

WPR22FA151

OPERATIONAL FACTORS

Specialist's Factual Report – Attachment 11

CE-208B Icing Procedures

July 23, 2022

ICING

THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCTIVE TO SEVERE IN-FLIGHT ICING - As Required by AD 96-09-15, Paragraph (a) (2):

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 - As Required by AD 96-09-15, Paragraph (a) (2):

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 Section 2 Limitations 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.
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.

(Continued Next Page)

ICING (Continued) **INADVERTENT ICING ENCOUNTER**

1. Ignition Switch - ON.
2. Inertial Separator - BYPASS.
3. Pitot/Static Heat Switch - ON.
4. Stall Warning Heat Switch - ON.
5. Windshield Anti-ice Switch(es) (if installed) - AUTO.
6. Prop Anti-ice Switch (if installed) - AUTO.
7. If above 20,000 feet:
 - A. Airspeed - 160 KIAS or below.
 - B. Altitude - DESCEND to 20,000 feet or below as soon as practical.
8. Turn back or change altitude to obtain an outside air temperature that is less conducive to icing.
9. Ignition Switch - OFF after 5 minutes operations.
10. Bleed Air Heat Switch and Temp Control - ON and ADJUST.
11. Push Fwd Cabin Heat control full in and pull Defrost control full out to obtain maximum windshield defroster effectiveness.
12. Propeller RPM - INCREASE to 1900 RPM to minimize ice build-up.

CAUTION

IF EXCESSIVE VIBRATION IS NOTED, MOMENTARILY REDUCE PROPELLER RPM TO 1600 WITH THE PROPELLER CONTROL, THEN RAPIDLY MOVE THE CONTROL FULL FORWARD. CYCLING THE RPM FLEXES THE PROPELLER BLADES AND HIGH RPM INCREASES CENTRIFUGAL FORCE, CAUSING ICE TO SHED MORE READILY.

13. Ignition Switch - OFF after 5 minutes of operation.
14. If icing conditions are unavoidable, plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable "off airport" landing site.
15. With an ice accumulation of 1/4 inch or more on the wing leading edges, be prepared for a significantly higher power requirement, approach speed and stall speed and longer landing roll.
16. If necessary, set up a forward slip for visibility through the left portion of the windshield during the landing approach.

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ICING (Continued)

INADVERTENT ICING ENCOUNTER (Continued)

17. Use a minimum approach speed of 105 KIAS, select the minimum flap setting required, and maintain extra airspeed consistent with available field length. With ice suspected on the airframe, or operating at 4°C or less in visible moisture, **Do Not Extend Flaps Beyond 20° for Landing.**

WARNING

WITH HEAVY ICE ACCUMULATIONS ON THE HORIZONTAL STABILIZER LEADING EDGE, DO NOT EXTEND FLAPS WHILE ENROUTE OR HOLDING. WHEN LANDING IS ASSURED, SELECT THE MINIMUM FLAP SETTING REQUIRED, NOT TO EXCEED 20°, AND MAINTAIN EXTRA AIRSPEED CONSISTENT WITH AVAILABLE FIELD LENGTH. DO NOT RETRACT THE FLAPS ONCE THEY HAVE BEEN EXTENDED, UNLESS REQUIRED FOR GO-AROUND. THEN RETRACT FLAPS IN INCREMENTS WHILE MAINTAINING 5 TO 10 KNOTS EXTRA AIRSPEED.

18. Land on the main wheels first, avoiding a slow and high flare-out.
19. Missed approaches should be avoided whenever possible because of severely reduced climb capability. However, if a go-around is mandatory, make the decision much earlier in the approach than normal. Apply takeoff power and maintain 90 to 105 KIAS while retracting the flaps slowly in small increments.

STATIC SOURCE BLOCKAGE (Erroneous Instrument Reading Suspected)

1. **Static Pressure Alternate Source Valve - PULL FULL ON.**

NOTE

The alternate static source is connected to the left-hand flight panel instruments only.

2. Refer to Section 5 for airspeed and altimeter corrections.
3. Autopilot - DISENGAGE altitude hold mode.