

# APPROVAL PROCESS OF CAT SET-IMC OPERATIONS BY DGAC-F



EASA CAT SET-IMC WORKSHOP – 4 JULY 2017 - Köln  
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DSAC

Direction Générale de l'Aviation Civile

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## ■ HISTORY

# PLAN OF THE PRESENTATION

- IDENTIFYING DIFFERENCES BETWEEN AIR-OPS AND THE PREVIOUS FRENCH INSTRUCTION
- TRANSITION WITH THE FRENCH INSTRUCTION : IMPLEMENTING THE DIFFERENCES WITH THE NEW CAT SET-IMC RULE
- HOW PART ARO IS IMPLEMENTED BY DGAC? – HOW TO ASSESS NEW OPERATOR'S SAFETY PERFORMANCE?
- HOW PART ARO IS IMPLEMENTED BY DGAC? – HOW TO ASSESS THE COMPLEXITY OF AN OPERATOR ?
- HOW PART ARO IS IMPLEMENTED BY DGAC? – WHAT IS THE FILE CONTENT THAT THE CAT SET-IMC APPLICANT IS EXPECTED TO PROVIDE TO THE AUTHORITY ?
- HOW PART ARO IS IMPLEMENTED BY DGAC? – CONTINUOUS SURVEILLANCE

## PIECES OF HISTORY

- From **1987 to 2008**, CAT SET-IMC operations were permitted only for cargo (papers delivery in French Antilles) in accordance with old French OPS1.
- from **2008 – 2012** : cargo SET- IMC operations have stopped because it was not possible under EU-OPS rule and no exemption was delivered.
- **2012** : Under the input of 2 operators, DGAC developed a rule (Instruction relative à l'exploitation en transport aérien commercial d'avions monomoteur à turbine en conditions IMC et/ou de nuit : 7 December 2012) based substantially on JAA NPA 29 issued on 2005 and ICAO requirements.
- This rule set the basis for approving **4 operators**. Those operators have been granted an exemption in accordance with Article 8(2) of Regulation (EEC) No 3922/91 as provided for in Article 6(5) of Regulation (EU) No 965/2012 :
  - 3 of them were at first operating C208s under VFR with a French AOC
  - 1 started CAT SET-IMC from scratch with a TBM SET
- **DGAC has gained experience during the last 4 years in approving and auditing CAT SET-IMC operations with passengers.**

## TRANSITION WITH THE NEW CAT SET-IMC RULE – IDENTIFYING DIFFERENCES

- First part of the work consisted on **identifying differences** between the previous French instruction and the new rule to deliver to operators under exemption a new certificate compliant with the CAT SET-IMC rule :
  - Navigation system : Lateral guidance. This functionality will be checked on board GNSS navigation system.
  - Single pilot IFR experience : 100h of experience on class or type (French instruction 50 hours)
  - SPA.SET-IMC.105(c) (b) allows to alleviate these 100h provided the pilot has a previous significant IFR experience : DGAC has difficulty to put numbers behind “significant”. Internal DGAC expertise from Flight inspectors is yet needed.
  - The definition/specification of a landing site is more detailed.
  - The landing sites need to be assessed at least every year to check the continued suitability

## TRANSITION WITH THE NEW CAT SET-IMC RULE IDENTIFYING DIFFERENCES (CONT)

- Total risk period is 15' instead of 15' of risk period between each landing site.
- Possibility of use of a matrix to calculate an extension based on the proven reliability rate and the exposure time in each flight phase.
- An amount of risk period must be used when no emergency landing is available during the take-off and landing phase .
- When a risk period is used during the take-off or landing phase, the contingency procedures should include appropriate information for the crew on the path to be followed after an engine failure in order to minimize to the greatest extent possible the risk to people on the ground.
- Implementation of a procedure in case of engine failure when the aircraft is equipped with passengers oxygen masks without automatic deployable system
- Pilot training syllabus:
  - normal procedure : use of fuel control, display interpretation.
  - Emergency procedure : fuel system failures

## TRANSITION WITH THE NEW CAT SET-IMC RULE IMPLEMENTING THE DIFFERENCES

- For the existing CAT SET-IMC operators the DGAC-F will check before the end of the exemptions on 2 September 2017 that all the differences will be assessed and implemented by the operator before issuing a new approval.
- Supervision flights are programmed in the short term for each of the 4 existing CAT SET-IMC operators. A supervision flight has already been performed when they were CAT SET-IMC approved under exemption. The flight operation inspectors will take advantage of these next inflight controls to check the identified differences for two operators. However for the two others this will be special additional supervision flights in the context of new CAT SET-IMC rule.
- The existing CAT SET-IMC operators were required to apply for an a SPA SET-IMC authorisation before 1<sup>st</sup> JUNE to let 3 months to the Authority to study the files.

## HOW PART ARO IS IMPLEMENTED BY DGAC? – IMPLEMENTING THE NEW CAT SET-IMC RULE

- As soon as 965/2012 was amended, DGAC-F started to develop a **procedure for the instruction** of a new CAT SET-IMC applicant file.
- This internal CAT SET-IMC certification procedure will be substantially derived from AROs. This internal procedure will call at different kind of expertise within DGAC (pilots (crew aspects), OSAC (maintenance aspects))
- A guide at the attention of the operators should be published at the end of 2017 and available on DGAC website.
- This guide should aim at providing guidelines for new operators to apply for an authorisation.

## HOW PART ARO IS IMPLEMENTED BY DGAC? – HOW TO ASSESS NEW OPERATOR'S SAFETY PERFORMANCE?

- Credit of operator's past experience :
  - Credit of previous twin operations (in the case where the operator shift to SETs)
  - Credit of previous SET VFR operations on the same airframe/engine combination based on the model of ETOPS approval.
- Credit of ground support
  - dedicated personnel for flight preparation,
  - capability to make a sound safety risk assessment for a specific route and propose adequate route planning
- Credit of aeroplane's equipment :
  - Augmented visual aids for assisting emergency landing : synthetic runway
  - Automatic recovery systems in case of unusual attitude
- Credit of pilot's experience



# HOW PART ARO IS IMPLEMENTED BY DGAC? – HOW TO ASSESS THE COMPLEXITY OF AN OPERATOR ?

- We are facing the following question : to which extend an operator is non-complex ?
- Complexity of operations : charter, scheduled flights, flights on big aerodromes
- Different types of SET aeroplanes in the fleet
- Activity : number of aeroplanes/volume of flights
- Multiple bases

DGAC considers that conformity to ORO.GEN.200(b) is a continuous process : the complexity of the management evolves gradually with the complexity of the operator (size, nature and complexity of activities).

Practically there should not be a huge step in the workload increase for the operator regarding its management system.

## HOW PART ARO IS IMPLEMENTED BY DGAC? – WHAT IS THE FILE CONTENT THAT THE CAT SET-IMC APPLICANT IS EXPECTED TO PROVIDE TO THE AUTHORITY ?

- **The Authority expects the applicant to provide a complete file before beginning the instruction :**
  - An agenda describing the expected implementation phases and the key dates including provisions for the validation flight
  - Documents describing the organization and the planned activity
  - A risk assessment study which would provide data relating to operator's performance (experience, training) to ensure the intended safety level would be achieved.
  - Documents proving that the airplane is eligible for SET-IMC operation
  - Maintenance procedures
  - Operational procedures :
    - Long term flight preparation : line study including assessment and selection of landing sites, flight altitudes, use of risk period,
    - Short term flight preparation : flight preparation procedures, preparation of flight documentation, use of appropriate weather forecasts (en-route, landing)
    - Emergency procedures (engine failure management, loss of pressurization management,...)
  - Training syllabus

# HOW PART ARO IS IMPLEMENTED BY DGAC? – CONTINUOUS SURVEILLANCE

- The CAT SET-IMC operator must provide an annual report :
  - Number of flights
  - Number of hours flown
  - Number of occurrences
  - DGAC may ask a document as an evidence on a yearly basis to refresh the reliability data provided by the TCH as part as the annual report (like for ETOPS).

# Thank you for your attention

## Questions?