

# *Ingestion of Rain and Hail*

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# ➤ CS-E 790 / AMC E 790 Ingestion of Rain and Hail

## ➤ All Engines

- ingestion of large hailstones
- acceptable operation throughout its specified operating envelope when subjected to sudden encounters with the certification standard concentrations of rain and hail as defined in Appendix A to CS-E.



- CS-E 790 / AMC E 790 Ingestion of Rain and Hail
  - Engines for Rotorcraft
    - Engine is capable of acceptable operation during and after the ingestion of rain with an overall ratio of water droplet flow to airflow.



- CS-E 790 / AMC E 790 Ingestion of Rain and Hail
  - Engine that incorporates or requires the use of a protection device, demonstration of the rain and hail ingestion capabilities of the Engine, as required in CS-E 790 (a), (b) and (c), may be waived wholly or in part
    - rain or hail constituents are of a size that will not pass through the protection device
    - protection device will withstand the impact
    - rain or hail constituents stopped by the protection device will not obstruct the flow of induction air



- CM-PIFS-006 Issue 01 Guidance for Rain and Hail Ingestion Testing for Turbine Engines - Short Hail Burst
- CM CM-PIFS-005 Issue 01 Guidance for Rain and Hail Ingestion Testing for Turbine Engines - Ice Accretion





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# End

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