



FLIGHT IN ICING CONDITION

Flight into known icing conditions is approved when the appropriate equipment and instrument required by the airworthiness and operating regulations are approved, installed and in an operable condition:

WARNING: SEVERE ICING MAY RESULT FROM ENVIRONMENTAL CONDITIONS OUTSIDE OF THOSE FOR WHICH THE AIRPLANE IS CERTIFICATED. FLIGHT IN FREEZING RAIN, FREEZING DRIZZLE, OR MIXED ICING CONDITIONS (SUPERCOOLED LIQUID WATER AND ICE CRYSTALS) MAY RESULT IN ICE BUILD-UP ON PROTECTED SURFACES EXCEEDING THE CAPABILITY OF THE ICE PROTECTION SYSTEM, OR MAY RESULT IN ICE FORMING AFT OF THE PROTECTED SURFACES. THIS ICE MAY NOT BE SHED USING THE ICE PROTECTION SYSTEMS, AND MAY SERIOUSLY DEGRADE THE PERFORMANCE AND CONTROLLABILITY OF THE AIRPLANE.

DURING FLIGHT, SEVERE ICING CONDITIONS THAT EXCEED THOSE FOR WHICH THE AIRPLANE IS CERTIFICATED SHALL BE DETERMINED BY THE FOLLOWING VISUAL CUES. IF ONE OR MORE OF THESE VISUAL CUES EXISTS, IMMEDIATELY REQUEST PRIORITY HANDLING FROM AIR TRAFFIC CONTROL TO FACILITATE A ROUTE OR AN ALTITUDE CHANGE TO EXIT THE ICING CONDITIONS.

- UNUSUALLY EXTENSIVE ICE ACCRETED ON THE AIRFRAME IN AREAS NOT NORMALLY OBSERVED TO COLLECT ICE.
 - ACCUMULATION OF ICE ON THE UPPER SURFACE OF THE WING AFT OF THE PROTECTED AREA.
 - ACCUMULATION OF ICE ON THE PROPELLER SPINNER FARTHER AFT THAN NORMALLY OBSERVED.
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- Since the autopilot may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when any of the visual cues specified above exist, or when unusual lateral trim requirements or autopilot trim warnings are encountered while the airplane is in icing conditions.
 - In icing conditions, use of flaps is restricted to takeoff, approach, and landing only. When the flaps have been extended for approach or landing, they may not be retracted unless the upper surface of the wing aft of the protected area is clear of ice, or unless flap retraction is essential for go-around.
 - All icing detection lights must be operative prior to flight into icing conditions at night.

NOTE: This supersedes any relief provided by the Master Minimum Equipment List (MMEL).



OPERATION IN ICING CONDITIONS

FLYING INTO ICING CONDITION

When flying into known or forecast icing conditions, proceed:

IGNITION Switches ON
 Ice Protection System TURN ON AS REQUIRED

The ice protection system should be turned on as follows:

- AOA, TAT and SLIP: before flying into known icing conditions.
- Propeller: before flying into known icing conditions or at the first sign of ice formation.
- Wing and tail leading edges, engine air inlet and windshield: at the first sign of ice formation.

Holding configuration:

Landing Gear Lever UP
 Flap Selector Lever UP
 Airspeed 160 KIAS MINIMUM
 Np 85% MINIMUM

To eliminate propeller vibrations, increase Np as required.

NOTE: For approach procedures in known or forecast icing conditions, increase the airspeed by 5 up to 10 KIAS until the short final.

THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCTIVE TO SEVERE IN-FLIGHT ICING

1. Visible rain at temperatures below 0 degrees Celsius ambient air temperature.
2. Droplets that splash or splatter on impact at temperatures below 0 degrees Celsius ambient air temperature.

PROCEDURES FOR EXITING THE SEVERE ICING ENVIRONMENT

These procedures are applicable to all flight phases from takeoff to landing. Monitor the ambient air temperature. While severe icing may form at temperatures as cold as -18 degrees Celsius, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cues specified in the Limitations Section of this manual for identifying severe icing conditions are observed, accomplish the following:

1. Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the airplane has been certificated.
2. Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
3. Do not engage the autopilot.
4. If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.

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OPERATION IN ICING CONDITIONS (Continued)

5. If an unusual roll response or uncommanded roll control movement is observed, reduce the angle of attack.
6. Do not extend flaps during extended operation in icing conditions. Operation with flaps extended can result in a reduced wing angle of attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.
7. If the flaps are extended, do not retract them until the airframe is clear of ice.
8. Report these weather conditions to Air Traffic Control.

- OPERATION IN ICING CONDITIONS CHECKLIST COMPLETED -