

ANC25MA018

OPERATIONAL FACTORS

Attachment 7

Pilot's Operating Handbook and Aircraft Flight Manual [Excerpts]

August 18, 2025



TEXTRON AVIATION

Pilot's Operating Handbook And FAA Approved Airplane Flight Manual **GRAND** **CARAVAN^{EX}**

CESSNA MODEL 208B

867 SHP - GARMIN G1000

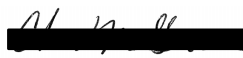
Serials 208B2197 and 208B5000 and On

SUPPLEMENT 1

TKS ICE PROTECTION SYSTEM FOR CARGO POD EQUIPPED AIRPLANES

SERIAL NO. _____
REGISTRATION NO. _____

This supplement must be inserted into Section 9 of the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual when the TKS Ice Protection System for Cargo Pod Equipped Airplanes is installed.

APPROVED BY 

for John Bouma, Lead ODA Administrator
Cessna Aircraft Company
Organization Delegation Authorization ODA-100129-CE
FAA Approved Under 14 CFR Part 183 Subpart D



Member of GAMA

DATE OF APPROVAL 24 May 2013

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WICHITA, KANSAS, USA

208BPHCUS-S1-05

24 MAY 2013

REVISION 5 - 19 FEBRUARY 2019

U.S.

S1-1

OPERATING LIMITATIONS

The following Limitations supersede and/or are in addition to the Limitations set forth in the basic Pilot's Operating Handbook and FAA Approved Airplane Flight Manual:

The airplane must be operated, and its ice protection systems must be used, as described in Normal, Abnormal and Emergency Procedures contained in this supplement. Specific operational speeds and performance information must be used where established for such conditions.

REQUIRED TRAINING

Specific training for flight into known or forecast icing conditions provided by Cessna Aircraft Company is required to be successfully completed by the pilot in command within the preceding 12 calendar months for any flight into known or forecast icing conditions.

Operators conducting operations under 14 CFR 121 and 14 CFR 135 may apply the grace provisions of 121.401(b) or 135.323(b) to the crew member's base month, as appropriate.

Completion of either of the following courses will meet this training requirement:

TKS-Equipped Caravan Cold Weather Ops Course (C14697, Onsite)

TKS-Equipped Caravan Cold Weather Ops Course (C14698, Online)

NOTE

Pilots that have completed the Caravan Cold Wx Ops and Cold Wx Ops TKS training under any of the previous course numbers will still be shown in compliance for up to 12 calendar months from the last training completion date.

OPERATING LIMITATIONS (Continued)

WEIGHT LIMITS

There are no additional limitations on the maximum allowable takeoff weight into known or forecast icing conditions for airplanes equipped with the TKS Ice Protection System. The maximum allowable operating weights for the airplane are:

Maximum Ramp Weight	8842 Pounds (4010.6 kg)
Maximum Takeoff Weight	8807 Pounds (3994.7 kg)
Maximum Landing Weight.	8500 Pounds (3855.5 kg)

MINIMUM DISPATCH FLUID

Minimum ice protection fluid for takeoff for flight into known or forecast icing conditions is 11.7 U.S. gallons (44.27 Liters)

This minimum amount of fluid allows for 45 minutes of ice protection with the PRIMARY switch set to HIGH mode. The sight gage on the TKS Ice Protection System tank is the only means of making sure there is adequate fluid quantity onboard before each flight. Refer to Figure S1-8, System Endurance Characteristics, in the Airplane and Systems Descriptions section of this supplement to make sure proper fluid quantity is onboard prior to each flight into known or forecast icing conditions.

OPERATING LIMITATIONS (Continued)

MINIMUM SPEEDS IN ICING CONDITIONS

The minimum airspeeds for operations in icing conditions with a **FULLY FUNCTIONAL** TKS Ice Protection System operating are:

WING FLAPS UP or TO/APR **95 KIAS**

WARNING

- These speeds do not apply to takeoff when using the published POH/AFM procedure for **TYPE II, TYPE III OR TYPE IV ANTI-ICE FLUID TAKEOFF** in Section 4, Normal Procedures of the POH/AFM.
- With a failed TKS Ice Protection System, maintain 120 KIAS with WING FLAPS UP (110 KIAS if climbing) and refer to the Emergency Procedure Section of this supplement.

FLAP SETTING IN ICING CONDITIONS

WING FLAPS must be UP when holding in icing conditions.

WARNING

- With ice suspected on the airframe, or operating with OAT at 5°C (41°F) or below in visible moisture, do not extend WING FLAPS beyond TO/APR for landing.
- WING FLAPS must be extended to TO/APR during all phases of flight (takeoff and landing INCLUDED) when airspeed is below 95 KIAS. This does not apply to takeoff when using the published POH/AFM procedure for **TYPE II, TYPE III OR TYPE IV ANTI-ICE FLUID TAKEOFF** in Section 4, Normal Procedures of the POH/AFM.
- The aural stall warning system does not provide adequate stall warning in all icing conditions.

OPERATING LIMITATIONS (Continued)

INERTIAL SEPARATOR

If the INERTIAL SEPARATOR is set to BYPASS at any point due to suspected or actual icing conditions, do not return it to NORMAL until the inertial separator door has been visually inspected and verified free of ice and ice protection fluid. Comply with the SHUTDOWN AND SECURING AIRPLANE check of the Normal Procedures in this supplement.

PROPELLER SPINNER

Do not operate the airplane's engine without the propeller spinner installed in accordance with the Cessna Model 208 Series Maintenance Manual.

ENVIRONMENTAL CONDITIONS

Icing conditions are defined as visually detected ice, or the presence of visible moisture in any form at an OAT of 5°C (41°F) or below.

Known icing conditions are defined by 14 CFR Part 25, Appendix C. These conditions do not include, nor were tests conducted in, all icing conditions that may be encountered (e.g., freezing rain, freezing drizzle, mixed conditions or conditions defined as severe).

WARNING

- **Flight in conditions outside of 14 CFR Part 25 Appendix C is prohibited.**
- **The airplane must not depart or be flown into an airport where freezing rain or freezing drizzle conditions are being reported.**

(Continued Next Page)

OPERATING LIMITATIONS (Continued)

ENVIRONMENTAL CONDITIONS (Continued)

Some icing conditions not defined in 14 CFR Part 25 Appendix C have the potential of producing hazardous ice accumulations, which (1) exceed the capabilities of the airplane's ice protection equipment, and/or (2) create unacceptable airplane performance and stall speed increase. Pilots must be prepared to divert the flight promptly if hazardous ice accumulations occur. Inadvertent operation in these conditions may be detected by:

1. Unusually extensive ice is accreted on the airframe in areas not normally observed to collect ice.
2. Accumulation of ice on the lower surface of the wing aft of the protected area.
3. Heavy ice accumulations on the windshield, or when ice forms aft of the curved sections on the windshield.
4. Ice forms aft of the protected surfaces of the wing struts.

If these conditions are encountered, the pilot must take immediate actions to exit these conditions.

Continued flight in icing conditions is prohibited after encountering one or more of the following with the TKS Ice Protection System fully functional and operating:

1. Airspeed in level flight at constant power decreases by 10 KIAS using Maximum Cruise Power.
2. MEA or MOCA (if applicable) on current leg falls into Area "C" of Figure S1-1, Enroute Tool For Exiting Icing, located in the Performance section of this supplement.

Exit strategies must be determined during preflight planning.

OPERATING LIMITATIONS (Continued)

AUTOPILOT OPERATION IN ICING CONDITIONS

Autopilot operation is prohibited when operating in icing conditions which are outside the 14 CFR Part 25 Appendix C defined Environmental Conditions listed in the Limitations section of this supplement.

The airspeeds listed in the Minimum Speeds In Icing Conditions in the Limitations section of this supplement also apply to autopilot operations.

Airplanes not equipped with Electronic Stability and Protection System (ESP™)

The autopilot must be disengaged when the BELOW ICING MIN SPD flashing amber and white annunciation is activated.

MAXIMUM OPERATING ALTITUDES

Certified Maximum Operating Altitudes:

Icing Conditions.	20,000 Feet
Any flight conditions with ice on the airplane	20,000 Feet

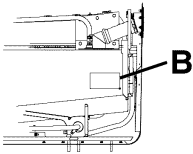
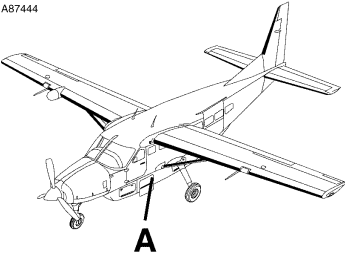
OPERATING LIMITATIONS (Continued)

PLACARDS (Continued)

EXTERIOR PLACARDS (Continued)

On the front of the TKS Ice Protection System Tank:

A87444



DETAIL A

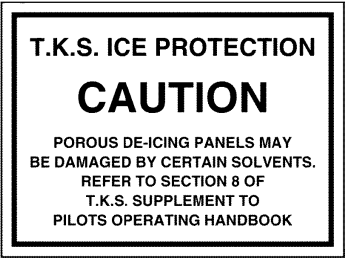
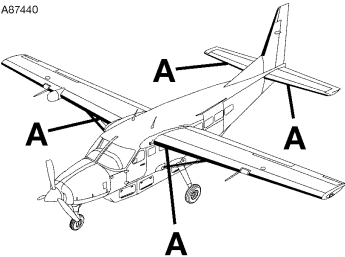
VIEW LOOKING AFT AT THE
FRONT OF THE TKS TANK

THE TKS SIGHT GAGE IS THE ONLY
APPROVED MEANS OF ASSURING
ADEQUATE FLUID QUANTITY PRIOR TO
FLIGHT INTO KNOWN OR FORECAST
ICING CONDITIONS. THE FLUID LEVEL
BALL MUST BE ABOVE THE MINIMUM
DISPATCH QUANTITY LINE (11.7 U.S.
GALLONS). THE AIRCRAFT MUST BE
LEVEL TO ENSURE PROPER INDICATIONS.

DETAIL B

Adjacent to TKS Ice Protection Porous Panels:

A87440



DETAIL A

EMERGENCY PROCEDURES (Continued)

AMBER A-ICE PRESS HI OR A-ICE FLUID LO ANNUNCIATOR COMES ON

- 1. Icing Conditions **EXIT AS SOON AS POSSIBLE**
- 2. TKS Ice Protection System **MONITOR**

FAILURE OF ICE PROTECTION SYSTEM OR EXCESSIVE ICE ACCUMULATION (OBSERVED OR SUSPECTED) ON PROTECTED AIRPLANE SURFACES

- 1. MAX FLOW Switch **AIRFRAME**
- 2. Airspeed **MAINTAIN 120 KIAS**
(or greater until final approach and landing)
- 3. Icing Conditions **EXIT AS SOON AS POSSIBLE**
- 4. Landing Distance **MULTIPLY POH/AFM DISTANCE BY:**
2.2 - WING FLAPS UP
2.1 - WING FLAPS TO/APR
- 5. Minimum Approach Airspeed **AT OR ABOVE:**
120 KIAS - WING FLAPS UP
110 KIAS - WING FLAPS TO/APR

WARNING

- **With an inoperative TKS Ice Protection System porous panel(s), increase power to Maximum Rated and exit icing conditions as soon as possible. In heavy icing conditions, it may not be possible to maintain altitude or proper glide path on approach. In this case, it is imperative that a safe airspeed be maintained.**
- **Stall speeds will increase with ice accumulation on the wing and tail leading edges. Expect higher than normal rates of descent with power reduction.**

(Continued Next Page)

EMERGENCY PROCEDURES (Continued)

FAILURE OF ICE PROTECTION SYSTEM OR EXCESSIVE ICE ACCUMULATION (OBSERVED OR SUSPECTED) ON PROTECTED AIRPLANE SURFACES (Continued)

WARNING

- **With unshed ice accumulations on the horizontal stabilizer leading edge, do not extend flaps while enroute or holding. When preparing to land use the minimum flap setting required. Do not exceed WING FLAPS TO/APR and maintain extra airspeed consistent with available field length. Do not retract the flaps once they have been extended unless required for go-around. When executing a go-around, retract flaps while maintaining 5 to 10 knots extra airspeed.**
- **Use of WING FLAPS LAND with an ice contaminated horizontal stabilizer leading edge can result in abnormal elevator control forces. The pilot should be prepared to apply the necessary elevator control inputs to maintain the desired pitch attitude while retracting the WING FLAPS to TO/APR.**
- **The aural stall warning system does not provide adequate stall warning in all icing conditions.**

(Continued Next Page)

EMERGENCY PROCEDURES (Continued)

FAILURE OF ICE PROTECTION SYSTEM OR EXCESSIVE ICE ACCUMULATION (OBSERVED OR SUSPECTED) ON PROTECTED AIRPLANE SURFACES (Continued)

NOTE

- Maintain a minimum airspeed of 120 KIAS with WING FLAPS UP (110 KIAS minimum if climbing). If unable to maintain this airspeed in level flight, allow altitude to decrease to maintain airspeed.
- If there are unshed ice accumulations along the wing, wing strut, or stabilizer leading edges during approach and landing, follow the procedures listed under Inadvertent Icing Encounters in Section 3, Emergency Procedures, of the POH/AFM.
- With an accumulation of 0.25 inch (6.35 mm) or more on the wing leading edges, be prepared for a significantly higher power requirement, approach speed, stall speed, and longer landing roll.
- If necessary, set up a forward slip for visibility through the left portion of the windshield during the landing approach.
- Select the minimum flap setting required for available field length. Use a minimum approach speed for the selected landing configuration. With ice suspected on the airframe, or operating at OAT 5°C (41°F) or less in visible moisture, do not extend WING FLAPS beyond TO/APR for landing. If installed, enable FLAP OVR prior to landing with FLAPS UP or TO/APR.

EMERGENCY PROCEDURES (Continued)

INADVERTENT ENCOUNTER WITH FREEZING RAIN,
FREEZING DRIZZLE, OR OTHER PERFORMANCE
CRITICAL ICING SITUATION

NOTE

Refer to Environmental Conditions, Limitations, contained
in this supplement for visual cues to identify severe icing
conditions (freezing rain or freezing drizzle).

ENROUTE

- 1. POWER Lever. **INCREASE TO MAXIMUM TAKEOFF**
(do not exceed 850° ITT or 103.7% Ng)
- 2. Minimum Airspeed. **120 KIAS**
(110 KIAS if climbing to exit icing condition)
- 3. TKS Ice Protection System **ON**
 - a. PRIMARY Switch **HIGH**
 - b. MAX FLOW Switch **AIRFRAME then WINDSHIELD**
(press momentarily)
 - c. P/S HEAT/LOW A/S AWARE Switch **ON**
 - d. STALL HEAT Switch **ON**
 - e. LED PANELS/ANNUN Rheostat. **ADJUST**
(for ambient lighting conditions)
 - f. IGNITION Switch **ON**
 - g. INERTIAL SEPARATOR. **BYPASS**
(rotate counterclockwise and PULL out)

CAUTION

If the INERTIAL SEPARATOR is set to BYPASS at any
point due to suspected or actual icing conditions, do not
return it to NORMAL until the inertial separator door has
been visually inspected and verified free of ice and ice
protection fluid.

- 4. ATC **NOTIFY**
(declare an emergency to exit icing conditions)
- 5. Icing Conditions. **EXIT IMMEDIATELY**

(Continued Next Page)

EMERGENCY PROCEDURES (Continued)

INADVERTENT ENCOUNTER WITH FREEZING RAIN, FREEZING DRIZZLE, OR OTHER PERFORMANCE CRITICAL ICING SITUATION (Continued)

APPROACH

1. POWER Lever **INCREASE**
(as required to maintain airspeed and glidepath)
Do not exceed 850° ITT or 103.7% Ng.
2. Recommended Airspeed **120 KIAS**
3. WING FLAPS Selector **TO/APR**
4. FLAP OVR (if installed). **ENABLE**
5. TKS Ice Protection System. **ON**
 - a. PRIMARY Switch **HIGH**
 - b. MAX FLOW Switch **AIRFRAME then WINDSHIELD**
(press momentarily)
 - c. P/S HEAT/LOW A/S AWARE Switch **ON**
 - d. STALL HEAT Switch. **ON**
 - e. LED PANELS/ANNUN Rheostat **ADJUST**
(for ambient lighting conditions)
 - f. IGNITION Switch **ON**
 - g. INERTIAL SEPARATOR. **BYPASS**
(rotate counterclockwise and PULL out)

CAUTION

If the INERTIAL SEPARATOR is set to BYPASS at any point due to suspected or actual icing conditions, do not return it to NORMAL until the inertial separator door has been visually inspected and verified free of ice and ice protection fluid.

6. ATC. **NOTIFY**
(declare an emergency and request straight-in approach)
7. Minimum Airspeed **110 KIAS**

PERFORMANCE (Continued)

STALL SPEED

Stall speed is not significantly affected by residual ice on unprotected airplane surfaces. Stall speeds increase significantly with even small accumulations on the wing leading edge.

The first 0.25 inch (6.35 mm) of ice accumulation on the wing leading edges causes the most rapid increase in stall speed. Additional ice accumulation on the wing leading edges results in a continued increase in stall speed, although at a less rapid rate.

WARNING

If pre-stall buffet or uncommanded pitch oscillations are encountered, disengage autopilot and reduce pitch attitude while increasing power to Maximum Rated Setting. Promptly extend the WING FLAPS to TO/APR to help stabilize the airplane. Increase airspeed to 95 KIAS or greater before retracting flaps. If the flaps are subsequently retracted, maintain at least 10 KIAS above initial buffet.

PREFLIGHT PLANNING

Figure S1-1 may be used for estimation of enroute altitude capability in icing conditions. After entering the chart with expected cruise weight and ambient temperature at altitude and cruise altitude, the pilot may plan the flight as follows:

AREA A: These altitudes should be available under most icing conditions for prolonged periods of time.

AREA C: These altitudes will probably not be available after ice begins to accrete on the airplane. Exiting the icing condition by climbing may not be possible.

NOTE

Exit strategies for icing conditions should be determined during preflight planning.

PERFORMANCE (Continued)

ENROUTE TOOL FOR EXITING ICING

Figure S1-1 must be used as one criteria for exiting icing conditions. Refer to Limitations, Environmental Conditions in this supplement for criteria for exiting icing conditions. Once enroute, if icing conditions are encountered such that ice begins to accrete on the airplane, the pilot **MUST** make their decision as follows:

AREA A: If current route leg MEA or MOCA (if applicable) falls in this area, it is recommended that the pilot exit the icing conditions as soon as practical.

AREA C: If current route leg MEA or MOCA (if applicable) falls in this area, the pilot must exit icing conditions immediately.

CAUTION

- Regardless of which area the airplane is operating, the pilot should continue to monitor ice buildup and airspeed decay and be prepared to exit icing immediately if icing conditions worsen.
- Data on this chart is based on flight testing with critical ice shapes derived for 14 CFR Part 25, Appendix C icing envelope. While some icing conditions will produce ice accretions that result in performance better than shown here, some icing conditions (freezing drizzle or freezing rain) will result in considerably worse performance.

(Continued Next Page)

PERFORMANCE (Continued)

ENROUTE TOOL FOR EXITING ICING (Continued)

(WITH CARGO POD INSTALLED)
ICING SERVICE CEILING
FLAPS UP - 95 KIAS

CONDITIONS:
Maximum Rated Power
1900 RPM

Inertial Separator - BYPASS
Cabin Heat - ON

- NOTES:
- 1. Torque set at 2397 foot-pounds or lesser value must not exceed maximum climb ITT of 825°C or N_g of 103.7%.
 - 2. Severity of pilot icing reports can be aircraft dependent. Light ice reports from large aircraft may be moderate or severe ice for small aircraft.

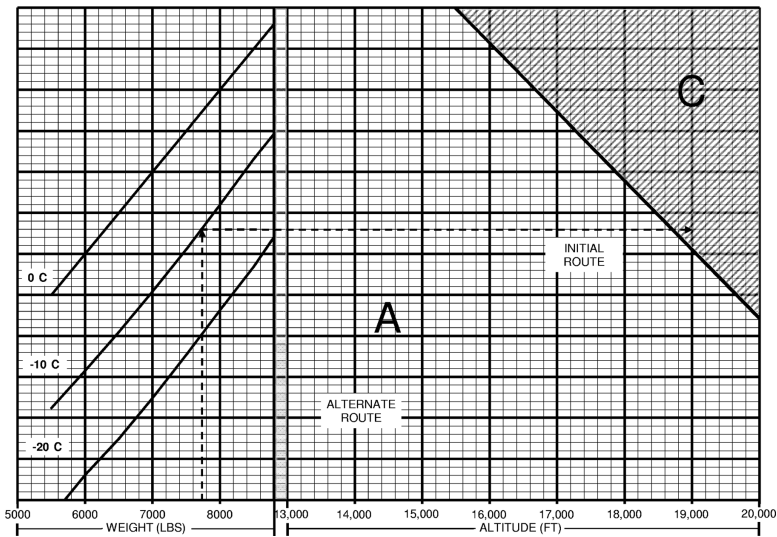
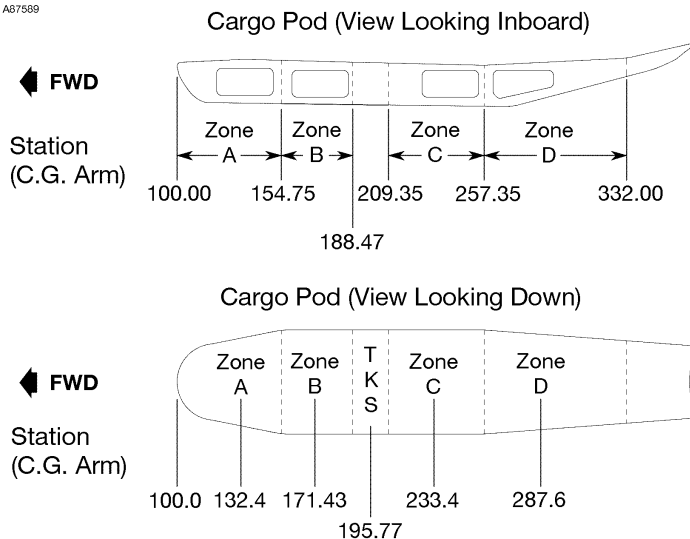


Figure S1-1
(Continued Next Page)

WEIGHT AND BALANCE/EQUIPMENT LIST

CARGO POD LOADING ARRANGEMENTS TKS TANK INSTALLED

A67589



NOTE

The 195.77 inch station reference for TKS is for the fluid and tank installation and is not valid for computing the C.G. for the TKS Zone.

Figure S1-2

WEIGHT AND BALANCE/EQUIPMENT LIST
(Continued)

WEIGHT AND MOMENT TABLE
TKS ICE PROTECTION FLUID

Gallons	Weight Pounds	Moment Inch-Pound/1000 (Arm Varies)
1.0	9.2	1.8
2.0	18.4	3.6
3.0	27.6	5.4
4.0	36.8	7.2
5.0	46.0	9.0
6.0	55.2	10.8
7.0	64.4	12.6
8.0	73.6	14.4
9.0	82.8	16.2
10.0	92.0	18.0
11.0	101.2	19.8
11.7	107.6	21.1
12.0	110.4	21.6
13.0	119.6	23.4
14.0	128.8	25.2
15.0	138.0	27.0
16.0	147.2	28.8
17.0	156.4	30.6
18.0	165.6	32.4
19.0	174.8	34.2
20.0	184.0	36.0
20.8	191.4	37.4

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Figure S1-3

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

SYSTEM DESCRIPTION (Continued)

The fluid passes through (a) microfilter(s) prior to distribution to the porous panels and propeller. The filter(s) assure(s) all contaminants are removed from the fluid and prevents panel blockage.

A system of nylon tubing carries the fluid to proportioning units located in the wings and tail of the airplane. The proportioning units divide the flow into the volumetric requirements of each panel or device supplied through the unit. Each panel and device is fed again with nylon tubing.

The TKS Ice Protection System tank is located in the cargo pod and serviced through a single filler located on the left side of the pod, near the left main landing gear. The tank has a maximum capacity of 20.8 U.S. gallons (78.7 Liters). It is the pilot's responsibility to make sure that an adequate quantity of TKS fluid is carried for the planned mission. A minimum of 11.7 U.S. gallons (44.3 Liters) in the tank is required before takeoff if the system is to be considered operational for dispatch into known icing conditions. This minimum dispatch quantity must be determined by visual inspection of the sight gage located on the filler end of the TKS fluid tank, refer to Figure S1-10.

CAUTION

The sight gage is the only approved means of assuring adequate fluid quantity prior to flight into known or forecast icing conditions. The fluid level ball must be above the minimum dispatch quantity line, 11.7 U.S. gallons, (44.3 Liters) with the airplane level to make sure proper indication.

The TKS fluid quantity is also measured by a sensor which transmits an electrical signal to the level indicator. The fluid quantity indicator gage is displayed on the MFD, refer to Figure S1-9.

(Continued Next Page)

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

SYSTEM DESCRIPTION (Continued)

The EIS strip on the MFD displays TKS (anti-ice) fluid quantity and time remaining feature to aid the pilot as to the amount of fluid/time available for ice protection. The system uses a series of colors to alert the pilot as to how much time is remaining based on fluid quantity and ANTI-ICE FLUID CONTROL switch position. Green readout informs the pilot of at least 20 minutes of ice protection with the PRIMARY switch in NORM; 8 minutes with the PRIMARY switch in HIGH.

ANTI-ICE fluid quantity and time values displayed against an amber background with black text alerts the pilot of less than 20 minutes of ice protection with the PRIMARY switch in NORM; less than 8 minutes with the PRIMARY switch in HIGH.

ANTI-ICE fluid quantity and time values displayed against a Red/White (reverse video) background alerts the pilot of less than 0.5 gallon of fluid. That equates to 5 minutes of ice protection with the PRIMARY switch in NORM; less than 2 minutes with the PRIMARY switch in HIGH.

When BACKUP is selected, the time remaining function is unreliable and must not be used.

A wing inspection light, controlled by the WING LIGHT switch, is provided to illuminate the leading edge of the left wing during night operation.

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

TKS ICE PROTECTION SYSTEM OPERATION, INDICATION AND MESSAGING

The TKS Ice Protection system is operated with three toggle switches. These switches are located in the ANTI-ICE section of the lower left pilot's instrument panel, refer to Figure S1-7. Control of the TKS Ice Protection System, ice detection light, pitot/static, Low Airspeed Awareness (LAA), and stall vane heat are included in this row of switches.

Primary control of the system is accomplished through three switches labeled PRIMARY, MAX FLOW, and BACKUP. These switches activate the primary modes of ice protection, including Normal (NORM) and HIGH, Maximum (MAX FLOW AIRFRAME) and WINDSHIELD, and BACKUP, refer to Detail A of Figure S1-7.

Normal mode is activated by selecting the NORM position (center) on the PRIMARY mode switch. NORM mode is the lowest fluid flow rate of the system. The flow rate is achieved by running both metering pumps of the system on a continuous repeat cycle of operation. The two pumps will run for approximately 20 seconds, then deactivate. After 100 seconds of inactivity, the pumps will again activate for the 20 second operation period. This on-off cycle of operation will continue until OFF is selected on the PRIMARY mode switch.

HIGH mode is activated by selecting HIGH (up) on the PRIMARY mode switch. HIGH mode is achieved by running one metering pump continuously. Like NORM mode, the HIGH mode may be terminated by selecting OFF on the PRIMARY mode switch.

Maximum flow (MAX FLOW) mode is provided for combating heavy or extreme icing conditions. For MAX FLOW mode to operate, the PRIMARY switch must be in either NORM or HIGH. With either of these modes operating, MAX FLOW mode may be activated by selecting the AIRFRAME position (spring-loaded up) on the MAX FLOW switch. The MAX FLOW switch is spring-loaded and will immediately return to the center position.

(Continued Next Page)

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

TKS ICE PROTECTION SYSTEM OPERATION, INDICATION AND MESSAGING (Continued)

Activation of MAX FLOW AIRFRAME mode will run both metering pumps continuously for a period of two minutes. At the end of two minutes, the system will return to the mode of operation selected with the PRIMARY mode switch. MAX FLOW mode will terminate operation after:

1. The timer turns the mode OFF after two minutes, or
2. The PRIMARY mode switch is selected to OFF.

CAUTION

Each two minute use of MAX FLOW AIRFRAME mode consumes approximately one gallon of ice protection fluid, representing 5% of the total fluid capacity of the ice protection system. Use MAX FLOW AIRFRAME mode only when in heavy or extreme icing conditions. If conditions require MAX FLOW AIRFRAME use, exit the icing conditions immediately.

The windshield system may be activated by selecting the WINDSHIELD position (spring-loaded down) on the MAX FLOW switch. The MAX FLOW switch is spring-loaded and will immediately return to the center position. The windshield pump will run for approximately four seconds after release of the switch. If the MAX FLOW switch is continuously held in the WINDSHIELD position, the windshield pump will continue to run when held down and four seconds after the switch is released.

The windshield de-icing system is designed for intermittent operation to establish pilot's forward vision as conditions require. The timer interval is designed to provide an optimum burst of fluid for clearing the windshield of ice. Momentary selection and release of the WINDSHIELD switch will achieve the desired result.

(Continued Next Page)

CESSNA
MODEL 208B 867 SHP
GARMIN G1000

SECTION 9 - SUPPLEMENTS
SUPPLEMENT 1

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)
TKS ICE PROTECTION SYSTEM OPERATION,
INDICATION AND MESSAGING (Continued)

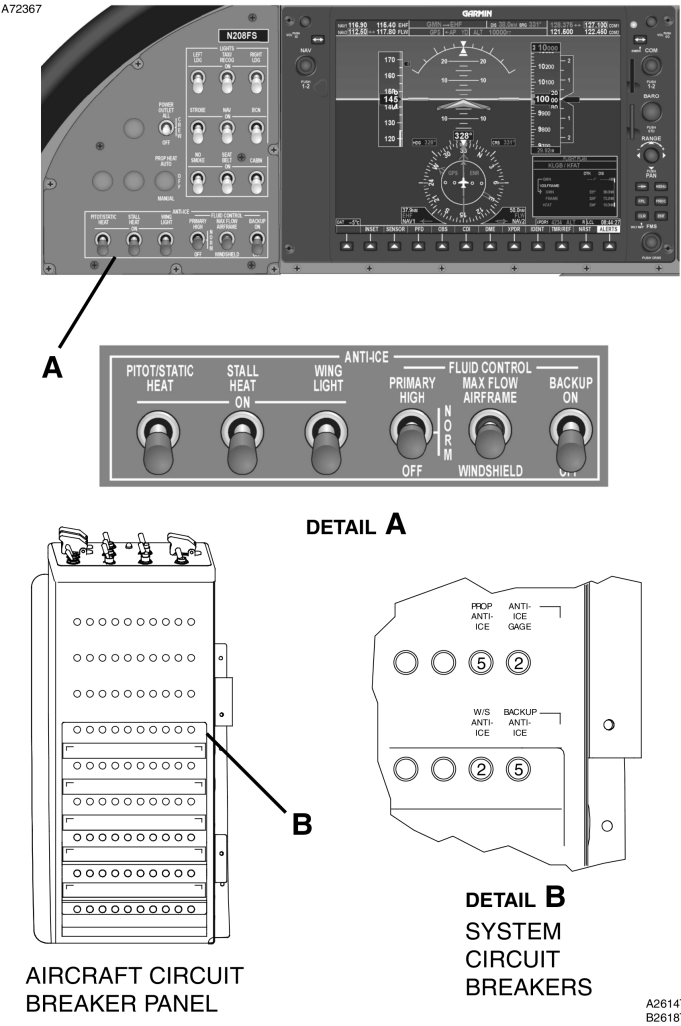


Figure S1-7

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

TKS ICE PROTECTION SYSTEM OPERATION, INDICATION AND MESSAGING (Continued)

WARNING

The windshield pump is rated for intermittent use only and is the primary means of keeping the windshield free of ice accumulation. Continuous operation may damage the pump and reduce ability to keep the windshield clear of ice accumulation. Do not operate the WINDSHIELD position of the MAX FLOW switch continuously longer than 6 seconds. Allow at least 10 seconds between operations.

The final operational mode of the system is the BACKUP mode. BACKUP mode is achieved by selecting the ON position (up) on the BACKUP switch. BACKUP mode activates the second metering pump (opposite of the pump used in HIGH mode) and runs continuously like HIGH mode. BACKUP mode is independent and isolated from the other ice protection operational modes. It is provided as a redundant capability in the event the normal operational modes are rendered inoperable.

If BACKUP mode is selected in flight as prescribed in the Emergency Procedures of this supplement, then the PRIMARY Switch should be set to the OFF position, and the PRI ANTI-ICE circuit breaker pulled to deactivate the PRIMARY system.

CAUTION

Other than the prescribed preflight steps outlined in the Normal Procedures of this supplement, BACKUP mode should never be used during normal operations. It is intended for emergency use only (as detailed in the Emergency Procedures of this supplement). When operating the TKS Ice Protection System under normal procedures, make sure that the BACKUP Switch is selected to OFF.

(Continued Next Page)

AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

LOW AIRSPEED AWARENESS SYSTEM

The Low Airspeed Awareness (LAA) system is designed to warn the pilot when airspeed falls below 97.5 ± 2.2 knots while operating in icing conditions. The system consists of an annunciator with a white or amber background and black letters, which reads BELOW ICING MIN SPD.

LAA ANNUNCIATOR

A87666

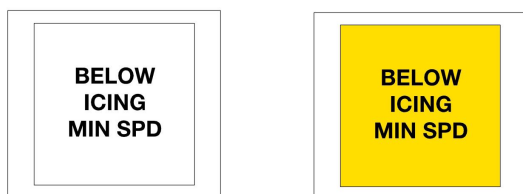


Figure S1-12

This annunciator is mounted in the instrument panel directly in front of the pilot, and is activated by an airspeed switch plumbed off the pilot's pitot and static lines. A remote mounted relay box provides logic for the annunciator, and for the stall warning horn, which provides an aural alert. Power is supplied from the LEFT PITOT HEAT and RIGHT PITOT HEAT circuit breakers and through the P/S HEAT/LOW A/S AWARE switch. This switch has two positions, ON and OFF and the Low Airspeed Awareness System is powered only when the P/S HEAT/LOW A/S AWARE switch is ON and at least one of the two circuit breakers is IN.

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AIRPLANE AND SYSTEMS DESCRIPTION (Continued)

LOW AIRSPEED AWARENESS SYSTEM (Continued)

When the P/S HEAT/LOW A/S AWARE switch is turned ON prior to takeoff, the BELOW ICING MIN SPD annunciator will be illuminated white, indicating that the airspeed is below 97.5 ± 2.2 knots. Once the airspeed exceeds 97.5 ± 2.2 knots, the BELOW ICING MIN SPD annunciator will extinguish. If the airspeed falls back below 97.5 ± 2.2 knots, the BELOW ICING MIN SPD annunciator will flash between amber and white and the stall warning horn will sound intermittently until the airspeed is increased above 97.5 ± 2.2 knots.

Pressing the flashing BELOW ICING MIN SPD annunciator, which incorporates a momentary switch, silences the stall warning horn and causes the annunciator to stop flashing. The annunciator will remain illuminated solid white as long as the airspeed is below 97.5 ± 2.2 knots. The autopilot must be disengaged when the flashing amber and white annunciation is activated unless the airplane is equipped with the Electronic Stability and Protection System (ESP™). Refer to Supplement 30, Electronic Stability and Protection System (ESP™), the Garmin G1000 Cockpit Reference Guide, and the Garmin G1000 Pilot's Guide for further information regarding ESP™.

The BELOW ICING MIN SPD annunciator brightness is controlled by the LED PANELS/ANNUN rheostat located on the lower part of the instrument panel to the left of the control pedestal. For daytime operations the rheostat should be rotated full counter-clockwise to the DAY position to make sure it is visible in bright light conditions. For all other lighting conditions, the LED PANELS/ANNUN rheostat can be adjusted clockwise to control lighting intensity.

ELECTRONIC STABILITY AND PROTECTION (IF INSTALLED)

The underspeed protection (USP) activation airspeeds are scheduled with P/S HEAT/LOW A/S AWARE switch position. When the P/S HEAT/LOW A/S AWARE switch is turned ON, underspeed protection will engage at approximately 95 KIAS or LAA activation, depending on the active autopilot vertical mode. Refer to Supplement 30, Electronic Stability and Protection System (ESP™), the Garmin G1000 Cockpit Reference Guide, and the Garmin G1000 Pilot's Guide for further information.