Compliance Statement for Single-Engined Turbine Aeroplane Operations at Night or in Instrument Meteorological Conditions (SET-IMC)

In accordance with SPA.SET-IMC.100, single-engined turbine aeroplanes shall only be operated at night or in IMC for the purposes of commercial air transport if the operator has been granted a SET-IMC approval.

This compliance statement is designed to assist operators in demonstrating compliance with the applicable requirements.

An application for SET-IMC approval will be connected with either an application for a new AOC, an application to add a new aircraft type to an existing AOC, or an application to add SET-IMC approval to an aircraft type already listed on the AOC. In all cases, this form should be submitted to apply@caa.co.uk and the operator's assigned Flight Operations Inspector.

The CAA reserves the right to refuse an application if this Compliance Statement is not completed in sufficient detail, or contains inaccurate information. Pleas ensure that the 'Operator's Comments' column is completed thoroughly, including references to operations manual entries, supporting documentation and sufficient statements to demonstrate compliance.

Requirement	Regulatory Reference	Operator's Comments
Risk Assessment and Mitigation		
Has the operator identified and mitigated the risks associated with SET-IMC operations? *Note: This refers to an identification of the general risks associated with SET-IMC operations. A risk assessment should be conducted in accordance with established management system procedures.*	ORO.GEN.200 (a) (3) AMC1 ORO.GEN.200(a)(3)	
Management of Change		
Has the operator assessed the safety risks associated with the introduction of SET-IMC operations? *Note: The risks associated with this change should be considered in accordance with established management system procedures.*	ORO.GEN.200 (a) (3) AMC1 ORO.GEN.200(a)(3) (e)	
Compliance Monitoring Programme		
Has the operator updated/adapted its compliance monitoring programme to include SET-IMC operations?	ORO.GEN.200 (a) (6) AMC1 ORO.GEN.200(a)(6)	
Turbine Engine Reliability		
How can the operator demonstrate that an acceptable level of turbine engine reliability is achieved in service by the world fleet for the particular airframe-engine combination?	SPA.SET-IMC.105 (a)	
Has the operator obtained the power plant reliability data from the type certificate (TC) holder and/or supplemental type certificate (STC) holder?	AMC1 SPA.SET-IMC.105(a)	
Can the data for the engine-airframe combination demonstrate, or be likely to demonstrate, a power loss rate of less than 10 per million flight hours?		
Is the in-service experience with the intended engine-airframe combination at least 100,000h, demonstrating the required level of reliability?		

If the above experience has not been accumulated, then, based on analysis or test, has in-service experience with a similar or related type of airframe and turbine engine been considered by the TC/STC holder to develop an equivalent safety argument in order to demonstrate that the reliability criteria are achievable?		
Maintenance Programme		
Has the operator established specific maintenance instructions and procedures to ensure the intended levels of continued airworthiness and reliability of the aeroplane and its propulsion system?	SPA.SET-IMC.105 (b)	
Do the specific maintenance instructions and procedures include an engine trend monitoring programme (except for aeroplanes first issued with an individual certificate of airworthiness after 31 December 2004 that have an automatic trend monitoring system)?	SPA.SET-IMC.105 (b) (1)	
Do the specific maintenance instructions and procedures include a propulsion and associated systems' reliability programme?	SPA.SET-IMC.105 (b) (2)	
Does the maintenance programme include an oil-consumption-monitoring programme based on engine manufacturer's recommendations, if available, and track oil consumption trends?	AMC1 SPA.SET-IMC.105(b) (a)	
Is the oil-consumption monitoring continuous and does it take account of oil added?		
If recommended by the engine manufacturer, is an engine analysis programme in place?		
Does the engine monitoring programme provide for engine condition monitoring describing the parameters to be monitored, the method of data collection and a corrective action process, and is it based on the engine manufacturer's instructions?		
Is the propulsion and associated systems' reliability programme designed to early identify and prevent problems, which otherwise would affect the ability of the aeroplane to safely perform its intended flight?	AMC1 SPA.SET-IMC.105(b) (b)	
For engines, does the reliability programme incorporate reporting procedures for all significant events?		
Is the above reporting information readily available (with the supporting data) for use by the operator, type certificate (TC) holders, and the CAA to help establish that the reliability level set out in AMC1 SPA.SET-IMC.105(a) is achieved?		
Does the operator have a process in place to undertake an immediate evaluation and take corrective measures or impose operational restrictions in the event of an adverse trend?		
Does the engine reliability programme include, as a minimum, the engine hours flown in the period, the power loss rate for all causes, and the engine removal rate, both rates on an annual basis, as well as reports with the operational context focusing on critical events?		
Are the above reports communicated to the TC holder and the CAA?		

Does the actual period selected reflect the global utilisation and the relevance of the experience included?		
Flight Crew Composition		
Has the operator established flight crew composition for SET-IMC operations?	SPA.SET-IMC.105 (c) ORO.FC.100 ORO.FC.200	
Is flight crew composition described in the Operations Manual Parts A and B?	AMC3 ORO.MLR.100	
Where the pilot-in-command has experience of less than 100 flight hours under instrument flight rules (IFR) with the relevant type or class of aeroplane including line flying under supervision (LIFUS), is the minimum crew composed of two pilots?	AMC2 SPA.SET-IMC.105(c) (a)	
Where the pilot-in-command has experience of less than 100 flight hours under IFR but single-pilot operations are planned, does the flight crew member have significant previous IFR experience? *Note: Previous IFR experience should be relevant to the type of operation.*	AMC2 SPA.SET-IMC.105(c) (b)	
Training Programme		
Has the operator established a training/checking programme?	SPA.SET-IMC.105 (c)	
Is the training/checking programme described in Operations Manual Part D?	AMC3 ORO.MLR.100	
Does conversion training include, as a minimum, all items listed in AMC1 SPA.SET-IMC.105 (c) (a), including: • Normal procedures. • Abnormal procedures. • Emergency procedures. *Note: The AMC includes a list of items that should be included in each of the above.*	AMC1 SPA.SET-IMC.105(c) (a)	
Does conversion checking include the following as part of the operator's proficiency check (OPC): • Conduct of the forced landing procedure until touchdown in simulated IMC with zero thrust set, and operating with simulated emergency electrical power. • Engine restart procedures. • Depressurisation following engine failure. • Engine-out descent in simulated IMC.	AMC1 SPA.SET-IMC.105(c) (b)	
Does conversion training and checking include the use of a suitable full flight simulator (FFS) or a suitable flight simulation training device (FSTD)?	AMC1 SPA.SET-IMC.105(c) (c)	
Does recurrent training include all items included in the conversion training required by AMC1 SPA.SET-IMC.105(c) (a)?	AMC1 SPA.SET-IMC.105(c) (d)	

Does recurrent checking include the following as part of the OPC: • Conduct of the forced landing procedure until touchdown in simulated IMC, with zero thrust set, and operating with simulated emergency electrical power. • Engine restart procedures. • Depressurisation following engine failure. • Emergency descent in simulated IMC.	AMC1 SPA.SET-IMC.105(c) (e)	
Does recurrent training and checking include the use of a suitable FFS or FSTD?	AMC1 SPA.SET-IMC.105(c) (f)	
Operating Procedures		
Have operating procedures regarding the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL), been established?	SPA.SET-IMC.105 (d) (1) ORO.MLR.105	
Have flight planning procedures been established?	SPA.SET-IMC.105 (d) (2)	
Do the flight planning procedures ensure that the routes and cruising altitudes are selected so as to have a landing site within gliding range?	AMC1 SPA.SET-IMC.105(d)(2) (a)	
Does the operator use one or more risk periods for the following operations when a landing site is not within gliding range: • Over water. • Over hostile environment. • Over congested areas.	AMC1 SPA.SET-IMC.105(d)(2) (b)	
Except for the take-off and landing phase, does the operator ensure that when a risk period is planned, there is a possibility to glide to a non-congested area?	AMC1 SPA.SET-IMC.105(d)(2) (b)	
Does the total duration of the risk period per flight not exceed 15 minutes?	AMC1 SPA.SET-IMC.105(d)(2) (b)	
If the total duration of the risk assessment exceeds 15 minuntes, has the operator established, based on a risk assessment carried out for the route concerned, that the cumulative risk of fatal accident due to an engine failure for this flight remains at an acceptable level? *Note: See GM2 SPA.SET-IMC.105(d)(2) for guidance on the risk assessment.*	AMC1 SPA.SET-IMC.105(d)(2) (b)	

Has the operator established a criteria for the assessment of each new route? Does this procedure address the following: • The selection of aerodromes along the route. • The identification and assessment, at least on an annual basis, of the continued suitability of landing sites (obstacles, dimensions of the landing area, type of the surface, slope, etc.) along the route when no aerodrome is available; the assessment may be performed using publicly available information or by conducting on-site surveys. • Assessment of en route specific weather conditions that could affect the capability of the aeroplane to reach the selected forced landing area following loss of power (icing conditions including gliding descent through clouds in freezing conditions, headwinds, etc.). • Consideration of landing sites' prevailing weather conditions to the extent that such information is available from local or other sources; expected weather conditions at landing sites for which no weather information is available should be assessed and evaluated taking into account a combination of the following information: o Local observations; o Regional weather information (e.g. significant weather charts); and o Terminal area forecast (TAF)/meteorological aerodrome report (METAR) of the nearest aerodromes; and o Protection of the aeroplane occupants after landing in case of adverse weather.	AMC1 SPA.SET-IMC.105(d)(2)(c)	
Do the flight planning procedures ensure that any selected landing site has been assessed by the operator as acceptable for carrying out a safe forced landing with a reasonable expectation of no injuries to persons in the aeroplane or on the ground?	AMC1 SPA.SET-IMC.105(d)(2)(c)	
How does the operator ensure that landing sites suitable for a diversion or forced landing are programmed into the navigation system so that track and distance to the landing sites are immediately and continuously available?	AMC1 SPA.SET-IMC.105(d)(2)(c)	
How does the operator ensure that none of these preprogrammed positions are altered in-flight?		
How does the operator ensure, to the extent possible, that the instrument departure procedures to be followed are those guaranteeing that the flight path allows, in the event of power loss, the aeroplane to land on a landing site?	AMC2 SPA.SET-IMC.105(d)(2)(a)	
How does the operator ensure, to the extent possible, that the arrival procedures to be followed are those guaranteeing that the flight path allows, in the event of power loss, the aeroplane to land on a landing site?	AMC2 SPA.SET-IMC.105(d)(2)(b)	
How does the operator ensure that any planned or diversionary route is selected and flown at an altitude such that, in the event of power loss, the pilot is able to make a safe landing on a landing site?	AMC2 SPA.SET-IMC.105(d)(2)(c)	
How does the operator ensure that the landing site allows the aeroplane to completely stop within the available area, taking into account the slope and the type of the surface?	AMC3 SPA.SET-IMC.105(d)(2)(a)	
Is the slope of the landing site assessed by the operator in order to determine its acceptability and possible landing directions?	AMC3 SPA.SET-IMC.105(d)(2)(b)	

How does the operator ensure that both ends of the landing area, or only the zone in front of the landing area for one-way landing areas, are clear of any obstacle which may be a hazard during the landing phase?	AMC3 SPA.SET-IMC.105(d)(2)(c)	
When selecting landing sites along a route to be operated, are different types of landing sites prioritised as follows: 1. Aerodromes with available runway lighting. 2. Aerodromes without available runway lighting. 3. Non-populated fields with short grass/vegetation or sandy areas. *Note: Guidance Material only*	GM1 SPA.SET-IMC.105(d)(2)(a)	

When assessing the suitability of a landing site which is not an aerodrome, is the following landing site criteria considered:
• Size and shape of the landing area:
  ○ Landing sites with a circular shape providing multiple approach paths depending on the wind; and
  ○ For other cases, landing sites with a minimum width of 45m.
• Type of surface: The surface of the landing area should allow a safe forced landing to be conducted.
 	
Note: Guidance Material only
	GM1 SPA.SET-IMC.105(d)(2)(b)	

Are the following details included in Operations Manual Part A? • The procedure for route selection with respect to the availability of surfaces, which permits a safe forced landing. • The instructions for the assessment of landing sites (elevation, landing direction, and obstacles in the area). • The instructions for the assessment of the weather conditions at those landing sites.	AMC3 ORO.MLR.100	
Is the following information related to landing sites included in Operations Manual Part C? • A description of the landing site (position, surface, slope, elevation, etc.). • The preferred landing direction. • Obstacles in the area.	AMC3 ORO.MLR.100	
Have normal procedures been established?	SPA.SET-IMC.105 (d) (3)	
Have contingency procedures, including procedures following a propulsion system failure, as well as forced landing procedures in all weather conditions, been established?	SPA.SET-IMC.105 (d) (4)	
When a risk period is used during the take-off or landing phase, do the contingency procedures include appropriate information for the crew on the path to be followed after an engine failure in order to minimise to the greatest extent possible the risk to people on the ground?	AMC1 SPA.SET-IMC.105(d)(4)	
Have monitoring and incident reporting procedures been established?	SPA.SET-IMC.105 (d) (5)	
Has take-off minima for SET-IMC operations been established and described in the Operations Manual Parts and C?	AMC1 CAT.OP.MPA.110 (c) (3) AMC3 ORO.MLR.100	

Where it is not possible to use the departure aerodrome as a take-off alternate aerodrome due to meteorological or performance reasons, does the operator select another adequate take-off alternate aerodrome that is no further from the departure aerodrome than 30 minutes flying time at normal cruising speed in still air conditions, based on the actual take-off mass?	CAT.OP.MPA.180 (a) (3)	
Equipment Requirements		
Is the aircraft equipped with two separate electrical generating systems, each one capable of supplying adequate power to all essential flight instruments, navigation systems and aeroplane systems required for continued flight to the destination or alternate aerodrome?	SPA.SET-IMC.110 (a)	
Is the aircraft equipped with two attitude indicators, powered from independent sources?	SPA.SET-IMC.110 (b) AMC1 SPA.SET-IMC.110(b)	
For passenger operations, is the aircraft equipped with a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat?	SPA.SET-IMC.110 (c)	
Is the aircraft equipped with airborne weather-detecting equipment?	SPA.SET-IMC.110 (d)	
Is the airborne weather-detecting equipment an airborne weather radar, as defined in the applicable Certification Specification — European Technical Standard Order (CS-ETSO) or equivalent?	AMC1 SPA.SET-IMC.110(d)	
in a pressurised aeroplane, is the aircraft equipped with sufficient supplemental oxygen for all occupants to allow descent, following engine failure at the maximum certificated cruising altitude, at the best range gliding speed and in the best gliding configuration, assuming the maximum cabin leak rate, until sustained cabin altitudes below 13000 ft are reached?	SPA.SET-IMC.110 (e)	
Is the aircraft equipped with an area navigation system capable of being programmed with the positions of landing sites and providing lateral guidance to the flight crew to reach those sites?	SPA.SET-IMC.110 (f)	
Is the area navigation system based on a global navigation satellite system (GNSS) stand-alone receiver or multi-sensor system, including at least one GNSS sensor, to enable at least required navigation performance approach (RNP APCH) operations without vertical guidance?	AMC1 SPA.SET-IMC.110(f)	
Is the aircraft equipped with a radio altimeter?	SPA.SET-IMC.110 (g)	
Is the aircraft equipped with a landing light, capable of illuminating the touchdown point on the power-off glide path from 200 ft away?	SPA.SET-IMC.110 (h)	

Is the aircraft equipped with an emergency electrical supply system of sufficient capacity and endurance capable of providing power, following the failure of all generated power, to additional loads necessary for all of the following: • The essential flight and area navigation instruments during descent from maximum operating altitude after engine failure. • The means to provide for one attempt to restart the engine. • If appropriate, the extension of landing gear and flaps; • The use of the radio altimeter throughout the landing approach. • The landing light. • One pitot heater. • If installed, the electrical means to give sufficient protection against impairment of the pilot's vision for landing. *Note: In accordance with GM1 SPA.SET-IMC.110(i)(7), examples of elements affecting pilot's vision for landing are rain, ice and window fogging.*	SPA.SET-IMC.110 (i)	
Is the aircraft equipped with an ignition system that activates automatically, or is capable of being operated manually, for take-off, landing, and during flight, in visible moisture?	SPA.SET-IMC.110 (j)	
Is the aircraft equipped with a means of continuously monitoring the power train lubrication system to detect the presence of debris associated with the imminent failure of a drivetrain component, including a flight crew compartment caution indication?	SPA.SET-IMC.110 (k)	
Is the aircraft equipped with an emergency engine power control device that permits continuing operation of the engine at a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel control unit?	SPA.SET-IMC.110 (l)	
Do the means that allows continuing operation of the engine within a sufficient power range for the flight to be safely completed in the event of any reasonably probable failure/malfunction of the fuel control unit enable the fuel flow modulation?	AMC1 SPA.SET-IMC.110(l)	
Annual Report		
Has the operator established a process to make available to the CAA on an annual basis a report related to its SET-IMC operations containing at least the following information: • The number of flights operated. • The number of hours flown. • The number of occurrences sorted by type.	AMC1 SPA.SET-IMC.105	

I, ... hereby certify that the above compliance statement is a true reflection of the

training, equipment, processes and procedures of company .....

Signed: ..... Date: .....

Position in company: .....