EASA Proposed CM-PIFS-005 Issue 01 – Guidance for Rain and Hail Ingestion Testing for Turbine Engines - Ice Accretion - Comment Response Document

Comment				Comment summary	Suggested resolution	Comment is an observation or is a suggestion	Comment is substantive or is an objection	EASA comment disposition	EASA response
NR	Author	Section, table, figure	Page						
1	*Rolls-Royce plc*			Rolls Royce plc has no objection to **(Proposed CM-PIFS-005 Issue 01)** - *Proposed Certification Memorandum on Guidance for Rain and Hail Ingestion Testing for Turbine Engines Ice Accretion*.					
2	*Boeing Commercial Airplanes*	3.1.1	5	The EASA document acknowledges a potential for unrepresentative ice accretion to form during an augmented hail water content sea level test, but does not address the possibility that no accretion might occur in a sea level test, when it might exist in the real flight case. The potential for hail accretion near the inter-compressor bleeds is similar to mixed phase accretion in warm airflow. Once the hail is reduced in size by several stages of compression and melting, the resulting mixed phase conditions resemble ice crystal conditions, which have been recently studied. Experiments have shown that the potential for this mixed phase threat to accrete depends greatly on the ratio of water to ice – therefore, it cannot be simulated by water alone, nor would it be simulated by a test with amplified hail water content.	EASA should require the applicant to address the potential for in-flight hail accretion by using equivalent absolute hail.		Substantive	Noted	The comments provided are noted by the agency, but are considered out of scope for this Certification Memorandum. The commenter is suggesting that the currently specified requirements may not identify ice accretion during altitude operation in hail conditions. It is considered that implementing the suggestions made by the commenter would require an extension of the existing requirements and would therefore be considered as rule making. Certification Memoranda are not intended to introduce new certification requirements or to modify existing certification requirements.
3	*UK CAA*			No comments					

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