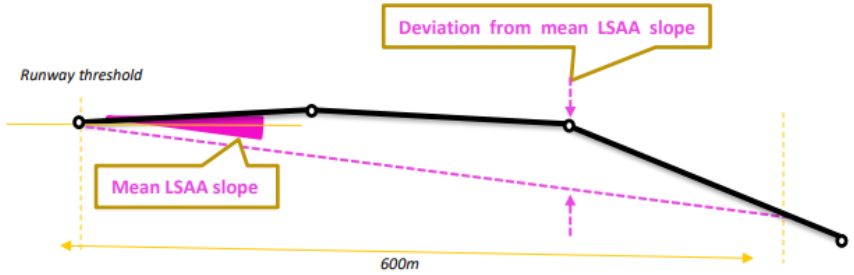
REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM5 SPA.LVO.110 (Cont.)	(a) Aircraft make: The aircraft make is the name assigned to the aircraft by the aircraft manufacturer when each aircraft was produced. In most cases, the aircraft make is the common name of the aircraft manufacturer; for example, Airbus, Boeing, Embraer, etc. (b) Aircraft model: An aircraft model is an aircraft manufacturer's designation for an aircraft grouping with a similar design or style of structure. In EASA type certificate data sheet (TCDS), this means the aircraft type certificate; for example, A330, B777. (c) Aircraft series: An aircraft series is an aircraft manufacturer's designation to identify differences within an aircraft model grouping. It provides a further specification to the aircraft type; for example, B777-232 where the series is the number 232. Some manufacturers define the so-called master series: An aircraft master series creates a grouping of similar aircraft series for analytical purposes and to identify aircraft series that share airworthiness properties. A master series contains aircraft series from within one aircraft model. For example, A320-100 and A320-200: the A320-100 master series only has one series (A320-111), while the A320-200 master series has many series (211, 212, 214, 215, 216, 231, 232, 233). (d) Aircraft variant; a variant defines different sets of limiting structural masses (e.g. MTOW, MLW, MZFW, etc.) within a series. For example, A320-232-007 or the A330-243 RR engine's variant 052. Variants are not covered in the ICAO Cast taxonomy; however, they may be specified in the EASA TCDS. (e) More information can be found in ICAO documentation under: https://www.icao.int/publications/DOC8643/Pages/Search.aspx?msclkid=a28160bbd09311ecbbe633ef5f1957a4 and http://www.intlaviationstandards.org/.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM6 SPA.LVO.110.1:DESK	**SUITABLE AERODROMES — DESKTOP ASSESSMENT — DATA NOT PROVIDED IN THE AFM** (a) When the AFM or additional data from the TC/STC holder does not provide the information needed in AMC1 SPA.LVO.110 points (g)(1) to (5), the operator may contact the TC/STC holder to request such information. Otherwise the operator may seek to use previous operational data or perform operational demonstration in accordance with AMC1 SPA.LVO.110.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM6 SPA.LVO.110.2:PREV-DAT	**SUITABLE AERODROMES — DESKTOP ASSESSMENT — USE OF PREVIOUS OPERATIONAL DATA** b) In-service consolidated experience from already successfully demonstrated and consistently used runways with the specific aircraft type and with the same intended operations (typically CAT II/III) could be used to support the desktop assessment. The assessment criteria, for pre- threshold terrain variation and LSAA slope, could then be defined by the prevailing complexity of the runway on which the operator already has in-service experience and where sufficient operational flight data is available to prove adequate performance of the automatic landing system.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM07 SPA.LVO.110	**SUITABLE AERODROMES — DESKTOP ASSESSMENT — AERODROME DATA SOURCES** As detailed in point (b)(2) of AMC1 SPA.LVO.110, the assessment of the suitability of an aerodrome, including instrument flight procedures, for the intended operations, may be made by a desktop assessment, that should consider aerodrome data. This GM describes some aerodrome data sources that ICAO Member States provide in accordance with ICAO Annex 4.			[ ] YES [ ] N/A [ ] NO [ ] N/R

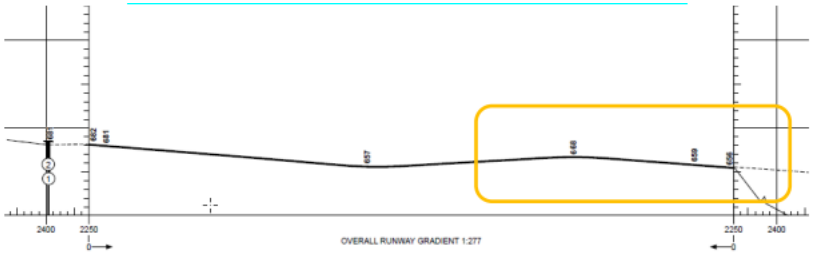
REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM07 SPA.LVO.110 (Cont.)	(a) Type A and Type B aerodrome obstacle charts Aerodrome obstacle charts come in two forms. Type A and B charts may be combined, and the chart is called aerodrome obstacle chart (ICAO Comprehensive). Where a terrain and obstacle chart is provided in electronic form, there is no need to provide Type A or B aerodrome obstacle charts. (b) Type A aerodrome obstacle chart (ICAO Annex 4, Chapter 3) Type A aerodrome obstacle charts are found at most aerodromes approved for LVOs. The function of the Type A chart is to enable an operator to comply with the performance operating limitations in Annex 6. The Type A chart does not have to be provided if there are no take-off obstacles, but a note informing about this is needed according to ICAO Annex 4. The elevation is given to the nearest half-metre or nearest foot. Linear dimensions are shown to the nearest half metre. (c) Type B aerodrome obstacle chart (ICAO Annex 4, Chapter 4) Type B aerodrome obstacle charts contain information about the elevation (at the centre line) of both runways plus the elevation at each significant change of the slope of the runway. The function of the Type B chart is: (1) the determination of minimum safe altitudes/heights including those for circling procedures; (2) the determination of procedures for use in the event of an emergency during take-off or landing; (3) the application of obstacle clearing and marking criteria; and (4) the provision of source material for aeronautical charts. Elevations and linear dimensions are shown to the nearest half metre. (d) Aerodrome terrain and obstacle Chart – ICAO (Electronic) (ICAO Annex 4, Chapter 5) The function of this chart is to: (1) enable an operator to comply with the operating limitations of Annex 6, Part I, Chapter 5, and Part III, Section II, Chapter 3, by developing contingency procedures for use in the event of an emergency during a missed approach or take-off, and by performing aircraft operating limitations analysis; and (2) support the following air navigation applications: (i) instrument procedure design (including circling procedure); (ii) aerodrome obstacle restriction and removal; and (iii) provision of source data for the production of other aeronautical charts. Note that this chart may also contain the information required for the PATC. According to ICAO Annex 4, from November 2015, this chart is made available for aerodromes regularly used by international aviation. The chart is made available in printed form on request. (e) Aerodrome chart (ICAO Annex 4, Chapter 13) According to ICAO Annex 4, an aerodrome chart is provided for aerodromes regularly used by international aviation. The function of this chart is to provide information to facilitate the ground movement of aircraft and in general also to provide essential operational information. This chart contains information about the height of the threshold and, for PA runways, the highest point of the TDZ. This information may also be included in the text part of the AIP, Chapter AD2 (normally paragraph 2.12 – Runway Physical Characteristics). The elevation is provided to the nearest half metre.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM07 SPA.LVO.110 (Cont.)	(f) Precision approach terrain chart (PATC) (Annex 4, Chapter 6) According to ICAO Annex 4, a PATC is made available for all PA runways Categories II and III at aerodromes used by international civil aviation, except where the requisite information is provided in the aerodrome terrain and obstacle chart — ICAO (Electronic). The chart includes: (i) a plan showing contours at 1 m (3 ft) intervals in the area 60 m on either side of the extended centre line of the runway, to the same distance as the profile, the contours to be related to the runway threshold; (ii) an indication where the terrain or any object thereon, within the plan defined in (i), differs by +/- 3 m in height from the centre line profile and is likely to affect a radio altimeter; (iii) a profile of the terrain to a distance of 900 m from the threshold along the extended centre line of the runway. Where the terrain at a distance greater than 900 m from the runway threshold is mountainous or otherwise significant to users of the chart, the profile of the terrain should be shown to a distance not exceeding 2 000 m from the runway threshold. (g) Summary (1) For the determination of runway slopes, the aerodrome obstacle chart, preferably the combined version, appears to provide the best information. The PATC appears to be the best source to determine the elevations and slopes in the approach area. (2) If the information provided by different parts of the AIP is inconsistent, this may indicate an error in the data and should be reported to the State of aerodrome or AIP issuing authority, unless the inconsistency is insignificant. It should however be noted that there may be different requirements for accuracy and resolution between different AIP charts or sections, which might cause values to differ slightly. (3) It may be difficult to conclusively state which chart is best for determining the runway slope in each case, but the primary source of information is the AIP, and therein the aerodrome obstacle chart and the PATC. As the aerodrome terrain and obstacle chart – ICAO (Electronic) becomes more available, it will probably take over as the primary source of information about both runways and pre-threshold terrain.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110 GM08 SPA.LVO.110.(a)	**Operational assessment - general** (a) When performing an operational assessment to determine the suitability of an aerodrome for the intended operations, the operator should have a process to determine the number of approaches and landings, in accordance with point (l) of AMC1 SPA.LVO.110. The following guidance provides examples of criteria that can be used to evaluate level complexity of the runway versus a landing system for the purpose of the determination of the number of approaches and landings. Depending on the landing system used, some criteria might not be relevant, or others might need to be considered. (1) Pre-threshold terrain profile The typical length of pre-runway threshold is calculated from the published threshold (displaced threshold if present) to 300 m on the extended centre line unless otherwise specified by the AFM or additional data from the TC/STC holder, the State of the aerodrome or AIP data, or the competent authority issuing the operator's LVO approval. The complexity of the pre-threshold terrain profiles is described as follows:			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM08 SPA.LVO.110.(a) (Cont.)	(i) Simple (A) approximately + 1 m variation from runway threshold elevation in the typical length; or (B) previous experience in more constraining pre-threshold terrain in the same aircraft type or variant. (ii) Moderate (A) presence of ARAS; or (B) approximately + 1 m variation from runway threshold elevation within the last 60 m prior to runway threshold; and (C) prior to 60 m and up to typical length: — moderate rising slope (less than 7 % rising); or — moderate 'sea wall' (less than 3 m). (iii) Complex (A) approximately + 2 m variation from runway threshold elevation within the last 60 m prior to runway threshold; and (B) prior to 60 m and up to typical length: — significant rising slope (up to 15 % rising); or — significant 'see wall' (up to 6 m); or — significant change of slope (rising then descending or descending then rising close to the limit values) (iv) Very complex Outside any of the limits defined above for complex pre-threshold terrain profiles. Note: The term 'sea wall' refers to sudden changes of terrain elevation that typically occur when runway thresholds are located near the sea. Sea level may change due to tides. Other cases of sudden terrain elevation may occur in other cases, a slope of 100 % may be considered as comparable to 'sea wall' (e.g. Boston USA).			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM08 SPA.LVO.110.(a) (Cont.)	 Figure 1: Typical example of 'very complex' with greater than 6 m 'sea wall' at 300 m (Asturias, LEAS 29 dated 2007) that after suitability assessment and due to the presence of ARAS, may be changed to 'moderate'. Example: A pre-threshold terrain with the following features would be considered as 'moderate'. (1) Less than 1 m variation of pre-threshold terrain elevation from runway threshold elevation, in the area from runway threshold up to 100 m prior to runway threshold. (2) Less than 3 m variation of pre-threshold terrain elevation from runway threshold elevation, in the area from 100 m prior to runway threshold up to 300 m prior to runway threshold			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM08 SPA.LVO.110.(a) (Cont.)	(2) Landing system assessment area (LSAA) slope Note: 600 metres after the threshold is the standard length; however depending on the landing system, other lengths might be relevant. Although not recommended by ICAO Annex 14 Volume 1, slope variation in the LSAA can exist (refer to point 3.1.15 to point 3.1.18) and represent a factor of risk to be considered. For the purpose of determining the relevant parameters characterising slope and slope variation, the following definitions may be used (Figure 1): — Mean LSAA slope: Slope computed from runway threshold elevation up to runway elevation at 600 metres after the threshold. — Deviation from mean LSAA slope: greatest elevation difference between any runway elevation inside LSAA and mean LSAA slope.  Figure 1: Mean LSAA slope & Deviation from mean LSAA slope Note: Published runway profiles usually contain the position and elevation of each significant runway longitudinal slope change. Elevation at other location can be interpolated assuming straight slope between each published elevation. The highest / lowest elevation of the LSAA might not be the one where the deviation from mean LSAA slope is the greatest. (i) Simple (A) Approximately + 0.4 % mean LSAA slope and less than 1 m (3 ft) variation around mean LSAA slope; or (B) previous experience in more constraining touch down condition in the same aircraft type or variant. (ii) Moderate Approximately + 0.8 % mean LSAA slope and less than 2 m (6 ft) variation around mean LSAA slope. (iii) Complex Approximately + 1.0 % mean LSAA slope and less than 4 m (12 ft) variation around mean LSAA slope. (iv) Very complex Outside any of the limits defined above.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110 GM08 SPA.LVO.110.(a) (Cont.)	 Figure 2: Typical example of 'simple' LSAA Slope (ESSA 01L dated 2018  Figure 3: Typical example of 'moderate' LSAA slope due to variation around mean LSAA slope greater than 1 m but lower than 2 m (EGNM 32 dated 2018)  Figure 4: Typical example of 'complex' mean LSAA slope greater than 0.8 % but lower than 1 % (EDD 23L dated 2009)			[ ] YES [ ] N/A [ ] NO [ ] N/R

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.110; GM08
SPA.LVO.110.(b)</td><td>
Operational assessment programme
(b) Operational assessment programme: the following guidance provides examples of typical flight programmes than can be used to demonstrate suitability of a landing system using the operational assessment method, considering the overall level of runway irregularities.
Note: For CAT II operations with no use of autoland nor guidance for the flare manoeuvre, the programmes could be alleviated.
The flight programmes are expected to depend on the level of runway irregularities. Table 1 provides examples of criteria that can be used to determine the level of runway irregularities.

<table>
<tr><th>Pre-threshold
LSAA slope</th><th>Simple</th><th>Moderate</th><th>Complex</th><th>Very Complex</th></tr>
<tr><td>Simple</td><td>Simple</td><td>Moderate</td><td>Complex</td><td>Very Complex</td></tr>
<tr><td>Moderate</td><td>Moderate</td><td>Moderate</td><td>Complex</td><td>Very Complex</td></tr>
<tr><td>Complex</td><td>Complex</td><td>Complex</td><td>Complex</td><td>Very Complex</td></tr>
<tr><td>Very Complex</td><td>Very Complex</td><td>Very Complex</td><td>Very Complex</td><td>Very Complex</td></tr>
</table>
Table 1: Level of runway irregularities to scale the flight programme
(1) Simple runway
For simple runways, unless other factors can be identified as a source of concern, no in-flight approach and landing may be required.
(2) Moderate runway
For moderate runways, a minimum of one successful approach/landing using the procedures, equipment and operationally relevant heights (DH/AH) for the intended operations is performed in the meteorological conditions described in AMC1 SPA.LVO.110 Table 14. More approaches could be required if any issue is identified during this approach/landing.
(3) Complex runway
For complex runways, an initial minimum of three approaches/landings using the procedures, equipment and operationally relevant heights (DH/AH) for the intended operations is performed in the meteorological conditions described in AMC1 SPA.LVO.110 Table 14, with at least one of the landings close to the maximum landing weight for the intended operation and the other two with other different conditions; for example, with a mid-weight in one and low weight in another or with different or wind conditions or aircraft configuration flap full/flap 3, or a combination of them. The flights for the assessment is conducted by pilots designated by the operator with defined minimum experience and qualifications, with procedures defined for the purpose. More approaches could be required if any issue is identified during these approaches/landings.
</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110; GM08 SPA.LVO.110.(b) (Cont.)	(4) Very complex runway For very complex runways, an initial minimum of four to six approaches/landings using the procedures, equipment and operationally relevant heights (DH/AH) for the intended operations is performed in the meteorological conditions described in AMC1 SPA.LVO.110 Table 14 in typical aircraft weight conditions in flights with no commercial passengers. If no anomaly is observed after the first four to six approaches/landings, extend the condition progressively close to the maximum landing weight for the intended operation with at least 15 successful approaches or landings and report any anomalies with the meteorological conditions described in AMC1 SPA.LVO.110 Table 14 and with different conditions, for example with different range of weight conditions (high, mid, low) or with different wind conditions or aircraft configuration flap full/flap 3, or a combination of them. The flights for the assessment should be conducted by pilots designated by the operator with defined minimum experience and qualifications, with procedures defined for the purpose.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM08 SPA.LVO.110.(c)	**Operational assessment successful criteria** (1) Data to be recorded To assess adequate performance of the landing system, some form of quantitative data should be recorded and reviewed with the competent authority as verification of performance. Acceptable methods of data collection include but are not limited to: (i) Record of wind conditions and touch down point (can be observation). (ii) Record of pertinent landing system parameters (typically from a digital flight data recorder, quick-access recorder or equivalent) with sufficient sampling rate (typically higher than 1 sample per second) for the part of the flight paths of interest (typically from 300 ft height above touch down through de-rotation after touch down) including typically: — barometric altitude; — radio altitude; — glide path error; — vertical speed; — elevator command; — pitch attitude; — throttle position / thrust commanded; — airspeed; — mode transition or engagement. (iii) Photo or video recording of pertinent instrument or instrument and outside view allowing post-flight replay and review of the above parameters.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110; GM08 SPA.LVO.110.(c) (Cont.)	(2) Data review and analysis to assess acceptable performance The final approach, flare and touch down profile should be reviewed with the competent authority to ensure suitability of at least each of the following: (i) suitability of the resulting flight path; (ii) acceptability of any flight path deviation from the nominal path (e.g. glide path deviation, deviation from nominal flare profile); (iii) proper mode switching; (iv) suitable touch down point; (v) suitable sink rate at touch down; (vi) proper flare initiation altitude; (vii) suitability flare quality (e.g. no evidence of early or late flare, no over-flare or under flare, no undue 'pitch down' tendency at flare initiation or during flare, no flare oscillation, no abrupt flare, no inappropriate pitch response during flare, no unacceptable floating tendency, or other unacceptable characteristic that a pilot could interpret as a failure or inappropriate response of the landing system); (viii) no unusual flight control displacement (e.g. elevator control input spikes or oscillation); (ix) appropriate throttle/thrust retard (e.g. no early or late retard, no failure to retard, no undue reversal of retard, no undue pitch/thrust coupling); (x) appropriate speed decay in flare (e.g. no unusually low speed risking high pitch attitude and tail strike, no excessive float, appropriate seed decay even if well above Vref at flare initiation due to planned wind or gust compensation); (xi) proper mode initiation or mode transition relating to altitude or radio altitude inputs (e.g. crosswind alignment).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM09 SPA.LVO.110.2:SUIT-FSTD	**TO APPLY A VERIFICATION USING AN FSTD, A SUITABLE FSTD SHOULD BE USED** (b) An FSTD should only be used if it is from: (1) the same aircraft make and model, unless the same aircraft make and model is restricted by any of the entities in point (c)(2) AMC1 SPA.LVO.110; or (2) another aircraft model, if stated in the AFM or additional data from the TC/STC holder. The following factors should be considered: (1) Aircraft systems The FSTD replicates the aircraft system in regard to the configuration and behaviour of the approach system or landing system. It covers all systems that are relevant and includes — as a minimum — the guidance and control systems, the relevant displays and the automatic call-outs. The FSTD may be composed of actual aircraft components or simulated components either by the aircraft manufacturer or by another supplier (e.g. the FSTD manufacturer). If a version or standard of a system or component differs from the aircraft, the operator verifies with the TC/STC holder whether the differences have an impact on the performance or behaviour of the approach system or landing system.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110; GM09 SPA.LVO.110.2: SUIT-FSTD (Cont.)	(2) Pre-threshold and runway terrain The aircraft operator ensures that all relevant pre-threshold and runway profile data is fed into the FSTD and is presentative of the real world. This could mean that additional features may need to be implemented in the terrain database of the FSTD, as the certification specifications for FSTDs require a realistic topography only for a very limited number of aerodromes. If the pre-threshold terrain includes an artificial radio altimeter surface (ARAS), the ARAS may be verified in the FSTD, if it can be shown for this ARAS that the actual echoes of the radio altimeters can be adequately reproduced in the FSTD. This may be done by using flight data. (3) Navigation facilities and associated instrument flight approach procedures All relevant navigation facilities for the instrument flight approach procedures need to be adequately represented in the FSTD. It has to be taken into account that the FSTD representation of the signal in space is usually not realistic in the sense of the signal propagation and is limited to being a straight line in space, which is adequate for training purposes. Some FSTDs support, as a simulation feature for a failure case, a parallel displacement of target approach path; however, dynamic displacements (bends) or VHF noise in the signal are usually not simulated. If the operation depends on a navigation aid, the use of the FSTD should be limited to the published service volume of the real-world navigation aid. The use of the FSTD outside this space is usually not meaningful as the signal performance and quality of the real-world navigation aid is not known. (4) Runway environment characteristics and facilities Whenever the flight operation relies on visual references in both natural or enhanced vision to control or monitor the flight path or to identify relevant obstacles, all relevant environment characteristics and facilities need to be suitably represented. In the case of an EFVS, the visual advantage of the system needs to be representative of the EFVS presentation in the aircraft. This could mean that additional features may need to be implemented in the visual database of the FSTD, as the certification specifications for FSTD require a realistic scenery only for a very limited number of aerodromes. (5) Scope of FSTD verification The minimum scope of the FSTD verification may be based on the level of runway irregularities as per GM8 SPA.LVO.110 (scaled approach).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM10 SPA.LVO.110	**SUITABLE AERODROMES — ASSESSMENT — COLLECT AND DEVELOP AIRPORT DATA NOT CONTAINED IN THE AIP — AEROPLANES** An AIP should be the primary means to collect the necessary data to perform the assessment of aerodromes for the intended operation. However, sometimes the relevant data may not be available. In that case, AMC4 SPA. LVO.110 establishes that the operator should develop procedures to collect or develop the necessary data. In this context, the operator may use surveys and/or collected data from aeroplane sensors or data recorders. This method could be typically used to determine the pre-threshold terrain profile and partially the LSAA if not published by a State authority.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110; GM10 SPA.LVO.110 (Cont.)	These options should be part of the LVO approval and could include, among others: (a) data from appropriate sensors (e.g. radio altimeter, GNSS position, LOC/GS deviations); (b) data collected from appropriate sensors stored in recorders; (c) FDM data, if appropriate. Sensors and data accuracy, including recorded sampling rate, should be considered in the usage of the collected data. When defined in the approval, the respective data might be used for other airplane types.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM11 SPA.LVO.110	**SUITABLE AERODROMES — SUITABLE INSTRUMENT APPROACH PROCEDURES (IAPs) — SA CAT I AND SA CAT II** ICAO design criteria for IAPs are contained in PANS-OPS (Doc 8168), Volume II. The design criteria for SA CAT I are the same as those used for standard CAT I approaches, except that the procedures used for SA CAT I should have an OCH based on radio altimeter height loss, since the use of a radio altimeter or other device capable of providing equivalent performance to determine the DH is prescribed. PANS-OPS Volume II contains the following statement about OCH based on the use of a radio altimeter: 'If the radio altimeter OCA/H is promulgated, operational checks shall have confirmed the repeatability of radio altimeter information.' To assist in assessing the suitability of the approach area for the use of a radio altimeter, aerodromes may produce a precision approach terrain chart (PATC). Such a chart is a standard requirement for CAT II/III runways. The criteria for the PATC are contained in ICAO Annex 4, which explains the function as follows: 'The chart shall provide detailed terrain profile information within a defined portion of the final approach so as to enable aircraft operating agencies to assess the effect of the terrain on DH determination by the use of radio altimeters.' A DH of 150 ft is located approximately 600 m before the threshold on a 3o glide path. For SA CAT I operations, the instrument approach chart should contain an OCH based on the use of a radio altimeter or other device capable of providing equivalent performance, and the information in Part C of the operations manual must contain a DH based on the use of a radio altimeter. This procedure may be titled 'SA CAT I' or 'CAT I'. For SA CAT II, the situation is similar. The design criteria are identical to those for CAT II approaches in PANS-OPS, the only exception being the lack of some lighting systems. The OCH and DH are based on the use of a radio altimeter or other device capable of providing equivalent performance. Since some of the lighting systems are missing, it is unlikely that a State will publish the instrument approach chart as CAT II or OTS CAT II but preferably as SA CAT II, even though the design criteria are the same. If a State, however, promulgates such an instrument approach as CAT II, it can be used for SA CAT II operations. SA CAT II operations can be conducted on regular CAT II runways and following CAT II procedures.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110; GM12 SPA.LVO.110 (a)	**Suitability of EFVS operation - obstacles** (a) EFVS operations allow operation below the DA/H without 'natural' visual reference. Obstacles may not be obvious to the crew using the EFVS and thus the approach descent slope used has to ensure that obstacle protection will be provided in the visual segment.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (b)	**Suitability of EFVS operation - higher probability of a go-around below DH** (b) When operating below the DA/H, pilots rely on the EFVS and, for EFVS-A operations, the pilot flying will need to acquire 'natural' visual reference at some point prior to touchdown (typically 100 ft above the threshold elevation). EFVS operations may present a higher probability of initiating a go-around below the DA/H than non-EFVS operations, depending on the equipment used.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (c)	**Suitability of EFVS operation - obstacle clearance** (c) The purpose of the assessment of the suitability of aerodromes of Instrument Approach Procedures (IAPs) is to confirm that clearance from terrain and obstacles will be available at every stage of the approach including the visual segment and, in the event of a go-around initiated below the DH, the missed approach segment. The assessment of the visual segment should be done with reference to the visual segment surface (VSS).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (d)	**Suitability of EFVS operation - considerations when runway/appraoch is promulgated as suitable by the aerodrome** (d) If a runway and an approach has been promulgated as suitable for EFVS operations, it may be assumed that the required obstacle clearance for the instrument segment and obstacle protection for the visual segment is assured and that the lighting systems are suitable. For EFVS-L operations, the pre-threshold terrain and LSAA need to be evaluated with regard to the function of flare cues or flare commands. Additionally, for runways not promulgated as suitable for EFVS operations, the operator may include the switch-over time for electrical power supply for the approach or runway lights in the safety assessment.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (e)	**Suitability of EFVS operation - US TERPS and ICAO Doc 9905 procedure design** (e) S TERPS and ICAO Doc 9905 'Required avigation Performance Authorisation Required (R P AR) Procedure Design anual' describe procedure design criteria that may be considered equivalent to PANS-OPS.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (f)	**Suitability of EFVS operation - obstacle protection below OCH** (f) Procedures not designed in accordance with PANS-OPS may have not been assessed for obstacle protection below the OCH and may not provide a clear vertical path to the runway at the normal descent angle. IAPs do not ensure obstacle clearance if a go-around is initiated below the DA/H. If an obstacle free zone (OFZ) is established, obstacle protection is provided for the go-around manoeuvre.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.110; GM12 SPA.LVO.110 (g)	**Suitability of EFVS operation - procedures when obstacle protection is not assured** (g) For approach procedures where obstacle protection is not assured for a balked landing, operational procedures available to the operator could include one or more of the following actions: (1) continue to the end of the runway and follow a published departure procedure for the landing runway (standard instrument departure or omnidirectional departure) in the event of a go-around below the DA/H; (2) require that a go-around should be executed promptly if the required visual reference is not distinctly visible and identifiable to the pilot without reliance on the EFVS by a height above the threshold that will ensure that obstacle protection. This height might be greater than 100 ft or the height below which an approach should not be continued if the flight crew does not acquire natural visual reference as stated in the AFM; (3) develop an alternative lateral profile to be followed in the event of a go-around below the DA/H; and (4) impose an aircraft mass restriction for EFVS operations so that the aircraft can achieve a sufficient missed approach climb performance to clear any obstacles in the missed approach segment if a go-around is initiated at any point prior to touchdown.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (h)	**Suitability of EFVS operation terrain/obstacle clearance in the missed approach** (h) The terrain/obstacle clearance required in the missed approach phase for EFVS operations should be no less than for the same approach flown without EFVS.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.110; GM12 SPA.LVO.110 (i)	**Suitability of EFVS operation - additional requirements of certain EFVS** (i) Certain EFVSs may have additional requirements for the suitability of the runways to be used. These could include verification of the accuracy of charting information for the runway threshold or the type of approach lighting installed (incandescent or LED). The assessment of the suitability of aerodromes should include the verification that all such requirements can be satisfied before EFVS operations are authorised for a particular runway.			[ ] YES [ ] N/A [ ] NO [ ] N/R

Parte SPA.LVO.120

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(a) AMC1 SPA.LVO.120(a)	**COMPETENCE OF THE FLIGHT CREW FOR THE INTENDED OPERATIONS — EXPERIENCE IN TYPE OR CLASS, OR AS PILOT-IN-COMMAND/COMMANDER** To ensure that the flight crew is competent to conduct the intended operations, the operator should assess the risks associated with the conduct of low-visibility approach operations by pilots new to the aircraft type or class and take the necessary mitigations. Where such mitigations include an increment to the visibility or RVR for LVOs, this should be stated in the operations manual.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(a) AMC2 SPA.LVO.120(a).(a)	**Competence of flight crew - min. no. of approaches (EFVS)** To be considered competent to conduct EFVS operations: (a) Pilots should complete a minimum of two approaches on each type of aircraft operated using the operator's procedures for EFVS operations during the validity period of each operator proficiency check or periodic demonstration of competence unless credits related to recent experience when operating more than one type are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012. When the operator is approved for both EFVS-L and EFVS-A, a minimum of one approach in each EFVS operation should be completed.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(a) AMC2 SPA.LVO.120(a).(b)	**Competence of flight crew in each operating capacity (EFVS)** To be considered competent to conduct EFVS operations: (b) If a flight crew member is authorised to operate as pilot flying and pilot monitoring during EFVS operations, the flight crew member should complete the required number of approaches in each operating capacity.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(a) AMC3 SPA.LVO.120(a).(a)	**Competence of flight crew - min. no. of approaches (SA CAT I/II, CAT II/III)** To be considered competent: (a) Pilots authorised to conduct low-visibility approach operations or operations with operational credits should complete at least two approaches using the operator's procedures for low-visibility approach operations or operations with operational credits, during the validity period of each operator proficiency check or periodic demonstration of competence, unless credits related to recent experience when operating more than one type are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(a) AMC3 SPA.LVO.120(a).(b)	**Competence of flight crew - additional aircraft equipment (SA CAT I/II, CAT II/III)** To be considered competent: (b) If the operator is approved for more than one piece of aircraft equipment used (e.g. autoland, HUD, auto-coupled approach with manual landing, SVGS, etc.), pilots should complete at least one additional approach in the lowest approved RVR (either to go-around or landing) for each piece of aircraft equipment used during the validity period of each operator proficiency check or periodic demonstration of competence (e.g. two approaches CATII with autoland and one CAT II with auto-coupled to below DH with manual landing, two CATII autoland and one CATII HUD to below DH with manual landing or vice versa) unless credits related to recent experience when operating more than one type are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(a) AMC3 SPA.LVO.120(a).(c)	**Competence of flight crew - min. no. of approaches using HUDLS (SA CAT I/II, CAT II/III)** To be considered competent: (c) Pilots authorised to conduct low-visibility approach operations or operations with operational credits using HUDLS or equivalent display systems to touchdown should complete two approaches (e.g. an operator approved for CAT II/III HUDLS will do two CAT III HUDLS; other examples would be two CAT III autoland and two CAT III HUDLS to touchdown, two SA CAT II autoland and two SA CAT II HUDLS, or when combining several LVOs and equipment, two CAT III autoland and one CAT II auto-coupled to below DH with manual landing and two CAT III HUDLS to touchdown) using the operator's procedures for low-visibility approach operations or operations with operational credits using HUDLS, during the validity period of each operator proficiency check or periodic demonstration of competence unless credits related to recent experience when operating more than one type are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(a) AMC3 SPA.LVO.120(a).(d)	**Competence of flight crew in each operating capacity (SA CAT I/II, CAT II/III)** To be considered competent: (d) If a flight crew member is authorised to operate as pilot flying and pilot monitoring, the flight crew member should complete the required number of approaches in each operating capacity.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(a) GM1 SPA.LVO.120(a).(a)	**Competence of flight crew - min. experience on type (CAT II)** As general guidance, the operator may use the following reference to assess the experience in type or class or as pilot-in- command/commander referred to in AMC1 SPA.LVO.120(a): (a) Before commencing CAT II operations, the following guidance applies to pilots-in-command/commanders or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type: (1) 50 hours or 20 sectors on the type, including LIFUS; and (2) 100 m should be added to the applicable CAT II RVR minima when the operation requires a CAT II manual landing to touchdown until: (i) a total of 100 hours or 40 sectors, including LIFUS, has been achieved on the type; or (ii) a total of 50 hours or 20 sectors, including LIFUS, has been achieved on the type where the flight crew member has been previously qualified for CAT II manual landing operations with an EU operator; (3) 100 m may be added to the applicable CAT II RVR minima when the operation requires the use of CAT II HUDLS to touchdown until: (i) a total of 40 sectors, including LIFUS, has been achieved on the type; or (ii) a total of 20 sectors, including LIFUS, has been achieved on the type where the flight crew member has been previously qualified for CAT II HUDLS to touchdown with an EU operator. The sector provision in point (a)(1) may always be applicable; the hours on type or class may not fulfil the provisions.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(a) GM1 SPA.LVO.120(a).(b)	**Competence of flight crew - min. experience on type (CAT III)** As general guidance, the operator may use the following reference to assess the experience in type or class or as pilot-in- command/commander referred to in AMC1 SPA.LVO.120(a): (b) Before commencing CAT III operations, the following additional provisions may apply to pilots-in-command/commanders or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type: (1) 50 hours or 20 sectors on the type, including LIFUS; and (2) 100 m may be added to the applicable CAT II or CAT III RVR minima unless they have been previously qualified for CAT II or III operations with an EU operator, until a total of 100 hours or 40 sectors, including LIFUS, has been achieved on the type.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC1 SPA.LVO.120(b).(a)	**Initial training - ground training course (LVTO)** The operator should ensure that the flight crew members have completed the following training and checking prior to being authorised to conduct take-offs in an RVR below 400 m unless credits related to training and checking for previous experience in LVTOs on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (a) A ground training course including at least the following: (1) characteristics of fog; (2) effects of precipitation, ice accretion, low-level wind shear and turbulence; (3) the effect of specific aircraft/system malfunctions; (4) the use and limitations of RVR assessment systems; (5) procedures to be followed and precautions to be taken with regard to surface movement during operations when the RVR is 400 m or less and any additional procedures required for take-off in conditions below 150 m; (6) qualification requirements for pilots to obtain and retain approval to conduct LVOs; and (7) the importance of correct seating and eye position.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC1 SPA.LVO.120(b).(b)	**Initial training - course of FSTD/flight training (LVTO)** The operator should ensure that the flight crew members have completed the following training and checking prior to being authorised to conduct take-offs in an RVR below 400 m unless credits related to training and checking for previous experience in LVTOs on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (b) A course of FSTD/flight training covering system failures and engine failures resulting in continued as well as rejected take-offs. Such training should include at least: (1) normal take-off in minimum approved RVR conditions; (2) take-off in minimum approved RVR conditions with an engine failure: (i) for aeroplanes, between V1 and V2 (take-off safety speed) or as soon as safety considerations permit; (ii) for helicopters, at or after the take-off decision point (TDP); and (3) take-off in minimum approved RVR conditions with an engine failure: (i) for aeroplanes, before V1 resulting in a rejected take-off; and for helicopters, before the TDP.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC1 SPA.LVO.120(b).(c)	**Initial training - training in FSTD (LVTO)** The operator should ensure that the flight crew members have completed the following training and checking prior to being authorised to conduct take-offs in an RVR below 400 m unless credits related to training and checking for previous experience in LVTOs on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) The operator approved for LVTOs with an RVR below 150 m should ensure that the training specified in (b) is carried out in an FSTD. This training should include the use of any special procedures and equipment.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC1 SPA.LVO.120(b).(d)	**Initial training - check (LVTO)** The operator should ensure that the flight crew members have completed the following training and checking prior to being authorised to conduct take-offs in an RVR below 400 m unless credits related to training and checking for previous experience in LVTOs on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (d) The operator should ensure that a flight crew member has completed a check before conducting LVTOs in RVRs of less than 150 m. The check should require the execution of: (1) at least one LVTO in the minimum approved visibility; (2) at least one rejected take-off at minimum approved RVR in an aircraft or FSTD. For pilots with previous experience with an EU operator of LVTOs in RVRs of less than 150 m, the check may be replaced by successful completion of the FSTD and/or flight training specified in (a), (b) and (c).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(a)(1)	**Initial training - ground training course - (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (a) For flight crew members who do not have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator: (1) A course of ground training including at least the following: (i) characteristics and limitations of different types of approach aids; (ii) characteristics of the visual aids; (iii) characteristics of fog; (iv) operational capabilities and limitations of airborne systems to include symbology used on HUD/HUDLS or equivalent display systems, if appropriate; (v) effects of precipitation, ice accretion, low level wind shear and turbulence; (vi) the effect of specific aircraft/system malfunctions; (vii) the use and limitations of RVR assessment systems;			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(a)(1) (Cont.)	(viii) principles of obstacle clearance requirements; (ix) the recognition of failure of ground equipment or in satellite approaches, the loss of signal in space and the action to be taken in the event of such failures; (x) procedures to be followed and precautions to be taken with regard to surface movement during operations when the RVR is 400 m or less and any additional procedures required for take-off in conditions below 150 m; (xi) the significance of DHs based upon radio altimeters and the effect of terrain profile in the approach area on radio altimeter readings and on automatic approach/landing systems. This applies also to other devices capable of providing equivalent information; (xii) the effect of the pre-threshold terrain and LSAA on airborne landing systems; (xiii) the significance of alert height, if applicable, and action in the event of any failure above and below the alert height; (xiv) qualification requirements for pilots to obtain and retain approval to conduct LVOs; (xv) the importance of correct seating and eye position; and (xvi) the significance of LVPs or equivalent procedures.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(a)(2)	**Initial training - FSTD/flight training course - (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (a) For flight crew members who do not have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator: (2) A course of FSTD training and/or flight training in two phases as follows: (i) Phase one (LVOs with aircraft and all equipment serviceable) — objectives (A) understand the operation of equipment required for LVOs; (B) understand the operating limitations resulting from airworthiness certification; (C) practise the monitoring of automatic flight control systems and status annunciators; (D) practise the use of HUD/HUDLS or equivalent display systems, where appropriate; (E) understand the significance of alert height, if applicable; (F) become familiar with the maximum lateral and vertical deviation permitted for different types of approach operation; (G) become familiar with the visual references required at DH; (H) master the manual aircraft handling relevant to low-visibility approach operations; (I) practise coordination with other crew members; and (J) become proficient at procedures for low-visibility approach operations with serviceable equipment. (ii) Phase one of the training should include the following exercises: (A) the required checks for satisfactory functioning of equipment, both on the ground and in flight; (B) the use of HUD/HUDLS or equivalent display systems during all phases of flight, if applicable;			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(a)(2) (cont.)	(C) approach using the appropriate flight guidance, autopilots, and control systems installed on the aircraft to the appropriate DH and transition to visual flight and landing; (D) approach with all engines operating using the appropriate flight guidance, autopilots and control systems installed on the aircraft, including HUD/HUDLS or equivalent display systems, down to the appropriate DH followed by a missed approach, all without external visual reference; (E) where appropriate, approaches using autopilot to provide automatic flare, hover, landing and roll-out; and (F) where appropriate, approaches using approved HUD/HUDLS or equivalent display system to touchdown. (iii) Phase two (low-visibility approach operations with aircraft and equipment failures and degradations) — objectives (A) understand the effect of known aircraft unserviceability including use of the MEL; (B) understand the effect of failed or downgraded equipment on aerodrome operating minima; (C) understand the actions required in response to failures and changes in the status of automatic flight control/guidance systems including HUD/HUDLS or equivalent display systems; (D) understand the actions required in response to failures above and below alert height, if applicable; (E) practise abnormal operations and incapacitation procedures; and (F) become proficient at dealing with failures and abnormal situations during low-visibility approach operations. (iv) Phase two of the training should include the following exercises: (A) approaches with engine failures at various stages of the approach; (B) approaches with critical equipment failures, such as electrical systems, auto-flight systems, ground or airborne approach aids and status monitors; (C) approaches where failures of auto-flight or flight guidance systems, including HUDLS or equivalent display systems, require either: (a) reversion to manual control for landing or go-around; or (b) reversion to manual control or a downgraded automatic mode control for go-around from the DH or below, including those which may result in contact with the runway. This should include aircraft handling if, during a CAT III fail-passive approach, a fault causes autopilot to disconnect at or below the DH when the last reported RVR is 300 m or less; (D) failures of systems that will result in excessive lateral or vertical deviation both above and below the DH in the minimum visual conditions for the operation; (E) incapacitation procedures appropriate to low-visibility approach operations; and (F) failures and procedures applicable to the specific aircraft type. (v) FSTD training should include: (A) for approaches flown using HUDLS or equivalent display systems, a minimum of eight approaches; (B) otherwise, a minimum of six approaches. (vi) For aircraft for which no FSTDs representing the specific aircraft are available, operators should ensure that the flight training phase specific to the visual scenarios of low-visibility approach operations is conducted in a specifically approved FSTD. Such training should include a minimum of four approaches. Thereafter, type-specific training should be conducted in the aircraft.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(a)(3)	**Initial training - check (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (3) A check requiring the completion of at least the following exercises in an aircraft or FSTD (i) Low-visibility approaches in simulated instrument flight conditions down to the applicable DH, using the flight guidance system. Standard procedures of crew coordination (task sharing, call-out procedures, mutual surveillance, information exchange and support) should be observed. For CAT III operations, the operator should use an FSTD approved for this purpose; (ii) Go-around after approaches as indicated in (2) at any point between 500 ft above ground level (AGL) and on reaching the DH; and (iii) Landing(s) with visual reference established at the DH following an instrument approach. Depending on the specific flight guidance system, an automatic landing should be performed.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(a)(4)	**Initial training - LIFUS (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (4) For operators for which LIFUS is required by Part-ORO, practice in approaches during LIFUS, as follows: (i) For low-visibility approach operations using a manual landing: (A) if a HUDLS or equivalent display system is used to touchdown, four landings, or if the training required by (a)(2) was conducted in an FSTD qualified for zero flight-time training (ZFTT), two landings; (B) otherwise, three landings, or if the training required by (a)(2) was conducted in an FSTD qualified for ZFTT, one landing; (ii) For low-visibility operations using autoland: (A) if the training required by (a)(2) was conducted in an FSTD qualified for ZFTT, one landing, or none if the fight crew member successfully completed a type rating based on ZFTT; (B) otherwise, two landings.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(b)(1)	**Type conversion - ground training course (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (b) For flight crew members who have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator, when changing to an aircraft for which a new class or type rating is required, within the same operator: (1) A course of ground training as specified in (a)(1), taking into account the flight crew member's existing knowledge of low-visibility approach operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(b)(2)	**Type conversion - FSTD/flight training (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (b) For flight crew members who have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator, when changing to an aircraft for which a new class or type rating is required, within the same operator: (2) A course of FSTD and/or flight training, as specified in (a)(2) above. If the flight crew member's previous experience of low-visibility approach operations is on a type where the following were the same or similar: (i) the technology used in the flight guidance and flight control system; (ii) operating procedures; (iii) handling characteristics; and (iv) the use of HUD/HUDLS or equivalent display systems, then the flight crew member may complete an abbreviated course of FSTD and/or flight training.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(b)(3)	**Type conversion - min. no. of approaches (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (b) For flight crew members who have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator, when changing to an aircraft for which a new class or type rating is required, within the same operator: (3) An abbreviated course should meet the objectives described in (a)(2), need not include the number of approaches required by (a)(2)(v), but should include at least the following number of landings: (i) if a HUDLS or an equivalent display system is utilised to touchdown, then four approaches including a landing at the lowest approved RVR and a go-around; or (ii) otherwise, two approaches including a landing at the lowest approved RVR and a go-around.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(c)(1)	**Operator conversion - ground training course (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator, when joining another operator: (1) A course of ground training as specified in (a)(1), taking into account the flight crew member's existing knowledge of low-visibility approach operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(c)(2)	**Operator conversion - FSTD/flight training course (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator, when joining another operator: (2) A course of FSTD and/or flight training as specified in (a)(2) above. If the flight crew member's previous experience of low-visibility approach operations is on the same aircraft type and variant, or on a different type or variant where the following were the same or similar: (i) the technology used in the flight guidance and flight control system; (ii) operating procedures; (iii) handling characteristics; and (iv) the use of HUD/HUDLS or equivalent display systems, then the flight crew member may complete an abbreviated course of FSTD and/or flight training. Such an abbreviated course should meet the objectives described in (a)(2), need not include the number of approaches required by (a)(2)(v), but should include at least the following number of landings: (A) if a HUDLS or an equivalent display system is utilised to touchdown, then four approaches including a landing at the lowest approved RVR and a go-around; or (B) otherwise, two approaches including a landing at the lowest approved RVR and a go-around.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC2 SPA.LVO.120(b).(c)(3)	**Operator conversion - LIFUS (SA CAT I/II, CAT II/III)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct SA CAT I, CAT II, SA CAT II and CAT III approach operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of low-visibility approach operations requiring an approval under this Subpart with an EU operator, when joining another operator: (3) Practice in approaches during LIFUS as required by (a)(3) above unless the flight crew member's previous experience of low-visibility approach operations is on the same aircraft type and variant.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(a)(1)	**Ground training course (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (a) For flight crew members who do not have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator: (1) A course of ground training including at least the following: (i) characteristics and limitations of HUDs/HUDLSs or equivalent display systems including information presentation and symbology; (ii) EFVS sensor performance, sensor limitations, scene interpretation, visual anomalies and other visual effects; (iii) EFVS display, control, modes, features, symbology, annunciations and associated systems and components; (iv) the interpretation of EFVS imagery; (v) the interpretation of approach and runway lighting systems and display characteristics when using EFVS; (vi) weather associated with low-visibility conditions and its effect on EFVS performance; (vii) pre-flight planning and selection of suitable aerodromes and approach procedures; (viii) principles of obstacle clearance requirements; (ix) the use and limitations of RVR assessment systems; (x) normal, abnormal and emergency procedures for EFVS operations; (xi) the effect of specific aircraft/system malfunctions; (xii) procedures to be followed and precautions to be taken with regard to surface movement during operations when the RVR is 400 m or less; (xiii) for EFVS-L, the effect of the pre-threshold terrain and LSAA on airborne landing systems; (xiv) human factors aspects of EFVS operations; (xv) qualification requirements for pilots to obtain and retain approval for EFVS operations; and (xvi) the significance of LVPs or equivalent procedures when operating below RVR 550 m.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(a)(2)	**Initial training - FSTD/flight training course (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (a) For flight crew members who do not have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator: (2) A course of FSTD training and/or flight training in two phases as follows: (i) Phase one (EFVS operations with aircraft and all equipment serviceable) — objectives: (A) understand the operation of equipment required for EFVS operations; (B) understand operating limitations of the installed EFVS;			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(a)(2) (Cont.)	(C) practise the use of HUD/HUDLS or equivalent display systems; (D) practise the set-up and adjustment of EFVS equipment in different conditions (e.g. day and night); (E) practise the monitoring of automatic flight control systems, EFVS information and status annunciators; (F) practise the interpretation of EFVS imagery; (G) become familiar with the features needed on the EFVS image to continue approach below the DH; (H) practise the identification of visual references using natural vision while using EFVS equipment; (I) master the manual aircraft handling relevant to EFVS operations including, where appropriate, the use of the flare cue and guidance for landing; (J) practise coordination with other crew members; and (K) become proficient at procedures for EFVS operations. (ii) Phase one of the training should include the following exercises: (A) the required checks for satisfactory functioning of equipment, both on the ground and in flight; (B) the use of HUD/HUDLS or equivalent display systems during all phases of flight; (C) approach using the EFVSs installed on the aircraft to the appropriate DH and transition to visual flight and landing; (D) approach with all engines operating using the EFVS, down to the appropriate DH followed by a missed approach, all without external visual reference; (E) where appropriate, approaches using approved EFVS to touchdown. (iii) Phase two (EFVS operations with aircraft and equipment failures and degradations) — objectives: (A) understand the effect of known aircraft unserviceabilities including use of the MEL; (B) understand the effect of failed or downgraded equipment on aerodrome operating minima; (C) understand the actions required in response to failures and changes in the status of the EFVS including HUD/HUDLS or equivalent display systems; (D) understand the actions required in response to failures above and below the DH; (E) practise abnormal operations and incapacitation procedures; and (F) become proficient at dealing with failures and abnormal situations during EFVS operations. (iv) Phase two of the training should include the following exercises: (A) approaches with engine failures at various stages of the approach; (B) approaches with failures of the EFVS at various stages of the approach, including failures between the DH and the height below which an approach should not be continued if natural visual reference is not acquired, requiring either: (a) reversion to head-down displays to control missed approach; or (b) reversion to flight with no, or downgraded, guidance to control missed approaches from the DH or below, including those which may result in a touchdown on the runway; (C) incapacitation procedures appropriate to EFVS operations; and (D) failures and procedures applicable to the specific EFVS installation and aircraft type. (v) FSTD training should include a minimum of eight approaches. (vi) If a flight crew member is to be authorised to operate as pilot flying and pilot monitoring during EFVS operations, then the flight crew member should complete the required FSTD training for each operating capacity.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(a)(3)	**Initial training - LIFUS (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (a) For flight crew members who do not have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator: (3) For operators for which LIFUS is required by Part-ORO, practice in approaches during LIFUS, as follows: (i) if EFVS is used to touchdown, four landings; or (ii) otherwise, three landings.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(b)(1)	**Type conversion - Ground training course (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (b) For flight crew members who have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator, when changing to an aircraft for which a new class or type rating is required, with the same operator: (1) A course of ground training as specified in (a)(1), taking into account the flight crew member's existing knowledge of low-visibility approach operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(b)(2)	**Type conversion - FSTD/flight training (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (b) For flight crew members who have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator, when changing to an aircraft for which a new class or type rating is required, with the same operator: (2) The course of FSTD and/or flight training required by (a)(2) above. If the flight crew member's previous experience of low-visibility approach operations is on a type where the following were the same or similar: (i) the technology used in the EFVS sensor, flight guidance and flight control system; (ii) operating procedures; and (iii) handling characteristics,			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(b)(2) (Cont.)	then the flight crew member may complete an abbreviated course of FSTD and/or flight training. Such an abbreviated course should meet the objectives described in (a)(2), need not include the number of approaches required by (a)(2)(v), but should include at least the following number of landings: (i) for EFVS to touchdown, four approaches including a landing at the lowest approved RVR and a go-around, or (ii) otherwise, two approaches including a landing at the lowest approved RVR and a go-around.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(c)(1)	**Operator conversion - ground training course (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator, when joining another operator: (1) A course of ground training as specified in (a)(1), taking into account the flight crew member's existing knowledge of low-visibility approach operations.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(c)(2)	**Operator conversion - FSTD/flight training course (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator, when joining another operator: (2) The course of FSTD and/or flight training required by (a)(2) above. If the flight crew member's previous experience of EFVS operations is on the same aircraft type and variant with the same EFVS or on a different type or different EFVS where the following were the same or similar: (i) the technology used in the EFVS sensor, flight guidance and flight control system; (ii) operating procedures; and (iii) handling characteristics, then the flight crew member may complete an abbreviated course of FSTD and/or flight training.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(c)(3)	**Operator conversion - min. no. of approaches (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator, when joining another operator:			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(c)(3) (Cont.)	(3) Such an abbreviated course should meet the objectives described in (a)(2), need not include the number of approaches required by (a)(2)(v), but should include at least the following number of landings: (i) for EFVS to touchdown, four approaches including a landing at the lowest approved RVR and a go-around, or (ii) otherwise, two approaches including a landing at the lowest approved RVR and a go-around.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC3 SPA.LVO.120(b).(c)(4)	**Operator conversion - LIFUS (EFVS)** Operators should ensure that flight crew members complete the following training and checking before being authorised to conduct EFVS operations unless credits related to training and checking for previous experience on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012: (c) For flight crew members who have previous experience of EFVS operations requiring an approval under this Subpart with an EU operator, when joining another operator: (4) Practice in approaches during LIFUS as required by (a)(3) above unless the flight crew member's previous experience of low-visibility approach operations is on the same aircraft type and variant.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC4 SPA.LVO.120(b).(a)	**Recurrent training and checking - check items (LVTO, SA CAT I/II, CAT II/III)** The operator should ensure that the pilots' competence to perform LVOs for which they are authorised is checked by completing at least the following exercises: (1) One or more low-visibility rejected take-off at minimum approved RVR at least once over the period between two operator proficiency checks or once at every periodic demonstration of competence or, for an ATQP operator, at each required operator proficiency check or alternatively at each required LOE. (2) Pilots authorised for LVTO operations in an RVR of less than 150 m should additionally conduct at least one LVTO in the minimum approved visibility at each required operator proficiency check or periodic demonstration of competence. (3) One or more low-visibility approaches in simulated instrument flight conditions down to a point between 500 ft AGL and the threshold (e.g. applicable DH) followed by go-around at DH at each required operator proficiency check or periodic demonstration of competence; and (4) One or more low-visibility approach and landings with visual reference established at the DH at each required operator proficiency check or periodic demonstration of competence.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC4 SPA.LVO.120(b).(b)	**Recurrent training and checking - missed approach following equipment failure below DH (SA CAT I/II, CAT II/III)** Pilots authorised to conduct CAT III operations on aircraft with a fail-passive autoland system, or HUDLS or equivalent, should complete a missed approach at least once over the period of three consecutive operator proficiency checks or demonstrations of competence as the result of an equipment failure at or below the DH when the last reported RVR was less than 300 m. For ATQP operators, pilots authorised to conduct CAT III operations on aircraft with a fail-passive autoland system, or HUDLS or equivalent, should complete a missed approach at least once every two OPCs or LOE (a period of about 2 years).			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC4 SPA.LVO.120(b).(c)	**Recurrent training and checking - use of FSTD** CAT III approach operations should be conducted in an FSTD. Other exercises may be conducted in an FSTD or aircraft.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) AMC5 SPA.LVO.120(b)	**DIFFERENCES TRAINING FOR LVTO, SA CAT I, CAT II, SA CAT II AND CAT III APPROACH OPERATIONS** (a) The operator should ensure that the flight crew members are provided with differences training or familiarisation whenever they are required to conduct low-visibility approach operations or operations with operational credits requiring an approval under this Subpart for which they are not already authorised, or whenever there is a change to any of the following: (1) the technology used in the flight guidance and flight control system; (2) the operating procedures including: (i) fail-passive/fail-operational; (ii) alert height; (iii) manual landing or automatic landing; (iv) operations with DH or no DH operations; (3) the handling characteristics; (4) the use of HUD/HUDLS or equivalent display systems; (5) the use of EFVS. (b) The differences training should: (1) meet the objectives of the appropriate initial training course; (2) take into account the flight crew members' previous experience; and (3) take into account the operational suitability data established in accordance with Regulation (EU) No 748/2012.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC6 SPA.LVO.120(b)	**RECURRENT CHECKING FOR EFVS OPERATIONS** (a) The operator should ensure that the pilots' competence to perform EFVS operations is checked at each required demonstration of competence or operator proficiency check by performing at least two approaches of which one should be flown without natural vision, to the height below which an approach should not be continued if natural visual reference is not acquired. (b) If a flight crew member is authorised to operate as pilot flying and pilot monitoring during EFVS operations, then the flight crew member should complete the required number of approaches in each operating capacity.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) AMC7 SPA.LVO.120(b)	DIFFERENCES TRAINING FOR EFVS OPERATIONS (a) The operator should ensure that the flight crew members authorised to conduct EFVS operations are provided with differences training or familiarisation whenever there is a change to any of the following: (1) the technology used in the EFVS sensor, flight guidance and flight control system; (2) the operating procedures; (3) the handling characteristics. (b) The differences training should: (1) meet the objectives of the appropriate initial training course; (2) take into account the flight crew members' previous experience; and (3) take into account the operational suitability data established in accordance with Regulation (EU) No 748/2012.			[ ] YES [ ] N/A [ ] NO [ ] N/R

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) GM1 SPA.LVO.120(b).(a)	**Flight crew training - min. no. of approaches** The number of approaches referred to in AMC2, AMC3, AMC4 and AMC6 to SPA.LVO.120(b) represents the minimum number of approaches that the flight crew members should conduct during initial and recurrent training and checking. More approaches or other training exercises may be required in order to ensure that flight crew members achieve the required proficiency.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) GM1 SPA.LVO.120(b).(b)	**Flight crew training - additional checking for different technology or operating procedure** Where flight crew members are to be authorised to conduct more than one kind of LVOs including operations with operational credits for which the technology and operating procedures are similar, there is no requirement to increase the number of approaches in initial training if the training programme ensures that the flight crew members are competent for all operations for which they will be authorised. Where flight crew members are to be authorised to conduct more than one kind of LVOs including operations with operational credits using different technology or operating procedures, then the required minimum number of approaches should be completed for each different technology or operating procedure.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) GM1 SPA.LVO.120(b).(c)	**Flight crew training - additional checking for different technology or operating procedure** Where flight crew members are authorised to conduct more than one kind of LVOs including operations with operational credits for which the technology and operating procedures are similar, then there is no requirement to increase the number of approaches flown during recurrent checking. However, where flight crew members are authorised to conduct more than one kind of LVOs including operations with operational credits using different technology or operating procedures, then the required number of approaches should be completed for each different technology or operating procedure.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) GM1 SPA.LVO.120(b).(d)	**Flight crew training - training for each operating capacity** Flight crew members are required to complete initial and recurrent FSTD training for each operating capacity for which they will be authorised (e.g. as pilot flying and/or pilot monitoring). A pilot who will be authorised to operate in either capacity will need to complete the minimum number of approaches in each capacity.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) GM1 SPA.LVO.120(b).(e)	**Flight crew training - Crediting for recent experience** Approaches conducted in a suitably qualified FSTD and/or during a proficiency check or demonstration of competence may be counted towards the recent experience requirements. If a flight crew member has not complied with the recent experience requirements of AMC2 SPA.LVO.120(a) or AMC3 SPA.LVO.120(a), the required approaches may be conducted during recurrent training, an operator proficiency check or a periodic check of competence either in an aircraft or on an FSTD.			[ ] YES [ ] N/A [ ] NO [ ] N/R

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr><td>SPA.LVO.120.(b)
GM1 SPA.LVO.120(b).(f)</td><td>
Flight crew training - summary of initial training requirements
Table 1 presents a summary of initial training requirements for LVOs and operations with operational credits.

Table 1
Summary of initial training requirements for LVOs and operations with operational credits
<table>
<tr><th>Approval</th><th>Airborne equipment</th><th>Previous experience</th><th>Reference</th><th>Practical (FSTD) training (Note 4)</th><th>LIFUS (if required)(Note 4)</th></tr>
<tr><td rowspan="4">CAT II</td><td rowspan="4">Auto coupled to below DH with manual landing</td><td>none</td><td>AMC2 SPA.LVO.120(b) point (a)(2)(v)</td><td>As required but not less than 6 approaches</td><td>3 landings or 1 landing (Note 1)</td></tr>
<tr><td>Previously qualified with the same operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (b)(2)(ii)</td><td>2 approaches</td><td>none</td></tr>
<tr><td>Previously qualified with a different EU operator, same type and variant</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>2 approaches</td><td>none</td></tr>
<tr><td>Previously qualified with a different EU operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>2 approaches</td><td>3 landings or 1 landing (Note 1)</td></tr>
<tr><td rowspan="4">SA CAT I
CAT II SA
CAT II
CAT III</td><td rowspan="4">Autoland</td><td>none</td><td>AMC2 SPA.LVO.120(b) point (a)(4)(ii)</td><td>As required but not less than 6 approaches</td><td>2 landings or 1 landing (Note 1) or no landings (Note 2)</td></tr>
<tr><td>Previously qualified with the same operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (b)(3)(ii)</td><td>2 approaches</td><td>None</td></tr>
<tr><td>Previously qualified with a different EU operator, same type and variant</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>2 approaches</td><td>None</td></tr>
<tr><td>Previously qualified with a different EU operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>2 approaches</td><td>2 landings or 1 landing (Note 1) or no landings (Note 2)</td></tr>
<tr><td rowspan="4">CAT II SA
CAT II
CAT III</td><td rowspan="4">HUDLS / manual landing</td><td>none</td><td>AMC2 SPA.LVO.120(b) point (a)(2)(v)</td><td>As required but not less than 8 approaches</td><td>4 landings or 2 landings (Note1)</td></tr>
<tr><td>Previously qualified with the same operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (b)(3)(i)</td><td>4 approaches</td><td>None</td></tr>
<tr><td>Previously qualified with a different EU operator, same type and variant</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>4 approaches</td><td>4 landings or 2 landings (Note1)</td></tr>
<tr><td>Previously qualified with a different EU operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>4 approaches</td><td>2 landings or 1 landing(Note1) or no landings (Note2)</td></tr>
</table>
</td><td></td><td></td><td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td></tr>
</table>

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<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr>
<td>SPA.LVO.120.(b)
GM1 SPA.LVO.120(b).(f)
(Cont.)</td>
<td>Cont.Table 1
<table>
<tr><th>Approval</th><th>Airborne equipment</th><th>Previous experience</th><th>Reference</th><th>Practical (FSTD) training (Note 4)</th><th>LIFUS (if required)(Note 4)</th></tr>
<tr><td rowspan="4">SA CAT I
CAT II SA
CAT II
CAT III</td><td rowspan="4">HUDLS / automatic landing</td><td>none</td><td>AMC2 SPA.LVO.120(b) point (a)(4)</td><td>As required but not less than 8 approaches</td><td>2 landings or 1 landing (Note 1) or no landings (Note 2)</td></tr>
<tr><td>Previously qualified with the same operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (b)(3)</td><td>4 approaches</td><td>none</td></tr>
<tr><td>Previously qualified with a different EU operator, same type and variant</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>4 approaches</td><td>none</td></tr>
<tr><td>Previously qualified with a different EU operator, similar operations (Note3)</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>4 approaches</td><td>2 landings or 1 landing (Note 1) or no landings (Note2)</td></tr>
<tr><td rowspan="4">EFVS-A</td><td rowspan="4">EFVS with HUD / HUDLS</td><td>none</td><td>AMC3 SPA.LVO.120(b) point (a)(2)</td><td>As required but not less than 8 approaches</td><td>3 landings</td></tr>
<tr><td>Previously qualified with the same operator, similar operations (Note3)</td><td>AMC3 SPA.LVO.120(b) point (b)(3)</td><td>2 approaches</td><td>None</td></tr>
<tr><td>Previously qualified with a different EU operator, same type and variant</td><td>AMC3 SPA.LVO.120(b) point (c)(2)</td><td>2 approaches</td><td>None</td></tr>
<tr><td>Previously qualified with a different EU operator, similar operations (Note3)</td><td>AMC3 SPA.LVO.120(b) point (c)(2)</td><td>2 approaches</td><td>3 landings</td></tr>
<tr><td rowspan="4">EFVS-L</td><td rowspan="4">EFVS with HUD / HUDLS</td><td>none</td><td>AMC3 SPA.LVO.120(b) point (a)(2)</td><td>As required but not less than 8 approaches</td><td>4 landings</td></tr>
<tr><td>Previously qualified with the same operator, similar operations (Note3)</td><td>AMC3 SPA.LVO.120(b) point (b)(3)</td><td>4 approaches</td><td>None</td></tr>
<tr><td>Previously qualified with a different EU operator, same type and variant</td><td>AMC2 SPA.LVO.120(b) point (c)(2)</td><td>4 approaches</td><td>none</td></tr>
<tr><td>Previously qualified with a different EU operator, similar operations (Note3)</td><td>AMC3 SPA.LVO.120(b) point (c)(2)</td><td>4 approaches</td><td>4 landings</td></tr>
</table>
Notes:
1: Fewer landings during LIF S are required if a level ‘D’ FSTD is used for conversion training.
2: No landings are required if a candidate has completed the zero flight-time (ZFT) type rating.
3: ‘Similar operations’ implies that the level of technology, operating procedures, handling characteristics and HUD/HUDLS or equivalent display systems are the same or similar.
4: ‘operational suitability data established in accordance with Regulation (EU) No 748/2012 may define credits’</td>
<td></td>
<td></td>
<td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td>
</tr>
</table>

<table>
<tr><th>REQUIREMENT</th><th>CONTENT</th><th>Ref. OM</th><th>REMARKS</th><th>EVALUATION</th></tr>
<tr>
<td>SPA.LVO.120.(b)
GM1 SPA.LVO.120(b).(g)</td>
<td>
Flight crew training - summary of recent experience and recurrent training/checking requirements
Table 2 presents a summary of recent experience and recurrent training/checking requirements for LVOs and operations with operational credits.
Table 2
Summary of recent experience and recurrent training/checking requirements for LVOs and operations with operational credits
<table>
<tr><th>LVO / operational credit</th><th>Airborne equipment</th><th>Recent experience (Note 1 and Note2)</th><th>Reference</th><th>Recurrent training / checking</th><th>Reference</th></tr>
<tr><td>LVTO</td><td>-</td><td>-</td><td>-</td><td>1 rejected take-off and 1 LVTO at minimum RVR (Note1)</td><td>AMC4 SPA.LVO.120(b) point (a)(1), (a)(2)</td></tr>
<tr><td>CAT II</td><td>Auto coupled below DH with manual landing</td><td rowspan="2">2 or more approaches (Note4)</td><td rowspan="2">AMC3 SPA.LVO.120(a) points (a) and (b)</td><td rowspan="2">1 approach to land; 1 approach to go-around</td><td rowspan="2">AMC4 SPA.LVO.120(b) point (a)(2), (a)(3)</td></tr>
<tr><td>SA CAT I
CAT II
SA CAT II
CAT III</td><td>Autoland</td></tr>
<tr><td>CAT II / III
SA CAT I
SA CAT II</td><td>HUDLS / manual landing</td><td rowspan="2">2 or 4 approaches</td><td rowspan="2">AMC3 SPA.LVO.120(a) point (c)</td><td rowspan="2">2 approaches including a landing</td><td rowspan="2">AMC4 SPA.LVO.120(b) point (b)</td></tr>
<tr><td>CAT II / III
SA CAT I
SA CAT II</td><td>HUDLS / automatic landing</td></tr>
<tr><td>Approach using EFVS</td><td>(HUD / HUDLS)</td><td>2 approaches (Note4)</td><td>AMC2 SPA.LVO.120(a)</td><td>2 approaches (Note3)</td><td>AMC6 SPA.LVO.120(b)</td></tr>
</table>
Notes:
1: LVTO only required if the minimum approved RVR is less than 150m.
2: If a flight crew member is authorised to operate as pilot flying and pilot monitoring, then the flight crew member should complete the required number of approaches in each operating capacity.
3: One approach to be flown without natural vision, to the height below which an approach should not be continued if natural visual reference is not acquired.
4: ‘operational suitability data established in accordance with Regulation (EU) No 748/2012 may define credits’
</td>
<td></td>
<td></td>
<td>[ ] YES [ ] N/A
[ ] NO [ ] N/R</td>
</tr>
</table>

REQUIREMENT	CONTENT	Ref. OM	REMARKS	EVALUATION
SPA.LVO.120.(b) GM2 SPA.LVO.120(b)	**RECURRENT TRAINING AND CHECKING FOR EFVS OPERATIONS** In order to provide the opportunity to practise decision-making in the event of system failures and failure to acquire natural visual reference, the recurrent training and checking for EFVS operations is recommended to periodically include different combinations of equipment failures, go- around due to loss of visual reference and landings.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(b) GM3 SPA.LVO.120(b)	**INITIAL TRAINING AND CHECKING FOR SA CAT I, CAT II, SA CAT II AND CAT III APPROACH OPERATIONS** The ground training referred to in points (a)(1)(i) and (iv) of AMC2 SPA.LVO.120(b) may include: (a) airborne and ground equipment: (1) technical requirements; (2) operational requirements; (3) operational reliability; (4) fail-operational; (5) fail-passive; (6) equipment reliability; (7) operating procedures; (8) preparatory measures; (9) operational downgrading; and (10) communications; and (b) procedures and limitations: (1) operating procedures; and (2) crew coordination.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(c)	**Records of the training and qualifications** (c) The operator shall keep records of the training and qualifications of the flight crew members.			[ ] YES [ ] N/A [ ] NO [ ] N/R
SPA.LVO.120.(d)	**Appropriately qualified training and checking personnel** (d) The training and checking shall be conducted by appropriately qualified personnel. In the case of flight and flight simulation training and checking, the personnel providing the training and conducting the checks shall be qualified in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011.			[ ] YES [ ] N/A [ ] NO [ ] N/R