



# Airworthiness Concern Sheet

Date:

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Make, Model, Series, Serial No.:  
The twin Cessna models, series and serial numbers identified in attachment 1.

Reason for Airworthiness Concern:  
Continued flight into known icing conditions on the aircraft identified above.

## FAA Description of Airworthiness Concern

Based on recent and historical accident and incident data, the aircraft identified in Attachment 1, which were extracted from Cessna Service Bulletin MEB97-4 may not be adequately equipped for flight into known icing conditions. These aircraft, even if equipped with pneumatic de-ice boots are not approved for icing and will accrete critical amounts of ice on the protected and unprotected areas which could cause unusual flight characteristics, high sink speeds resulting in hard landings. Additionally, data suggests potentially large increases in stall speed with no stall warning. In the prior 30 years, the affected models were involved in 46 icing related events resulting in 36 fatalities (see attachment 2). The non-fatal events usually resulted in injuries and substantial aircraft damage. The NTSB docket for two non-fatal landing events showed airplane stall with no activation of the stall warning system.

The differences in the ice protection systems for the aircraft identified differ greatly than later models. Some of these differences could include: electric windshield (instead of alcohol), de-ice propeller (some might have had boots without the de-ice propeller), de-ice boots on entire span of wing as well as a different style de-ice boots, different pitot probe and static ports, and one model also had to add a de-ice boot the vertical tail.

Based on the review of the accident and incident data the FAA is considering requiring the following actions:

- 1) Comply with MEB97-4 which installs a placard prohibiting flight into known icing conditions.
- 2) Add a placard that for requires the pilot to increase the approach and landing speeds by at least 15 knots indicated airspeed for inadvertent icing encounters.

Request for Information: We are soliciting additional information and comments from the Associations and operators of potentially affected airplanes. Any information related to operations in icing such as airspeed, stall warning, airplane performance, boot operation, information on alternatives to the proposed actions, and impact on operations are solicited. Please make comments and information as specific as possible. Please provide specific examples to illustrate comments/concerns.

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owner/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve an AD action or an SAIB, or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type clubs comments.

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Attachments: \*SDR(s)  \*A/ID  \*SLs  \*FAASR/\*NTSBSR  \*AD  \*AMOC  \*RA

Notification: FAA  \*AOPA  \*EAA  Type Club  \*TC Holder  Other:

Response Requested on 4/15/11: Emergency (10 days)  Alert (30 days)  Information (90 days)

(to select a check box, double click on check box and select "Checked" in the Default value)

\* Service Difficulty Reports (SDRs); Accident/Incident Data System (A/IDS); Service Letter (SL); Special Airworthiness Information Bulletin (SAIB); Federal Aviation Administration (FAA)/National Transportation Safety Board (NTSB) Safety Recommendation (FAASR/NTSBSR); Airworthiness Directive (AD); Alternate Method of Compliance (AMOC); Risk Assessment (RA); Aircraft Owners & Pilots Association (AOPA); Experimental Aircraft Association (EAA); Type Certificate (TC)

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## Attachment 1: List of Affected Models

<i>Model</i>	<i>Serial Numbers</i>
310	35000 thru 35546
310A	38000 thru 38161
310B	607, 35547 thru 35549, 35551 thru 35771
310C	35550, 35772 thru 35999, 39001 thru 39031
310D	39032 thru 39299
310E	35912A, 310M0001 thru 310M0036
310F	310-0001 thru 310-0016, 310-0018 thru 310-0156
310G	310G0001 thru 310G0156
310H/E310H	310H thru 310H0148
310I	310I0001 thru 310I0200
310K	310K0001 thru 310K0245
310L	310L0001 thru 310L0207
310N	310N0001 thru 310N0198
310P/T310P	310P0001 thru 310P0240
310Q/T310Q	310Q0001 thru 310Q1160
310R/T310R	310R0001 thru 310R0735
320/320-1	320-0001 thru 320-0110
320A	320A001 thru 320A0047
320B	320B0001 thru 320B0062
320C	320C0001 thru 320C0073
320D	623, 320D0001 thru 320D013
320E	320E0001 thru 320E0110
320F	658, 320F0001 thru 320F0045
340	340-0001 thru 340-0115, 340-0151 thru 340-0260, 340-0301 thru 340-0370, 340-0501 thru 340-0555
340A	340A0001 thru 340A0125
401	401-0001 thru 401-0322
401A	401A0001 thru 401A0132
401B	401B0001 thru 401B0221
402	402-0001 thru 402-0322
402A	402A0001 thru 402A0129
402B	402B0001 thru 402B0122, 402B0201 thru 402B0249, 402B0301 thru 402B0455, 402B0501 thru 402B0640
411	411-0001 thru 411-0250
411A	411-0251 thru 411-0300
414	414-0001 thru 414-0099, 414-0151 thru 414-0175, 414-0251 thru 414-0280, 414-0351 thru 414-0437, 414-0451 thru 414-0550
421	421-0001 thru 421-0200
421A	421A0001 thru 421A0158
421B	421B0001 thru 421B0056, 421B0101 thru 421B0147, 421B0201 thru 421B0275, 421B0301 thru 421B0486, 421B0501 thru 421B0665

**Attachment 2: List of NTSB/FAA Accidents and or Incidents used:**

Aircraft Model	NTSB/FAA Report No.
CE-310	CHI79DEE29
CE-310	MKC80FCJ09
CE-310	19960103003009G
CE-310	MKC89LA073
CE-310	IAD79FA029
CE-310	CHI80FET09
CE-310	NYC82DA040
CE-310	FTW92LA032
CE-310	BFO95LA027
CE-310	19970313009449C
CE-310	NYC01FA056
CE-310	CHI01LA086
CE-310	SEA05CA035
CE-310R	CHI85LA063
CE-310R	CHI93LA066
CE-310R	CHI96LA047
CE-310R	BFO96FA032
CE-320	CHI94FA080
CE-340	CHI80DEV15
CE-340	LAX82FA109
CE-340	SEA82DA038
CE-340	FTW85LA077
CE-340	ATL85FA079
CE-340	SEA86LA060
CE-340	CHI92LA100
CE-340	NYC94FA052
CE-340	DEN00LA177
CE-340	DEN02FA034
CE-401	LAX82FA111
CE-401	SEA86FA046
CE-401	CHI91LA034
CE-402	DEN82FA007
CE-402	MKC82FA019
CE-402	SEA91LA014
CE-402	CHI98LA073
CE-414	ATL82FKQ09
CE-414	DEN84FA030
CE-414	DEN85FA017
CE-414	ATL04FA051
CE-414	IAD05LA034
CE-421	LAX80DVA58
CE-421	19910306019289G
CE-421	CHI96FA146
CE-421	397209
CE-421B	MKC85LA028
CE-421B	CHI94MA032
CE-421B	SEA97LA030