**LVTO-IR**

**Reference Model: LVTO-IR**

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| **Version** | ***1*** |
| **Description:**  *Low Visibility Operations (LVO) Implementing Rules (IR) limited in scope to only the Low Visibility Take-off Operations (LVTO) in accordance with EASA rules as specified in SPA.LVO SUBPART E, SPA.LVO.100 - SPA.LVO.130.* | |

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| **Number** | **Details** |
| **SPA.LVO.100** | **Low Visibility Opererations (LVO)** |
| **SPA.LVO.100.a** | **Low Visibility take-off (LVTO) operations**  The operator shall only conduct low visibility operations (LVO) when approved by the competent authority with regards to (a) low visibility take-off (LVTO) operations.  Compliancy Note: Sub (b) - (f) relates to approach requirements. The requested approval is only for LVTO, thus only relates to the LVO take-off requirements and not the LVO approach requirements. |
| **SPA.LVO.100.b** | **Low Visibility Standard CAT 1 (LTS 1) operations**  Lower than Standard (LTS) operations.  Compliancy Note: Not applicable to LVTO only requirements. |
| **SPA.LVO.100.c** | **Standard category II (CAT II) operations**  Compliancy Note: Not applicable to LVTO only requirements. |
| **SPA.LVO.100.d** | **Other than standard category II (OTS CAT II) operations**  Compliancy Note: Not applicable to LVTO only requirements. |
| **SPA.LVO.100.e** | **Standard category II (CAT III) operations**  Compliancy Note: Not applicable to LVTO only requirements. |
| **SPA.LVO.100.f** | **Approach operations using EVS**  Approach operation utilising enhanced vision systems (EVS) for which an operational credit is applied to reduce the runway visual range (RVR) minima by no more than one-third of the published RVR.  Compliancy Note: Not applicable to LVTO-only requirements as there are no AMCs yet to cover the use of EVS for the take-off part (LVTO). In the currently published AMCs, it is mentioned that the use of EVS equipment is not covering at the moment the use of this equipment for the LVTO part. See subnote below original text in AMC1 SPA.LVO.125.b with reference to the use of EVS systems during LVTO operations: Background to EVS provisions, section (2): "Provisions for the use of EVS during take-off have not been developed. The systems evaluated did not perform well when the RVR was below 300 m. There may be some benefit for use of EVS during take-off with greater visibility and reduced light; however, such operations would need to be evaluated." Therefore, this part is not applicable to LVTO only operations. |
| **SPA.LVO.105** | **LVO approval**  To obtain an LVO approval from the competent authority, the operator shall demonstrate compliance with the requirements in this Subpart.  Compliancy Note: This Subpart refers to SUBPART E covering SPA.LVO.100 up to and including SPA.LVO.130. |
| **SPA.LVO.110** | **General operating requirements**  Compliancy Note: Not applicable to LVTO only operations. Refers only to the conduct of either LTS CAT I, CAT II, OTS CAT II, CAT III operations or the use of EVS systems in the approach phase. |
| **SPA.LVO.115** | **Aerodrome related requirements** |
| **SPA.LVO.115.a** | **Use of aerodrome for LVOs below a visibility of 800m**  The operator shall not use an aerodrome for LVOs below a visibility of 800 m unless:  (1) the aerodrome has been approved for such operations by the State of the aerodrome; and (2) low visibility procedures (LVP) have been established.  Compliancy Note: See Sub (b) for aerodromes where Low Visibility Procedures (LVP) are not used. See Operations Manual: **LVTO.OPS.240 Visibility minima**. |
| **SPA.LVO.115.b** | **LVO operations at aerodrome without Low Visibility Procedures (LVP)**  If the operator selects an aerodrome where the term LVP is not used, the operator shall ensure that there are equivalent procedures that adhere to the requirements of LVP at the aerodrome. This situation shall be clearly noted in the operations manual or procedures manual including guidance to the flight crew on how to determine that the equivalent LVP are in effect.  Compliancy Note: See Operations Manual: **LVTO.OPS.240 Visibility minima**. |
| **SPA.LVO.120** | **Flight crew training and qualifications** |
| **SPA.LVO.120.a** | **Training requirements**  The operator shall ensure that, prior to conducting an LVO each flight crew member: (1) complies with the training and checking requirements prescribed in the operations manual, including flight simulation training device (FSTD) training, in operating to the limiting values of RVR/VIS (visibility) and DH specific to the operation and the aircraft type; and (2) is qualified in accordance with the standards prescribed in the operations manual.  Compliancy Note: According to EASA CS0FSTC(A) Certification Specifications for Aeroplane Flight Simulation Training Devices, the definition of FSTD is "‘Flight simulation training device (FSTD)’ means a training device which is: "In the case of aeroplanes, a full flight simulator (FFS), a flight training device (FTD), a flight navigation procedures trainer (FNPT), or a basic instrument training device (BITD). In the case of helicopters, a full flight simulator (FFS), a flight training device (FTD) or a flight navigation procedures trainer (FNPT)."  In addition, BITD is defined there as follows: "‘Basic instrument training device (BITD)’ means a ground-based training device which represents the student pilot’s station of a class of aeroplanes. It may use screen-based instrument panels and spring loaded flight controls, providing a training platform for at least the procedural aspects of instrument flight."  Compliancy Note: See Operations Manual, section **LVTO.OPS.110 Simulator training** and **LVTO.OPS.120 Further training requirements**. |
| **SPA.LVO.120.b** | **Training in accordance with a detailed syllabus**  The operator shall ensure that, prior to conducting an LVO the training and checking is conducted in accordance with a detailed syllabus.  Compliancy Note: See document **LVTO-TRN**, the Training Syllabus. |
| **SPA.LVO.125** | **Operating procedures** |
| **SPA.LVO.125.a** | **Operator shall establish procedures and instructions to be used for LVOs**  The operator shall establish procedures and instructions to be used for LVOs. These procedures and instructions shall be included in the operations manual or procedures manual and contain the duties of flight crew members during taxiing, take-off, approach, flare, landing, rollout and missed approach operations, as appropriate.  Compliancy Note: See document **LVTO-OPS**, the Operations Manual. |
| **SPA.LVO.125.b** | **Pilot-in-command responsibilities prior to commencing an LVO**  Prior to commencing an LVO, the pilot-in-command/commander shall be satisfied that:  (1) the status of the visual and non-visual facilities is sufficient;  (2) appropriate LVPs are in force according to information received from air traffic services (ATS); (3) flight crew members are properly qualified.  Compliancy Note: This part relates mostly to the approach phase of flight. For LVTO related parts, see **LVTO-OPS** for LVO operations and **LVTO-TRN** for compliance to crew training. |
| **SPA.LVO.130** | **Minimum equipment** |
| **SPA.LVO.130.a** | **Operator shall define the minimum equipment to be serviceable at the commencement of an LVO**  The operator shall include the minimum equipment that has to be serviceable at the commencement of an LVO in accordance with the aircraft flight manual (AFM) or other approved document in the operations manual or procedures manual, as applicable.  Compliancy Note: See **LVTO.OPS.310 Working instruments**. As per **NCO.GEN.155** a MEL, Minimum Equipment List, may be established, but is not mandatory. For LVTO-only operations, it is assumed that the aircraft is suitable to fly under Instrument Flight Rules (IFR) and no further special equipment is required. In LVTO-OPS.310, LVTO operations are prohibited when essential instruments are not working. |
|  | **Pilot-in-command responsibilities related to the status of aircraft and relevant airborne systems**  The pilot-in-command/commander shall be satisfied that the status of the aircraft and of the relevant airborne systems is appropriate for the specific operation to be conducted.  Compliancy Note: See **LVTO.OPS.310 Working instruments** and **LVTO.OPS.560 Engine monitoring**. |