



Super King Air 200 Series



COMMUTER CATEGORY CONVERSION INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

ICA Manual No. 006-30
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September 2021

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REVISION LOG

Rev. No.	Rev. Date	Changes	Page(s) Affected
1	07/12/13	Page numbering.	6 thru 29, A1 thru A45, B1 thru B23
		Over-speed warning switch description, inspection, removal & installation.	1, 2, 26
		Exit sign above main cabin door; electric exit sign description, inspection, removal & installation.	2, 23, 24
		Emergency lighting power supply description, removal & installation.	2, 3, 14, 15
		Airworthiness limitations and life limits.	6
		Placard illustrations.	10 thru 12
		Emergency lighting battery charge procedure, removal, inspection & installation.	14, 15
		Ice mode stall warning tip gram force values; ground & flight cal. forms.	19 thru 21
		Emergency light & LED indicator-caution light installations.	24
		Emergency lighting functional test form added.	25
		Wing inspection times.	28, 29
2	05/31/16	General information and Beechcraft AMM designations.	1-5, 5.1, 12.1, 24.7, 26.1-26.2, 27.2, 27.4, 33.1, 34.1-34.3
		King Air 250 and Pro Line Fusion information.	1, 2, 4, 5.1, 24.7
		Removed Appendices A (IPC) & B (WD) & Ch. 7.	2, 5, 7.1, 33.5 Apdx. A, Apdx. B
		Wiring diagram drawings.	1
		Airworthiness limitation information; wing structure airworthiness limits & inspections; Charts 3, 4A, 201, 57A & 57B deleted.	4.1-4.9, 5.1, 57.1- 57.6
		Engine fire extinguisher system airworthiness limits, replacement, inspections & servicing.	4.9, 5.1-5.4, 26.1- 26.2
		Self-illuminating exit sign airworthiness limits & inspection.	4.9, 5.1, 5.3, 33.1
		Phase & Biennial inspection requirements and item descriptions	5.1, 5.3, 5.4
		High utilization inspection program.	5.1-5.2
		Placard description; figure numbering; illustrations of emerg. light system placards updated & added.	11.1, 11.3-11.7
		Tire pressures revised & added for 14,000-lb. airplane.	12.1
		Location information for emerg. light power supply; figure numbering.	24.1-24.8
		Ice mode stall warning procedures & stall vane tip gram tolerances.	27.2-27.4
		Electric exit sign inspection & information; figure numbering; "optional" deleted.	2, 3, 5.3, 33.2- 33.5
3	12/01/19	Halo 275 designation added.	All pages
		Introduction info. updated, drawings now ref. & not required for ICA	1
		IPC 006-40 & WDM 006-50 replace drawings.	5



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INTRODUCTION

GENERAL

This manual provides Instructions for Continued Airworthiness (ICA) for Textron Aviation (Beechcraft) Super King Air 200 series airplanes modified by CenTex Aerospace's (CTA) *Halo 250 Conversion* or *Halo 275 Conversion* approved under FAA Supplemental Type Certificate (STC) number SA11103SC. Both *Halo 250 Conversion* and *Halo 275 Conversion* add commuter category safety systems and equipment designed to enhance aircraft and passenger safety. They also permit changing airplane category from normal to commuter category in order to operate at higher approved weight limits. Refer to *Description of Equipment* on the following pages for descriptions of each of the commuter category safety systems and equipment installed by the *Halo 250/275 Conversion*. The two STC options for airplane category are identified as follows:

- Option 1: Airplane in normal category; no increase in takeoff weight limit (12,500 pounds).
- Option 2: Airplane in commuter category; takeoff weight limit increases to 13,420 pounds for *Halo 250 Conversion* or 14,000 pounds for *Halo 275 Conversion*.

When information in this manual applies to only one option, it will be specifically identified by option number.

This manual supplements the existing aircraft maintenance manual (AMM), Textron/Beechcraft Super King Air 200 Series Maintenance Manual, P/N 101-590010-19 and Textron/Beechcraft Super King Air Model B200GT/B200CGT Fusion Maintenance Manual, P/N 434-590168-0009. References to these manuals shall be made herein as "Beechcraft AMM" or simply "AMM."

ASSOCIATED DRAWINGS

The following CenTex Aerospace drawings are provided with the STC modification kit. These drawings are listed as reference and are not required for maintaining the continued airworthiness of the airplane. Contact CenTex Aerospace to obtain a copy of any drawing listed below.

Number	Title
006-0000-1000	INSTALLATION INSTRUCTIONS - KING AIR 200 SERIES
006-0000-2000	INSTALLATION INSTRUCTIONS - KING AIR 250
006-1001-0000	INSTALLATION, PLACARDS & MARKINGS, KING AIR 200 SERIES
006-1002-0000	INSTALLATION, OVERSPEED WARNING, KING AIR 200 SERIES
006-1003-0000	INSTALLATION, FLOOR PROXIMITY PATH MARKING, KING AIR 200 SERIES
006-1004-0000	INSTALLATION, EMERGENCY EXIT SIGN, KING AIR 200 SERIES
006-1005-0000	INSTALLATION, EMERGENCY LIGHTING, KING AIR 200 SERIES
006-1006-0000	INSTALLATION, TRIM OUT OF RANGE WARNING, KING AIR 200 SERIES
006-1009-0000	INSTALLATION, ENGINE FIRE EXTINGUISHER, KING AIR 200 SERIES
006-1010-0000	INSTALLATION, ICE MODE, STALL WARNING, KING AIR 200 SERIES
006-1011-0001	WIRING DIAGRAM – OVERSPEED WARNING
006-1011-0002	WIRING DIAGRAM – EMERGENCY LIGHTING
006-1011-0003	WIRING DIAGRAM – TRIM OUT-OF-RANGE
006-1011-0004	WIRING DIAGRAM – ENGINE FIRE EXTINGUISHER
006-1011-0005	WIRING DIAGRAM – ICE MODE STALL WARNING

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DESCRIPTION OF EQUIPMENT

The safety systems and equipment installed on King Air 200 series aircraft for this STC are described below. The aircraft is not required to have all of the safety systems when in STC Option 1. However, all applicable safety systems must be installed for STC Option 2. See page 6 of this manual for a list of the safety systems and equipment installed on this airplane.

A. Placards and Markings:

New placards mark the switches, circuit breakers, and annunciator lights added as part of this conversion. A new cabin door handle placard provides new door closing and opening markings that comply with commuter category requirements. Two-inch wide color band placards outlining the exterior borders of the cabin door and emergency exit window make these exits more visible to emergency rescue personnel in case of an accident. See Chapter 11 for maintenance information.

B. Over-Speed Warning System:

The over-speed warning system provides the pilot with an aural warning anytime the airplane exceeds the maximum operating speed or Mach number. For King Air models 200, 200C, A200, A200C, B200, B200C, B200GT, and B200CGT, the warning horn automatically sounds at airspeeds above 259 KIAS or an airspeed corresponding to 0.58 Mach and above.

NOTE: The CenTex over-speed warning system is not installed on King Air B200GT, B200CGT, or other models equipped with Rockwell Collins Pro Line 21 or Pro Line Fusion avionics system, which includes an aural over-speed warning.

For King Air models 200CT, 200T, A200CT, B200CT, and B200T, the warning horn automatically sounds at airspeeds above 244 KIAS or an airspeed corresponding to 0.472 Mach and above. The warning horn stops when the pilot reduces speed and the airspeed drops back under the limit.

The system uses an over-speed warning switch mounted in the center cockpit pedestal or behind the instrument panel. The switch senses pitot and static pressures from lines connected directly into the pilot's pitot and static system lines. The switch is preset and is not adjustable. The warning horn is located on the instrument panel glare shield. Power for the over-speed warning system comes from the dual fed bus through a 5-amp circuit breaker in the copilot circuit breaker panel labeled O/S WARN. A test switch allows the pilot or ground crew to test the system. The test switch is a momentary toggle switch mounted in the pilot outboard sub panel and labeled OVERSPEED WARN TEST. See Chapter 34 for maintenance information.

In conjunction with the overspeed warning system, the STC changes the Mach limit "Barber Pole" on certain airspeed indicators from 0.52 to 0.58 Mach. This adjustment is made for mechanical airspeed indicators on King Air models 200, 200C, A200, A200C, B200, and B200C. CenTex identifies adjusted airspeed indicators with the label "CenTex Mod 006-31." See Chapter 34 for airspeed indicator adjustment and calibration procedures.

C. Emergency Escape Path Markings:

Part of the overall cabin emergency lighting system, the emergency escape path markings are photo luminescent strips positioned on the floor along both sides of the main cabin aisle starting at the main cabin door entry and ending at the emergency exit window. This provides passengers and crew an illuminated pathway to guide them to the nearest exit in dark or smoky conditions. The strips must be charged prior to each flight as part of the pre-flight procedure. This can be done using cabin lighting or sunlight. See Chapter 33 for maintenance information.

D. Illuminated Exit Signs:

Part of the overall cabin emergency lighting system, the illuminated exit signs identify where the cabin exits are found. One exit sign is above the emergency exit window, and the second exit sign is on the left aft cabin bulkhead, which leads to the main cabin door. If the airplane does not have a cabin bulkhead, then the exit sign is located on the trim panel above the main cabin door. The exit signs are either self-illuminating or electrically powered. The self-illuminating signs use phosphor coated tubes

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filled with tritium gas that can last a long time without loss of brightness. Electrically powered exit signs get power from the emergency lighting system. See the section below for a description of this system. See Chapter 33 for maintenance information.

E. Cabin Emergency Lighting System:

The cabin emergency lighting system is a self-contained, battery-powered lighting system that automatically activates when the airplane's electrical power is lost, or when the airplane experiences a deceleration of 2g's or greater. The lighting system, together with the escape path markings and exit signs, guide passengers to the nearest exit in the event of an emergency.

The lighting system has two LED flood lamps, one mounted in the cabin ceiling near the center of the main cabin and another above the cabin door entryway. In addition, the system may also provide power to the electrically powered exit signs described in the section above. Power to the lights and exit signs (if installed) comes from a dedicated power supply containing two 12-volt sealed lead-acid batteries. The power supply houses the batteries within an aluminum box mounted under the main cabin floor. Charging for the batteries comes from the aircraft's dual fed electrical bus through a 5-amp circuit breaker in the copilot circuit breaker panel labeled EMERG LIGHT. This circuit breaker can power the lights and exit signs directly when the main aircraft battery switch is on.

Two switches control the emergency lighting system and provide the required functionality. A cabin switch located next to one of the overhead flood lamps connects the power supply to the lights. This switch allows the crew to turn the lights on or off. A guarded, three-position, cockpit control switch located in the copilot sub-panel provides the pilot with the ability to arm or manually control the lights.

Two amber indicators located in the copilot instrument panel warn the pilot when the system switches are not set properly for flight. The CABIN SW OFF indicator illuminates when the cabin switch is off. The LT NOT ARMED indicator illuminates when the cockpit control switch is in either the ON or OFF position. Both amber indicators extinguish when the cabin switch is ON and the control switch is in the ARM position.

When exiting the airplane both the control switch and the cabin switch should be placed in the OFF position. In the event that the lights are left on, the power supply has a built in timer relay that turns the emergency cabin lights off automatically after 10 minutes. The crew can reset the timer relay by turning the cabin switch OFF. Once reset, the crew can turn the cabin lights on again if needed. See Chapters 24 and 33 for maintenance information.

F. Takeoff Trim Out-of-Range Warning System:

The takeoff trim warning system alerts the pilot prior to takeoff by an aural warning when the elevator trim tab is outside the normal takeoff range. Power to the system comes through the auto-feather system switch. The warning system activates on the ground when the pilot places the auto-feather switch in the ARM position and advances the left engine throttle lever past 90% N₁. A roller, lever-actuated micro-switch located in the cockpit pedestal, forward of the elevator trim wheel contacts a trigger plate mounted on the elevator trim wheel, opposite the takeoff trim range marks. When elevator trim is within the normal takeoff range, the roller remains in contact with the trigger plate, which presses against the switch lever and keeps the switch contacts closed. If the pilot moves the elevator trim up or down out of the takeoff range, the roller loses contact with the trigger plate, which opens the switch contacts (extended with audible click) and activates the trim out-of-range warning horn. The system deactivates after lift-off by means of the signal from the landing gear weight-on-wheels switch. In flight, the elevator trim warning is inoperative. See Chapter 27 for maintenance information.

G. Engine Fire Extinguisher System:

The engine fire extinguisher system is identical to the optional engine fire extinguisher system provided by the factory. Refer to Section 26-20-00 of the Beechcraft AMM for a description. See Chapter 26 for maintenance information.

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H. "Ice Mode" Stall Warning System for Flight in Icing Conditions:

The "ice mode" stall warning system alerts the pilot by an aural warning when the airplane's airspeed drops to within 10 knots above the stalling speed of an airplane contaminated with ice. The existing stall warning system does not have the capability to adjust for the effect that icing has on stall speed. Ice accretion causes the wing to stall at a lower angle-of-attack and can result in a 15% to 20% increase in stall speed.

This ice mode system activates automatically when the pilot identifies ice accumulation on the wing and selects either SINGLE or MANUAL on the surface de-ice boot switch. A white indicator switch located on the glare shield, labeled STALL WARNING ICE MODE, illuminates when the system is active. The pilot can deactivate the system by depressing the switch.

Power for the ice mode system comes from the existing stall warning system. When activated, the ice mode system diverts the signals from the existing stall lift computer located under the floor behind the cockpit through a 24-pole switching relay to a new, ice mode stall lift computer installed in the center cockpit pedestal. This second stall lift computer is calibrated at installation for the higher stall speeds that occur when the aircraft experiences ice accumulations.

The system works with the same stall/lift vane and stall warning horn as the existing system. The ice mode stall lift computer senses voltage from the stall/lift vane. When the output of the lift vane reaches a preset voltage, the stall lift computer triggers the stall warning horn to sound. The initial sound of the stall warning horn in the ice mode is a 1-Hertz pulsing tone. If angle-of-attack increases further, the duration of the pulsing increases until the tone becomes constant. On airplanes with Rockwell Collins Pro Line 21 or Fusion, the tone is constant.

The system has three different voltage settings, one for each flap position; which enables it to provide accurate warning at each flap setting. These voltage settings are uniquely selected so that the effect of ice on the wings is considered. With wing flaps up, the stall warning activates at approximately 20 knots higher airspeed in the ice mode.

When the pilot deactivates the ice mode system, the relay switches the input signals back to the existing stall lift computer, which reverts back into the "normal mode" stall warning system. See Chapter 27 for maintenance information.

I. Beechcraft King Air 250, 250C, 260, and 260C with Rockwell Collins Pro Line 21 or Pro Line Fusion Avionics System:

On these King Airs, the Rockwell Collins adaptive flight displays (AFD), which consist of two primary PFD screens and a multi-function MFD screen, and the standby display unit (ESIS or similar) have been updated to indicate the airspeed values appropriate to the increased gross weight for airplanes operating in commuter category under STC Option 2. These changes do not affect the system's inspection or maintenance procedures. Refer to the Beechcraft AMM for maintenance information.



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AIRPLANE MAINTENANCE

Airworthiness limitations, inspection procedures, servicing information, and maintenance procedures provided in this manual apply to the equipment and modifications associated with this STC and supplement the standard aircraft maintenance manual (AMM); refer to the latest revision of the Beechcraft AMM. For King Air 200 series aircraft modified by this STC, follow the inspection, servicing, and maintenance procedures in the AMM, except as provided herein. This manual uses the same chapter numbering and general format as the AMM.

For standard aviation maintenance practices, such as cutting, splicing, and replacing wire, routing and securing lines, inspecting electrical wiring and equipment, etc. use the techniques and practices found in FAA Advisory Circular AC 43.13-1B/2B or later FAA approved revision.

REPLACEMENT PARTS

Refer to CenTex Aerospace Illustrated Parts Catalog (IPC) no. 006-40 for a list of commuter category safety systems and equipment parts installed on the airplane. Contact CenTex Aerospace to order replacement parts.

WIRING DIAGRAMS

Refer to CenTex Aerospace Wiring Diagram Manual (WDM) no. 006-50 for wiring details of the commuter category safety systems and equipment installed on the airplane.

MANUAL UPDATES

A copy of this ICA Manual is provided with the STC upon installation. When changes to this ICA Manual are made, CenTex Aerospace will provide updates to the registered airplane owner by email or direct mail. Contact CenTex Aerospace to make other arrangements. If there is a change in airplane ownership or operator, please notify CenTex Aerospace in order to keep all contact information current.

The changes to the ICA manual will be identified by revision number and date in the Revision Log. CenTex will provide the owner with the revised pages, a Revision Log, and an updated List of Effective Pages. The owner, or responsible party, will add or replace the pages affected by the revision and make an entry in the Record of Revisions in order to document the update to the ICA Manual is accomplished.

PROCEDURES TO CHANGE STC OPTIONS

The STC allows the operator to switch between STC Option 1 (normal category) and STC Option 2 (commuter category) as needed. The procedures for changing STC options are found in CTA Drawing 006-0000-1000 for King Air 200/B200 series and CTA Drawing 006-0000-2000 for King Air 250/260 series. Changing the STC option requires reissuance of the airworthiness certificate in the appropriate airplane category.

ASSISTANCE

For assistance with continuing airworthiness issues or any other issues related to this STC, contact CenTex Aerospace at the following address or telephone number.

CenTex Aerospace Inc.
7925 Karl May Drive
Waco, Texas 76708
(254) 752-4290
<http://www.centex.aero/>



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HALO 250/275 SAFETY SYSTEMS & EQUIPMENT INSTALLED

Identify the aircraft model, serial number, STC option, and the CenTex Halo 250/275 systems and equipment installed on the airplane. A copy of this list should be accessible for maintenance personnel to reference when performing maintenance on the aircraft.

A/C Model: _____

A/C Serial No. _____

STC Option (check one): ☐ Option 1 (Normal Cat.) ☐ Option 2 (Commuter Cat. & IGW)

SYSTEM/EQUIPMENT	INSTALLED
1. Cabin Door and Emergency Exit Window Borders	<input type="checkbox"/>
2. Cabin Door Handle Placard	<input type="checkbox"/>
3. Commuter Placard on Overhead Panel (Option 2 only)	<input type="checkbox"/>
4. Overspeed Warning System	<input type="checkbox"/>
5. Emergency Escape Path Markings (Floor Path)	<input type="checkbox"/>
6. Electric Exit Signs	<input type="checkbox"/>
7. Self-Illuminating Exit Signs	<input type="checkbox"/>
8. Emergency Lighting System	<input type="checkbox"/>
9. Takeoff Trim Out-of-Range Warning System	<input type="checkbox"/>
10. Engine Fire Extinguisher System (CTA or OEM)	<input type="checkbox"/>
11. Ice Mode Stall Warning System	<input type="checkbox"/>
12. Airspeed Indicators Modified per CTA Spec. 006-31	<input type="checkbox"/>
13. Pro Line 21 or Pro Line Fusion Updated for IGW (King Air 250/260 series)	<input type="checkbox"/>

NOTE: IGW refers to increased gross weight approved under STC Option 2.



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CHAPTER 4

AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

GENERAL

Beechcraft King Air 200 series airplanes modified by CenTex's Halo 250/275 Conversion STC shall follow the airworthiness limitations specified in Beechcraft Super King Air 200 Series Airworthiness Limitations Manual, P/N 101-590010-453, except where noted by this Chapter.

The Halo 250/275 STC does not change any of the structural limitations that currently apply to the various airplane configurations identified below in *Airplane Configurations*. Refer to *Structural Limitations* on the following page in order to find the structural life limits and structural inspection times, intervals, and procedures that apply to your airplane configuration.

AIRPLANE CONFIGURATIONS

The table below assigns a configuration number to each airplane modified by CenTex's Halo 250/275 STC. The configuration number, by row, includes each configuration item denoted by a black dot. Information about each configuration item is specified below. Determine the configuration number that applies to your airplane before going to *Structural Limitations*.

TABLE 4.1 - Airplane Configurations Defined

CONFIG.	STC OPTION 1	STC OPTION 2	TENSION WING	SHEAR WING	BLR WINGLET
1	•		•		
2	•			•	
3		•	•		
4		•		•	
5	•		•		•
6	•			•	•
7		•	•		•
8		•		•	•

STC OPTION 1

Any King Air 200 series airplane operating in normal category with a maximum takeoff weight of 12,500 pounds.

STC OPTION 2

Any King Air 200 series airplane operating in commuter category with a maximum takeoff weight of either 13,420 or 14,000 pounds.



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TENSION WING MODELS

Any King Air 200 series airplane with the original Beech "tension fitting" wing design, which include, but are not limited to, King Air model 200 and B200 serial numbers BB-2 thru BB-1157, BB-1159 thru BB-1166, and BB-1168 thru BB-1192; model 200C and B200C serial numbers BL-1 thru BL-72; model 200T and B200T serial numbers BT-1 thru BT-30; model 200CT and B200CT serial numbers BN-1 thru BN-4. The tension wing employs four bolts in tension at the upper and lower, forward spar and rear spar fittings to attach each outboard wing to the center wing section. The main spar has a solid aluminum spar cap.

SHEAR WING MODELS

Any King Air 200 series airplane with the current Beech "shear fitting" wing design, which include, but are not limited to, King Air model B200 serial numbers BB-1158, BB-1167, BB-1193 and up; model B200C serial numbers BL-73 and up; model B200T serial numbers BT-31 and up; model B200CT serial numbers BN-5 and up; model B200GT serial numbers BY-1 and up; and model B200CGT serial numbers BZ-1 and up. The shear wing uses a double clevis and pin joint in place of the tension bolt at the lower, forward spar fitting. This "shear fitting" plus the three tension bolts carried over from the original design attach the outboard wings to the center wing section. The main spar has a fail-safe (layered and bonded) aluminum spar cap.

NOTE: Airplane serial numbers below BB-1335, BL-133 and BT-35 must have Beechcraft Kit 101-4050 bushing replacements installed prior to installation of this STC.

BLR AEROSPACE WINGLETS

Any King Air model 200, 200C, B200, B200C, B200CGT or B200GT airplane equipped with BLR Aerospace's *Winglet System* in accordance with STC SA01615SE. This also includes any King Air 250 series airplane and any King Air model B200GT modified by BLR Aerospace's *Ultimate Performance Package* under STC SA02131SE. Refer to BLR Aerospace Document BLR-200-950, *Instructions for Continued Airworthiness-King Air 200 Winglet System*, for more information about BLR winglets and the installation of Gurney flaps.

HALO 250/275 FLIGHT PROFILE

The Halo 250/275 flight profile is a typical executive flight profile in which the majority of the flight is spent above a cruise altitude of 10,000 feet with a flight duration of one hour or more. The component life limits in this Chapter are based on operating the airplane in the Halo 250/275 flight profile 95% of the time. Contact CenTex Aerospace regarding airworthiness limitations for flight profiles that do not meet these criteria.

STRUCTURAL LIMITATIONS

The Halo 250/275 STC does not change the structural limitations that currently apply to these aircraft. The appropriate structural limitations are identified below for each configuration number defined by Table 4.1.

CONFIGURATION NO. 1, 2, 3, 4, 5 OR 7

Refer to Beechcraft Airworthiness Limitations Manual, P/N 101-590010-453, for all structural limitations by airplane serial number. Follow all structural inspection times, intervals, and procedures in accordance with the Beechcraft manuals.

NOTE: BLR Aerospace requires an airplane in configuration no. 5 or 7 have Gurney flaps installed.



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CONFIGURATION NO. 6 OR 8

For an airplane that has BLR Aerospace Gurney flaps installed, refer to Beechcraft Airworthiness Limitations Manual, P/N 101-590010-453, for all structural limitations by airplane serial number. Follow all structural inspection times, intervals, and procedures in accordance with the Beechcraft manuals.

For an airplane that does NOT have Gurney flaps installed:

- 1) Refer to Tables 3.B. and 3.C. in Beechcraft Airworthiness Limitations Manual, P/N 101-590010-453, for fuselage and tail structural limitations by airplane serial number. Follow the structural inspection times, intervals, and procedures prescribed for these areas in accordance with the Beechcraft manuals.
- 2) Refer to Table 4.2 in this manual for wing structural limitations by airplane serial number. The life limits in Table 4.2 supersede the life limits in Table 3.D. *Wing and Associated Structure* in Beechcraft Airworthiness Limitations Manual, P/N 101-590010-453.
- 3) Refer to Table 4.3 in this manual for wing inspection times and intervals. Perform the wing inspection procedures required by Chapter 57-17-02 and Chart 201 in Beechcraft Structural Inspection and Repair Manual, P/N 98-39006 Revision D, or subsequent, in accordance with the inspection times and intervals identified in Table 4.3. The inspection times and intervals in Table 4.3 supersede the times and intervals in Chart 201 of the Beechcraft manual.



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**TABLE 4.2 – Wing and Associated Structure for Configuration no. 6 or 8
without Gurney Flaps**

Component	Effectivity	Life
(1) Wing Center Section	BB-1158, BB-1167, BB-1193 thru BB-1203, BB-1207 thru BB-1295, BB-1297 thru BB-1301, BB-1303, BB-1304, BB-1306 thru BB-1308, BB-1310 thru BB-1313, BB-1316 thru BB-1334, BL-124 thru BL-127, BL-129, BL-131, and BL-132 with Beechcraft Kit no. 101-4050 installed; BB-1335 thru BB-1337, BB-1344 thru BB-1375, BB-1377 thru BB-1382, BB-1385 thru BB-1433, and BB-1435 thru BB-1512; BL-133 thru BL-141	18,000 hours unless Beechcraft Kit no. 101-1200 is installed.
(2) Wing Center Section	BB-1158, BB-1167, BB-1193 thru BB-1203, BB-1207 thru BB-1295, BB-1297 thru BB-1301, BB-1303, BB-1304, BB-1306 thru BB-1308, BB-1310 thru BB-1313, BB-1316 thru BB-1334, BL-124 thru BL-127, BL-129, BL-131, and BL-132 with Beechcraft Kit no. 101-4050 and Kit no. 101-1200 installed; BB-1335 thru BB-1337, BB-1344 thru BB-1375, BB-1377 thru BB-1382, BB-1385 thru BB-1433, BB-1435 thru BB-1512, and BL-133 thru BL-141 with Beechcraft Kit no. 101-1200 installed; BB-1513 and after; BL-142 and after; BY-1 and after; BZ-1 and after	Life not limited provided inspections identified in Table 4.3 of this manual are performed.
(3) Outboard Wing Structure	BB-1158, BB-1167, BB-1193 thru BB-1203, BB-1207 thru BB-1295, BB-1297 thru BB-1301, BB-1303, BB-1304, BB-1306 thru BB-1308, BB-1310 thru BB-1313, BB-1316 thru BB-1334, BL-124 thru BL-127, BL-129, BL-131, and BL-132 with Beechcraft Kit no. 101-4050 installed; BB-1335 thru BB-1337, BB-1344 thru BB-1375, BB-1377 thru BB-1382, BB-1385 thru BB-1433, BB-1435 thru BB-1539, BB-1541, and BB-1542; BL-133 thru BL-141	23,750 hours unless Spar Cap is replaced with Beechcraft P/N 101-110085-1 and -2.

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TABLE 4.2 (continued) – Wing and Associated Structure for Configuration no. 6 or 8 without Gurney Flaps

Component	Effectivity	Life
(4) Outboard Wing Structure	BB-1158, BB-1167, BB-1193 thru BB-1203, BB-1207 thru BB-1295, BB-1297 thru BB-1301, BB-1303, BB-1304, BB-1306 thru BB-1308, BB-1310 thru BB-1313, BB-1316 thru BB-1337, BB-1344 thru BB-1375, BB-1377 thru BB-1382, BB-1385 thru BB-1433, BB-1435 thru BB-1539, BB-1541, BB-1542, BL-124 thru BL-127, BL-129, and BL-131 thru BL-141 with Beechcraft P/N 101-110085-1 and -2 Spar Cap installed; BB-1540, BB-1543 and after; BL-141 and after; BY-1 and after; BZ-1 and after	Life not limited provided inspections identified in Table 4.3 of this manual are performed.
(5) Wing to Fuselage Attach Angles, Beechcraft P/N 101-120032-3 and -4	All airplanes in configuration no. 6 or 8	19,500 hours unless Beechcraft Kit no. 101-1202 is installed.
(6) Wing to Fuselage Attach Angles, Beechcraft P/N 101-120032-3 and -4	All airplanes in configuration no. 6 or 8 with Beechcraft Kit no. 101-1202 installed	30,000 hours
(7) (*) Upper Forward, Upper and Lower Aft Wing Bolts and Nuts	All airplanes in configuration no. 6 or 8	Replace at 20 years of service or 20,000 hours, whichever occurs first (Beechcraft Kit no. 101-4025 & Kit no. 101-4026).
(8) Lower Forward Wing Bolts and Nuts	All airplanes in configuration no. 6 or 8	Replace at 5 years or anytime removed (Beechcraft Kit no. 101-4083).

NOTE: (*) These parts are not practical to mark with a part number/serial number. If removed before the end of its life limit, bag the part and identify it with the accumulated hours/cycles in service. Maintain records to ensure compliance with the life limit.

NOTE: The limitations in Table 4.2 are equivalent to Table 6-2 in BLR Aerospace ICA Document BLR-200-950.

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**TABLE 4.3 – Wing Inspection Schedule for Configuration no. 6 or 8
without Gurney Flaps**

Index No. (*)	Inspection Area	Initial Inspection	Recurring Inspection Interval	Component Replacement Schedule
1.	Lower forward (main) spar lugs	15,000 hours	6,000 hours	None
2.	Outboard wing panel lower forward spar cap P/N 101-110085-1 and -2 (spar assy. P/N 101-110084)	15,000 hours	3,000 hours	None
3.	Center section lower forward spar cap	18,000 hours	3,000 hours	None
4.	Center section belly skin	10,500 hours	3,000 hours	None
5.	Center section lower aft spar See Note 1	15,000 hours	1,500 hours See Note 2	None
6.	Center section and outboard wing panel aft spar lower fittings See Note 1	15,000 hours	1,500 hours See Note 2	None
7.	Lower forward main spar clevis fittings	5 years	5 years	None
8.	Outboard wing panel upper and lower main spar caps	5 years	Annually	Refer to Table 4.2 Components (3) & (4) in this manual
9.	Lower forward wing bolt	N/A	N/A	Refer to Table 4.2 Component (8) in this manual
10.	Upper forward, upper and lower aft wing bolts	First scheduled inspection after date on airplane's Standard Airworthiness Certificate	First scheduled inspection after wing bolt replacement	Refer to Table 4.2 Component (7) in this manual
11.	Flat surfaces, depressions, counterbores, and bolt bores at the upper forward, upper and lower aft wing joining points	5 years	5 years	None
12.	Wing bolts at the upper forward, upper and lower aft wing attach points	5 years	5 years	Refer to Table 4.2 Component (7) in this manual
13.	Wing forward spar angle	18,000 hours	3,000 hours	None

(*) The index number in this table corresponds to the index number in Chart 201, Chapter 57-17-02 of Beechcraft Structural Inspection and Repair Manual, P/N 98-39006 Rev. D (SIRM).

NOTE 1 (per SIRM): The installation of Beechcraft Kit no. 101-4077 is MANDATORY. The inspection should entail wing B.L. 123.309 to B.L. 28.72.



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**TABLE 4.3 (continued) – Wing Inspection Schedule for Configuration no. 6 or 8
without Gurney Flaps**

NOTE 2 (per SIRM): This recurring inspection interval does not require fastener removal, but requires an Eddy Current inspection to be performed on the vertical, aft and fwd flange of the rear spar shown in Figure 205, View A-A, Chapter 57-17-02 of Beechcraft Structural Inspection and Repair Manual, P/N 98-39006 Rev. D.

NOTE 3: The inspection times and intervals in Table 4.3 are equivalent to those in Table 6-1 in BLR Aerospace ICA Document BLR-200-950.

NOTE 4: For each inspection area, perform the inspection according to the inspection method required by Chapter 57-17-02 and Chart 201 in Beechcraft Structural Inspection and Repair Manual, P/N 98-39006 Rev. D or subsequent.

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MISCELLANEOUS LIMITATIONS

ENGINE FIRE EXTINGUISHER SYSTEM

The engine fire extinguisher component life limits for a King Air 200 series airplane modified by CenTex's Halo 250/275 Conversion are specified below. The limitations specified in Table 4.4 apply to all airplane configurations.

TABLE 4.4 - Engine Fire Extinguisher System Component Life Limits

Component	Life
Engine Fire Extinguisher Cylinder (Bottle)	The cylinder must be requalified and remarked every 5 years in accordance with Title 49 CFR 180.205 for DOT specification 4DS cylinders, except the retest pressure must be that stamped on the cylinder. A cylinder that is filled before the requalification becomes due may remain in service on the airplane past its' requalification date until it is either emptied or otherwise removed for maintenance as specified in Chapter 26 of this manual. A cylinder that has been emptied and is past its' 5-year requalification date, may not be serviced or re-filled until it has been hydrostatically tested and requalified by a person authorized under the appropriate provisions of 49 CFR.
Engine Fire Extinguisher Cartridge (Squib)	The cartridge life is 6 years, which includes the combined time in storage and in service, with the time in service (installed) limited to a maximum life of 4 years. Exceptions are noted in Chapter 26 of this manual.

SELF ILLUMINATING EXIT SIGN

The self-illuminating exit sign component life limit for a King Air 200 series airplane modified by CenTex's Halo 250/275 Conversion is specified below. This limitations specified in Table 4.5 apply to all airplane configurations.

TABLE 4.5 - Self-Illuminating Exit Sign Component Life Limits

Component	Life
Emergency Exit Signs, Self-Illuminating	Replace the exit sign 7 years from the date of manufacture as stated on the sign, or test the exit sign annually, beginning at seven years, and replace when the brightness drops below <u>160 microlamberts</u> in accordance with 14 CFR 23.811. Refer to Chapter 33 of this manual for the test procedure.



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CHAPTER 5

TIME LIMITS/MAINTENANCE CHECKS

GENERAL

The overhaul and replacement schedule and inspection programs in this chapter apply to the equipment installed as part of this STC. The format of the inspection programs is the same as those in Beechcraft's maintenance manuals and maintenance manual supplements. The terminology (phase, detailed, biennial, etc.) used in this chapter has the same meaning as Beechcraft's terminology. Use the AMM guidelines when following the replacement and inspection schedules specified herein. Use the *Halo 250/275 Equipment Inspection* sheets in this chapter to record the completion of each required inspection item at the time of the scheduled inspection (phase 1, 2, 3, etc.). Retain the inspection sheets with the normal aircraft maintenance records.

OVERHAUL AND REPLACEMENT SCHEDULE

For all airplanes, overhaul or replace the following items per the recommended period.

ITEM	OVERHAUL OR REPLACE
Emergency lighting system batteries	On condition; refer to Chapter 24
Engine Fire Extinguisher Cylinder	Refer to Chapter 4, Table 4.4
Engine Fire Extinguisher Cartridge (Squib)	Refer to Chapter 4, Table 4.4
Exit Sign, Self-Illuminated	Refer to Chapter 4, Table 4.5
Wing and Associated Structure Safelife	Refer to Chapter 4, <i>Structural Limitations</i>

SCHEDULED INSPECTION PROGRAM - PHASE / BIENNIAL

For Super King Air 200 series airplanes following a scheduled inspection program in Beechcraft Maintenance Manual no. 101-590010-19, inspect the Halo 250/275 equipment items during the inspection marked below.

NOTE: See the *Halo 250/275 Equipment Inspection* sheets in this chapter for inspection details.

ITEM	PHASE INSP				BIENNIAL INSP	
	1	2	3	4	INT	COMP
Cabin door & emergency exit exterior marking	X	X	X	X	X	X
Cabin door handle placard	X	X	X	X	X	X
Cockpit placards	X	X	X	X	X	X
Emergency lighting batteries operational check	X	X	X	X	X	X
Emergency lighting power supply & batteries			X			X
Emergency lighting system LED indicator caution lights			X			X
Emergency lighting system operational check			X			X
Emergency lights			X			X
Engine fire extinguisher	X	X	X	X		X
Engine fire extinguisher operational check	X	X	X	X	X	X
Engine fire extinguisher functional test		X				X
Escape path marking strips	X	X	X	X	X	X
Exit sign, self-illuminated	X	X	X	X	X	X
Exit sign, electric			X			X

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ITEM	PHASE INSP				BIENNIAL INSP	
	1	2	3	4	INT	COMP
Ice mode stall warning switch, lift computer & relay			X			X
Ice mode stall warning system operational check			X			X
Over-speed pressure switch, horn, wiring, lines & fittings			X			X
Over-speed warning system operational check			X			X
Takeoff trim warning switch & horn			X			X
Takeoff trim warning system operational check			X			X

SCHEDULED INSPECTION PROGRAM - DETAILED

For Super King Air B200GT/B200CGT Fusion airplanes following a scheduled inspection program in Textron/Beechcraft Maintenance Manual no. 434-590168-0009, inspect the Halo 250/275 equipment items during the inspection marked below.

NOTE: See the *Halo 250/275 Equipment Inspection* sheets in this chapter for inspection details.

ITEM	DETAILED INSP			
	1	2	3	4
Cabin door & emergency exit exterior marking	X	X	X	X
Cabin door handle placard	X	X	X	X
Cockpit placards	X	X	X	X
Emergency lighting batteries operational check	X	X	X	X
Emergency lighting power supply & batteries			X	
Emergency lighting system LED indicator caution lights			X	
Emergency lighting system operational check			X	
Emergency lights			X	
Engine fire extinguisher	X			
Engine fire extinguisher operational check	X	X	X	X
Engine fire extinguisher activation check	X			
Escape path marking strips	X	X	X	X
Exit sign, self-illuminated	X	X	X	X
Exit sign, electric			X	
Ice mode stall warning switch, lift computer & relay			X	
Ice mode stall warning system operational check			X	
Over-speed pressure switch, horn, wiring, lines & fittings			X	
Over-speed warning system operational check			X	
Takeoff trim warning switch & horn			X	
Takeoff trim warning system operational check			X	

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HIGH UTILIZATION INSPECTION PROGRAM (HUIP)

For Super King Air B200 series airplanes using Beechcraft's high utilization inspection program (HUIP) per Maintenance Manual Supplement, P/N 101-590010-559, inspect the Halo 250/275 equipment items during the inspection marked below.

NOTE: See the *Halo 250/275 Equipment Inspection* sheets in this chapter for inspection details.

ITEM	DETAILED INSP				ROUTINE INSP
	1	2	3	4	
Cabin door & emergency exit exterior marking	X	X	X	X	X
Cabin door handle placard	X	X	X	X	X
Cockpit placards	X	X	X	X	X
Emergency lighting batteries operational check	X	X	X	X	X
Emergency lighting power supply & batteries			X		
Emergency lighting system LED indicator caution lights			X		
Emergency lighting system operational check			X		
Emergency lights			X		
Engine fire extinguisher	X				
Engine fire extinguisher operational check	X	X	X	X	X
Engine fire extinguisher activation check	X				
Escape path marking strips	X	X	X	X	X
Exit sign, self-illuminated	X	X	X	X	X
Exit sign, electric			X		
Ice mode stall warning switch, lift computer & relay			X		
Ice mode stall warning system operational check			X		
Over-speed pressure switch, horn, wiring, lines & fittings			X		
Over-speed warning system operational check			X		
Takeoff trim warning switch & horn			X		
Takeoff trim warning system operational check			X		



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HALO 250/275 EQUIPMENT INSPECTION

Owner _____ Total Time _____ Total Cycles _____

W.O. No. _____ Date In _____ Date Out _____

Serial No. _____ Reg. No. _____ STC Installed TIS _____ Cycles _____

Inspection (1, 2, 3, 4, INT, COMP): _____

NOTE: Inspect only the items required by the applicable phase or other inspection as designated by an "X" in the inspection program table. Write "N/A" if an item is not required according for the applicable inspection.

A. PILOT COMPARTMENT	REFERENCE	MECH	INSP
1. COCKPIT PLACARDS - Check placards for proper adhesion, visibility, signs of damage.	006-30 Ch. 11		
2. TAKEOFF TRIM WARNING SWITCH & HORN - Check for security of attachment, signs of damage or wear, and proper switch position.	006-30 Ch. 27		
3. ICE MODE STALL WARNING SWITCH, LIFT COMPUTER & RELAY - Check for damage to wiring, loose connectors, and security of attachment.	006-30 Ch. 27		
4. EMERGENCY LIGHT SYSTEM LED INDICATOR CAUTION LIGHTS - Check for security of attachment and inoperative LEDs.	006-30 Ch. 33		
5. OVER-SPEED PRESSURE SWITCH, HORN, WIRING, LINES & FITTINGS - Check for security of attachment, signs of damage, and leaks.	006-30 Ch. 34 MM 34-00-00		
B. CABIN SECTION			
1. CABIN DOOR & EMERGENCY EXIT EXTERIOR MARKING - Check 2-inch color band for proper adhesion, visibility, signs of damage.	006-30 Ch. 11		
2. CABIN DOOR HANDLE PLACARD - Check for security, proper adhesion, visibility, signs of damage.	006-30 Ch. 11		
3. EMERGENCY LIGHTS - Check for security of attachment, signs of damage, and inoperative LEDs.	006-30 Ch. 33		
4. EMERGENCY LIGHTING POWER SUPPLY & BATTERIES - Check for security of attachment, damage to wiring, and battery condition.	006-30 Ch. 24		
5. ESCAPE PATH MARKING STRIPS - Check photo-luminescent strips for damage and clean strips.	006-30 Ch. 33		
6. EXIT SIGN, SELF ILLUMINATED - Check for security of attachment.	006-30 Ch. 33		
7. EXIT SIGN, ELECTRIC - Check for security of attachment, signs of damage, and inoperative LEDs.	006-30 Ch. 33		
C. LEFT WING CENTER SECTION			
1. ENGINE FIRE EXTINGUISHER – Inspect plumbing for security of attachment.	MM 26-20-00, 001		
2. ENGINE FIRE EXTINGUISHER – Check fire bottle pressure gage.	MM 26-20-03, 301		
3. ENGINE FIRE EXTINGUISHER – Check for presence of activation voltage to the cartridge/squib. Perform the EXTINGUISHER ACTIVATION CHECK procedure.	MM 26-20-00, 501		
D. RIGHT WING CENTER SECTION			
1. ENGINE FIRE EXTINGUISHER – Inspect plumbing for security of attachment.	MM 26-20-00, 001		
2. ENGINE FIRE EXTINGUISHER – Check fire bottle pressure gage.	MM 26-20-03, 301		
3. ENGINE FIRE EXTINGUISHER – Check for presence of activation voltage to the cartridge/squib. Perform the EXTINGUISHER ACTIVATION CHECK procedure.	MM 26-20-00, 501		



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HALO 250/275 EQUIPMENT INSPECTION (continued)

E. OPERATIONAL INSPECTION	REFERENCE	MECH	INSP
1. TAKEOFF TRIM WARNING SYSTEM - Conduct "System Functional Test"	006-30 Ch. 27		
2. ICE MODE STALL WARNING SYSTEM - Conduct "System Operational Test"	006-30 Ch. 27		
3. EMERGENCY LIGHTING SYSTEM - Conduct "Emergency Lighting System Functional Test"	006-30 Ch. 33		
4. EMERGENCY LIGHTING BATTERIES - Conduct "Checking Battery Charge"	006-30 Ch. 24		
5. OVER-SPEED WARNING SYSTEM - Conduct "System Functional Test"	006-30 Ch. 34 MM 34-00-00		
6. ENGINE FIRE EXTINGUISHERS - Perform system test according to instructions found in the Super King Air 200/B200 Pilot's Operating Handbook and FAA Approved Airplane Flight Manual (POH/AFM).	POH/AFM		

NOTE: "MM" refers to the Super King Air 200 Maintenance Manual section specified.

INSPECTION COMPLETED

I certify that this inspection was performed in accordance with the CenTex Halo 250/275 STC Inspection Program and that the airplane is approved for return to service:

MECHANIC: _____ CREW CHIEF: _____

INSPECTOR: _____ DATE: _____

CHAPTER 11

PLACARDS AND MARKINGS

PLACARDS AND MARKINGS - DESCRIPTION

The placards and markings added to the airplane for this STC are typically located in the areas indicated in Figure 11.1 below. Interior placards are in locations C thru F. Exterior placards are in locations A and B.

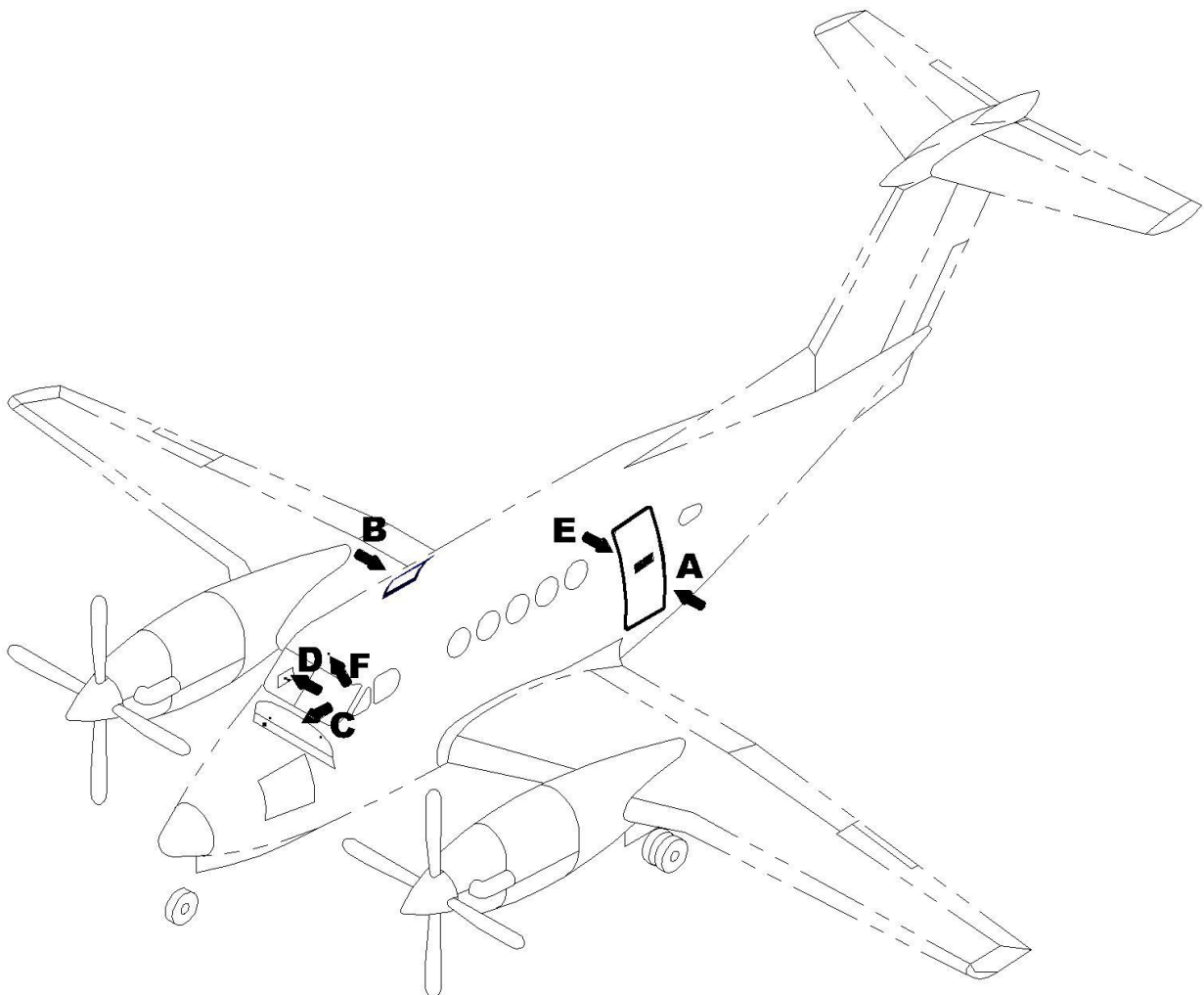
NOTE: Exact locations may vary as allowed by the installation.

PLACARDS AND MARKINGS - MAINTENANCE PRACTICES

Inspect placards and markings for damage and wear. Replace placards or markings that become illegible or start peeling or delaminating.

Every time the airplane is repainted or touched up, inspect the cabin door & emergency exit window borders, making sure they are not covered with paint.

Figure 11.1 - Placard and Marking Locations

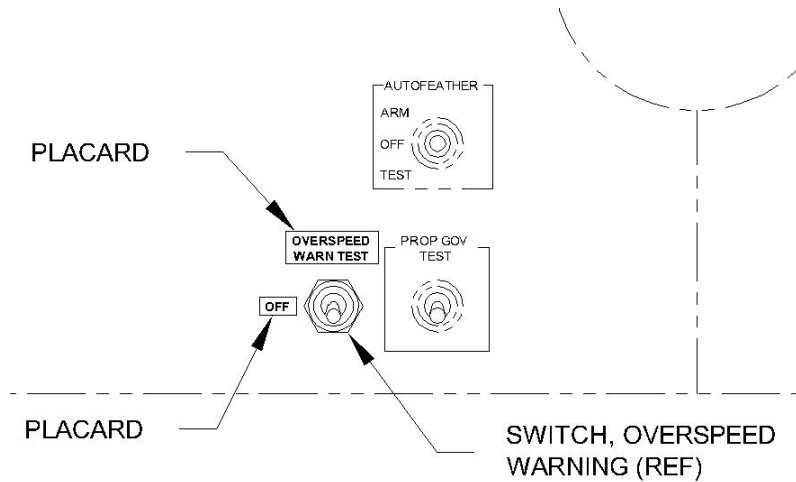


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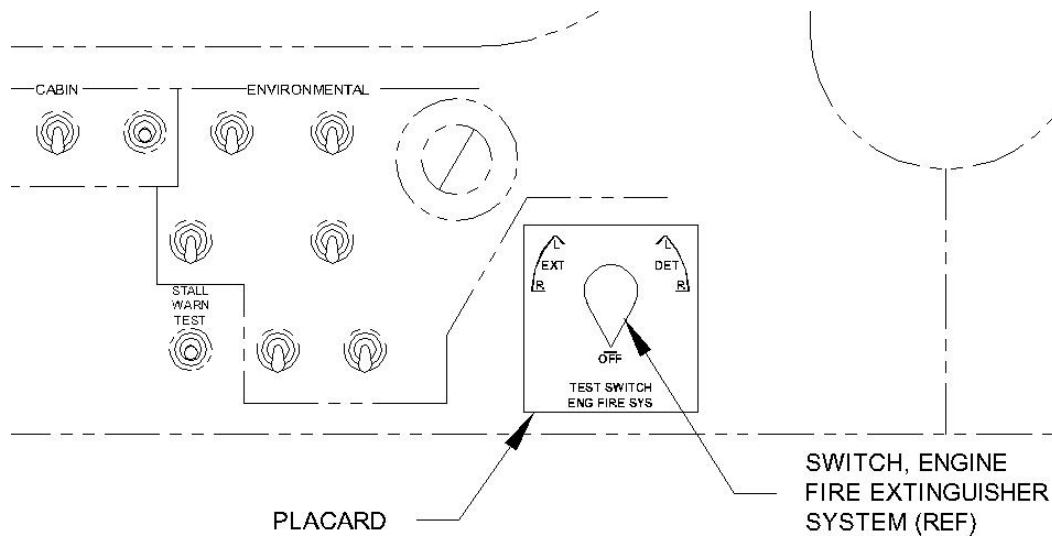
INTERIOR PLACARDS AND MARKINGS

Location C - Instrument Panel:

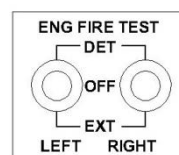
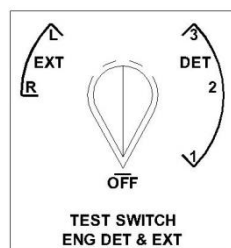
Pilot Side, Lower Left:



Copilot Side, Lower Left:

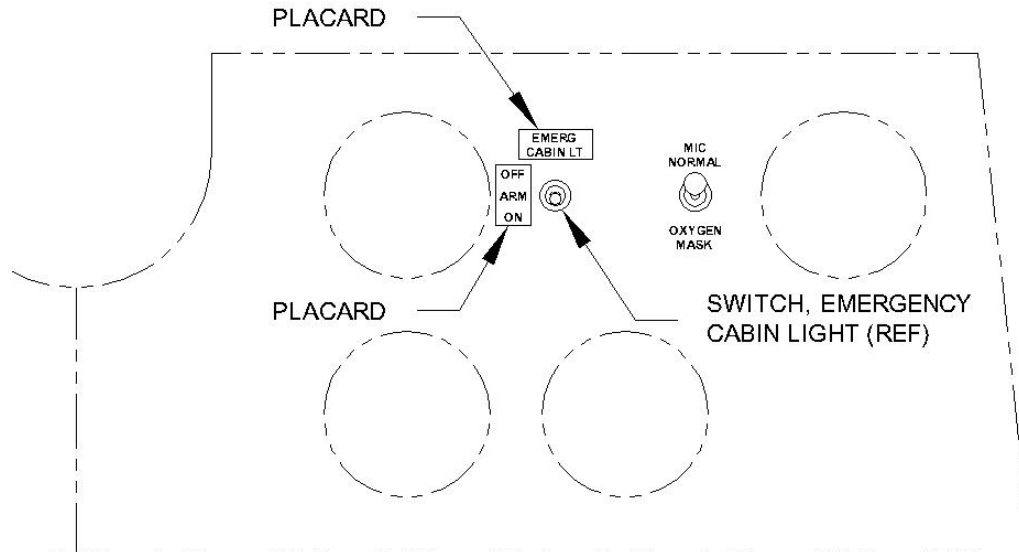


Alternate fire detector/ extinguisher test switch placards:

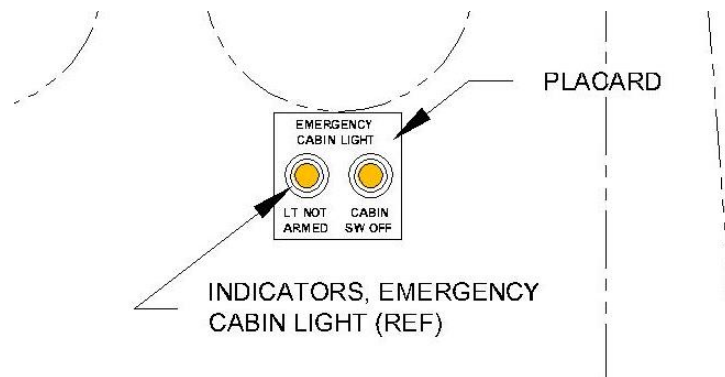


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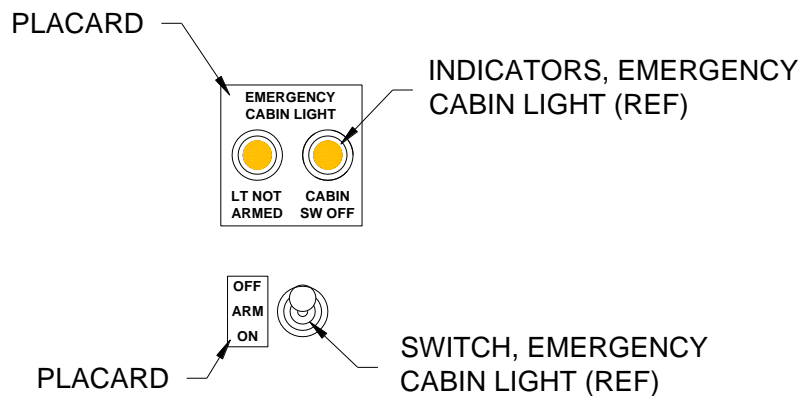
Copilot Side, Lower Right:



Copilot Side:

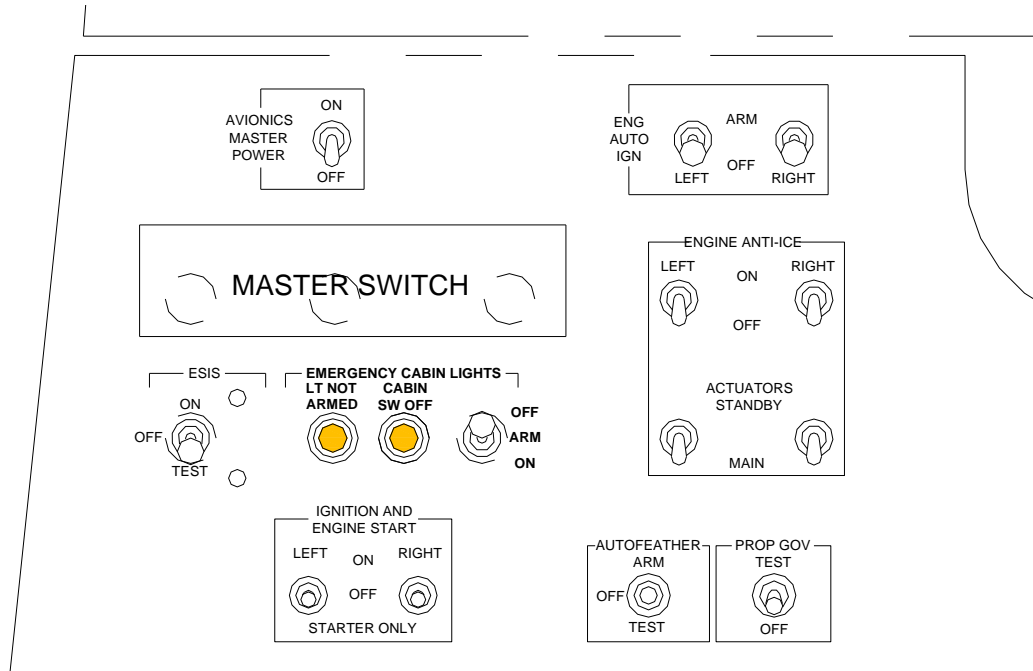


Alternate emergency light control switch configuration:



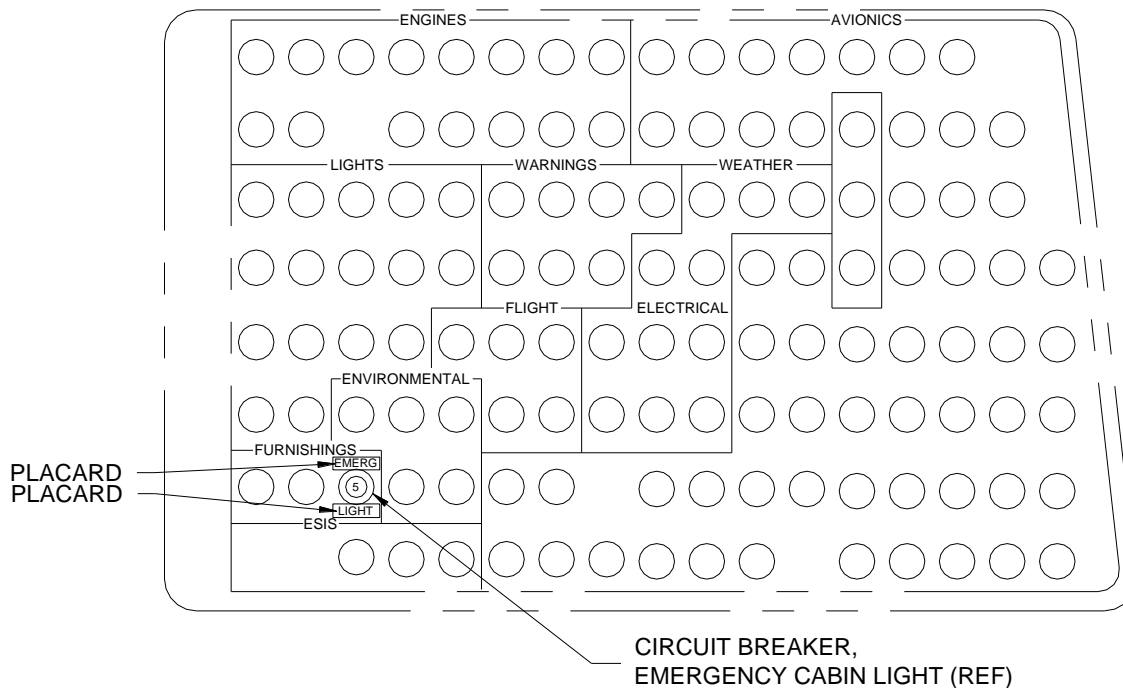
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Emergency light control switch configuration for airplane with Pro Line 21 or Pro Line Fusion avionics; or as an alternate configuration. Pilot side, lower, left:



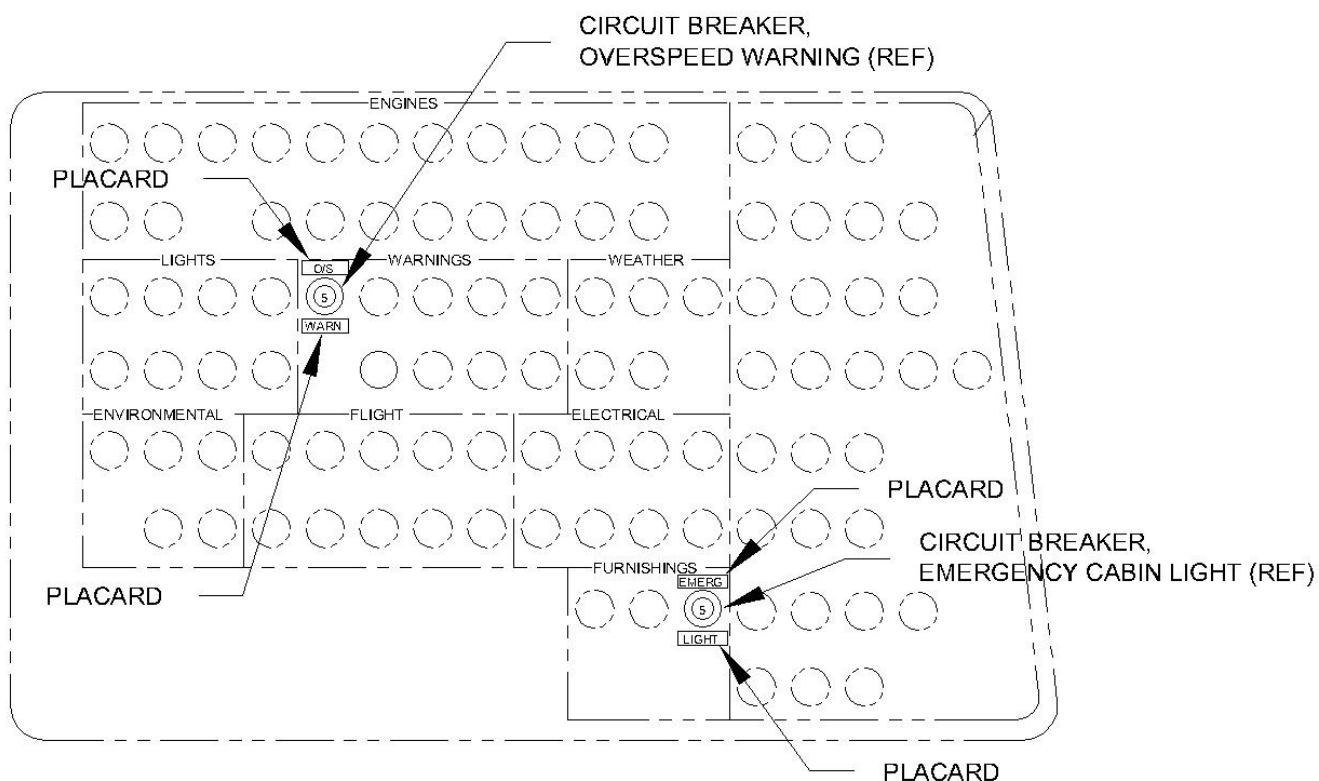
Location D - Copilot Circuit Breaker Panel:

Circuit breaker panel for airplane with Pro Line Fusion avionics (Pro Line 21 similar).



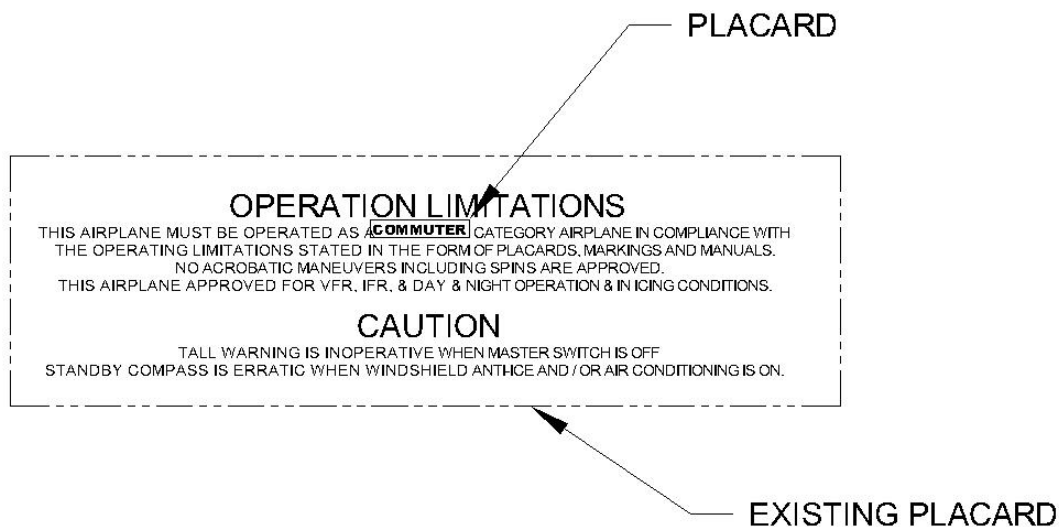
SUPER KING AIR 200 SERIES HALO 250/275 ICA MANUAL

Circuit breaker panel for airplane with standard avionics (Garmin G1000 similar).



Location F - Overhead Light Panel

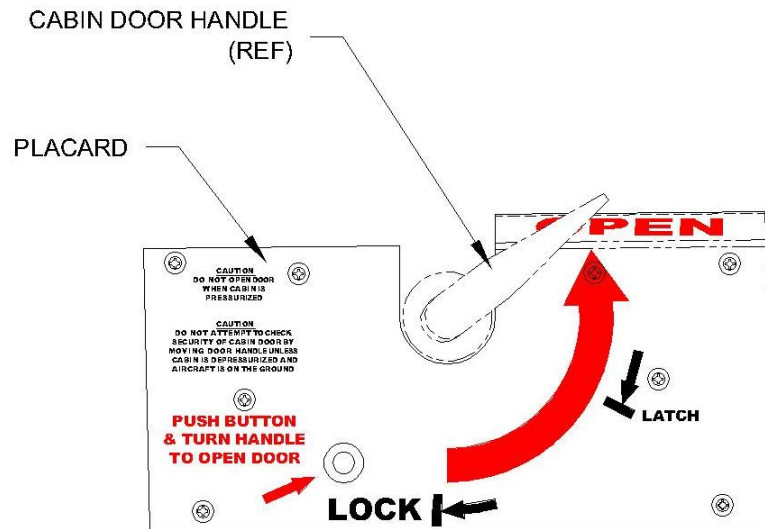
The "COMMUTER" placard is only installed for STC Option 2. For STC Option 1, there is no change to the existing placard.



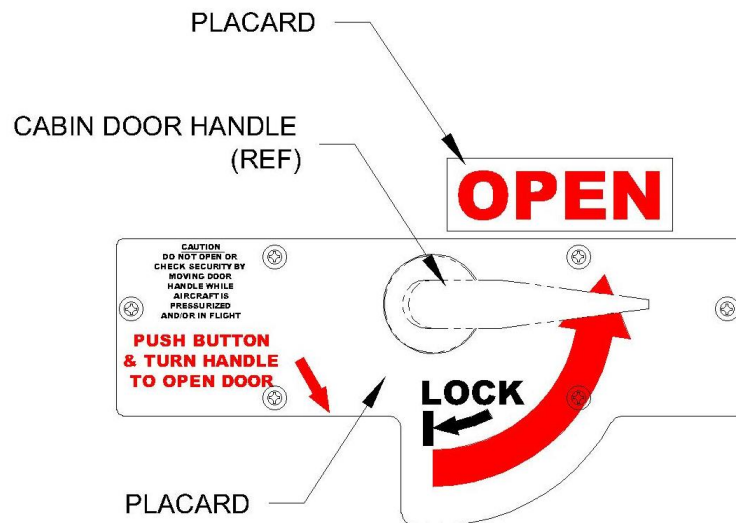
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Location E - Cabin Door Handle

Standard Model Cabin Door:



Cargo Model Cabin Door:

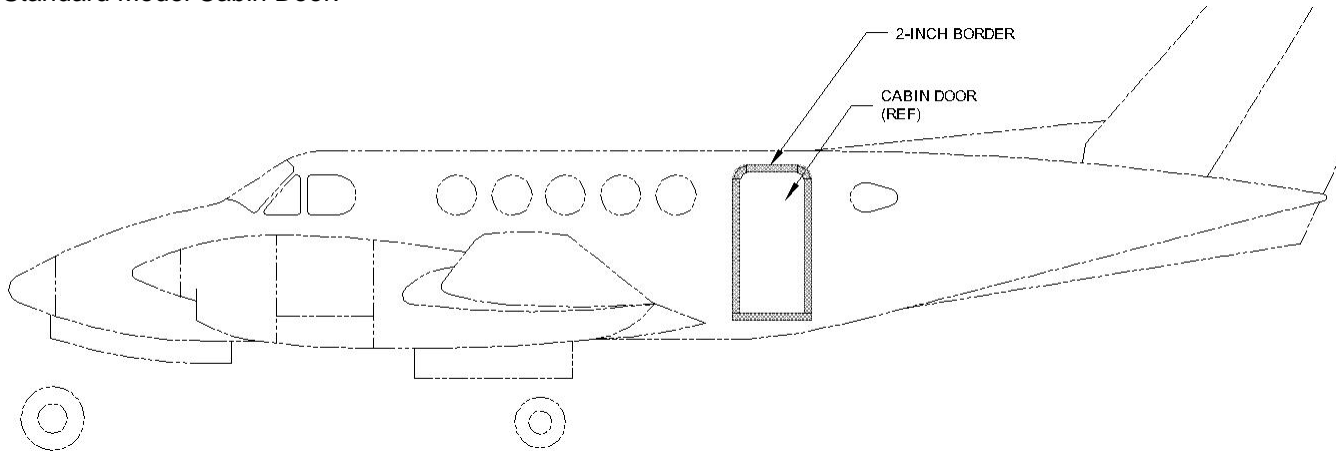


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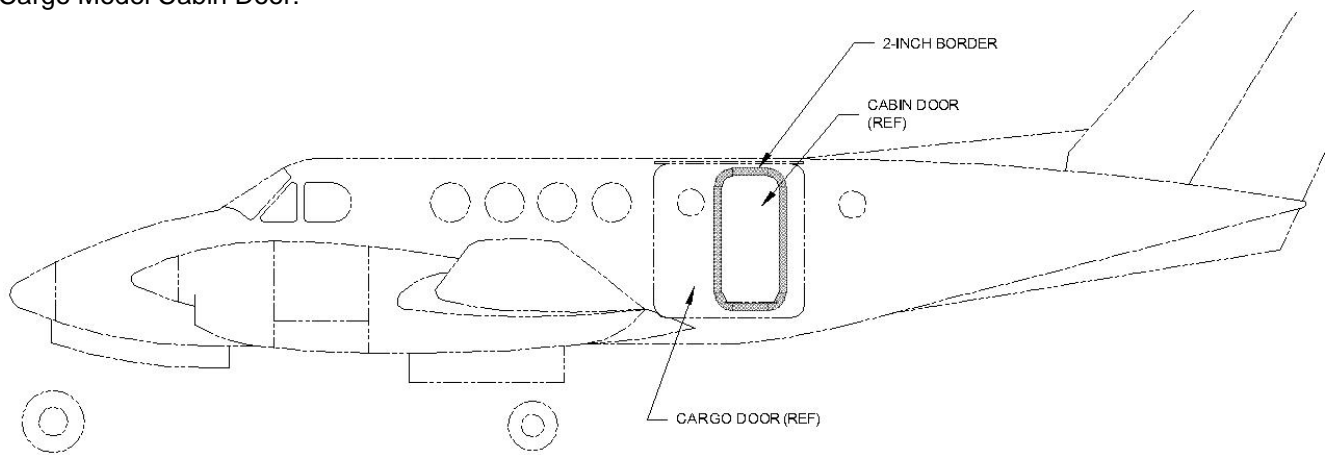
EXTERIOR PLACARDS AND MARKINGS

Location A - Cabin Door:

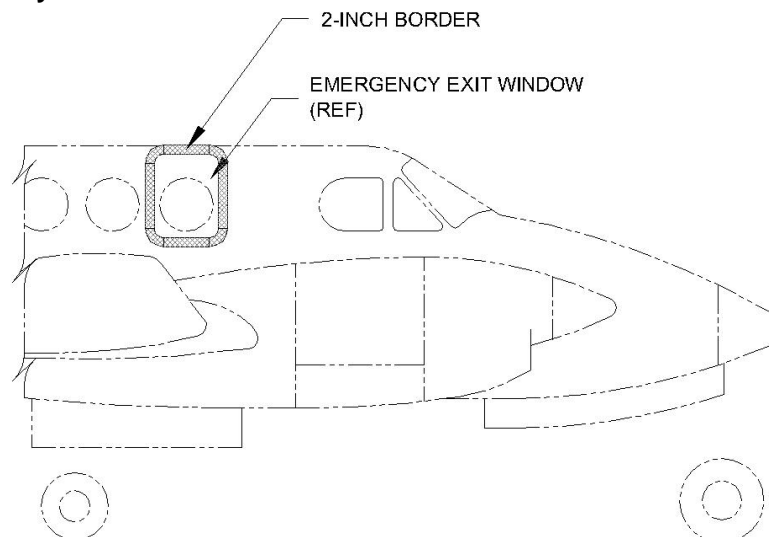
Standard Model Cabin Door:



Cargo Model Cabin Door:



Location B - Emergency Exit:





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CHAPTER 12

SERVICING

GENERAL

In addition to the servicing information and procedures specified in the Beechcraft AMM, follow the procedures below for equipment installed as part of this STC.

SCHEDULED SERVICING - MAINTENANCE PRACTICES

TIRES

If the airplane is operating in normal category under STC Option 1, then follow the tire servicing procedures in Section 12-20-00 of the AMM.

If the airplane is operating in commuter category under STC Option 2, follow the tire servicing procedures in Section 12-20-00 of the AMM except for the specific tire servicing information noted below.

For operations at gross weights above 12,500 pounds, the airplane is equipped with one of the following types of nose and main wheel tires. Regularly check tire pressures for proper inflation. Inflate the tires to the pressure specified for each type.

Nose Wheel Tire	Pressure
22 X 6.75-10, 8-ply	55 - 60 psi
Type III 6.50-10, 6-ply	55 - 60 psi

Main Wheel Tires	Pressure at 13,420 Lbs. Max. Weight	Pressure at 14,000 Lbs. Max. Weight
Type VII 18 X 5.5, 10-ply	110 ± 4 psi	N/A
19.5 X 6.75-8, 10-ply	95 ± 2 psi	N/A
22 X 6.75-10, 8-ply	67 ± 2 psi	70 ± 2 psi
Type III 6.50-10, 8-ply	67 ± 2 psi	70 ± 2 psi

CAUTION: *Do not intermix tire types on the main landing gear.*

NOTE: For unloaded tire pressure, subtract 3 psi from the above value.

EMERGENCY LIGHTING SYSTEM BATTERIES

The emergency lighting system batteries are sealed, lead-acid batteries that do not require electrolyte servicing. See Chapter 24 for maintenance practices.



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CHAPTER 24 **ELECTRICAL POWER**

EMERGENCY LIGHTING SYSTEM POWER SUPPLY - MAINTENANCE PRACTICES

The emergency lighting system power supply has two sealed, lead-acid batteries connected in series. Nominal voltage is 12 volts per battery. Battery charging occurs during normal ground or flight operations or any time the main aircraft battery switch is on. Airplanes used on a regular basis have no special charging requirements.

BATTERY SPECIFICATIONS

The batteries used in the emergency lighting system power supply may be replaced with any battery that meets or exceeds the following specifications:

Battery Type:	Rechargeable, Sealed Lead Acid (SLA)
Nominal Voltage:	12 volts (6 cells)
Nominal Capacity:	0.8 AH (20-hour rate, 40 mA to 10.5 volts)
Size & Weight:	3.78 X .98 X 2.44 inches; 0.8 pounds
Battery Case:	Impact resistant, ABS Plastic (UL 94-HB)
Terminal Type:	WL, insulated wire leads with Amp 2-circuit plug
Max. Discharge Current:	2.4 amps
Operating Temp.:	-40°F to +140°F

The following batteries are examples of acceptable replacements: Power Sonic PS-1208WL, Universal Power Group (UPG) UB1208p, Duracell Ultra SLAA12-0.8WL.

BATTERY LIFE & STORAGE

Battery life depends on cyclic use, operating temperatures, and charging method. The emergency lighting system batteries can last in the range of 3 to 5 years. Because of variations in battery usage, CenTex recommends replacing the batteries every 36 calendar months from the time they are installed. However, this may be done at the operator's discretion. It is required to replace the batteries if they do not pass the battery inspection specified on page 24.3 or when they do not provide proper emergency light illumination as noted below.

The emergency lighting system batteries will discharge over time if the airplane is not flown regularly. If the airplane is not to be operated for more than a six month period, the batteries should be removed and kept in a clean and dry location. Storage temperature is ideally 60 to 75°F. Charge the batteries within six months of storage in order to avoid permanent loss of capacity.

CHECKING BATTERY CHARGE

Check the battery charge level by turning the cabin emergency light switch to ON. Emergency lights and optional electrically powered exit signs (if installed) should illuminate at or near full strength for at least 10 minutes. If the lights are dim or out, charge the batteries using the onboard charging procedure below. If the lights are still dim after charging, remove the batteries, follow the inspection procedure, and replace as needed.

NOTE: Illumination of emergency lights and exit signs under emergency battery power can be judged by comparing to full strength (28 VDC) illumination as follows.



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Full Strength Illumination: 1) Main battery switch - ON
2) Apply external power to airplane (if necessary)
3) Cockpit control switch - ON
4) Cabin light switch - ON

Battery Power Illumination: 5) Cockpit control switch - OFF

BATTERY CHARGING ON AIRPLANE

Turn on the main battery switch and connect external power to the airplane.

Make sure the EMERG LIGHT circuit breaker is pushed in.

Place the EMERG CABIN LT control switch in the ARM position.

Allow batteries to charge for one hour.

Turn off the main battery switch and disconnect external power.

Check the battery charge level.

POWER SUPPLY REMOVAL

The power supply for the emergency lighting system is located under the floor, at one of several locations:

- Behind the main spar, on the right side of the fuselage. See Figure 24.1.
- Under the center aisle panel at F.S. 188. See Figure 24.2.
- Under the center aisle panel at F.S. 207. See Figure 24.3.
- Under the center aisle panel at F.S. 246 (not pictured).
- Under the center aisle panel at F.S. 278. See Figure 24.4.

To access the power supply at the main spar location, remove the right hand passenger seat(s), carpet, and floor panel.

To access the power supply below the center aisle, remove the floor runner, carpet, and floor panel.

Unplug the two power supply 4- and 6-pin wire harness connectors.

Remove the screw, nuts, and washers from the ground wire terminal.

Remove the four screws holding the power supply to the airframe.

POWER SUPPLY INSPECTION

Check to see that the wiring connector is secure and wires are not chafed or damaged. Replace any damaged wire.

Check to see that the G-switch, relays, and timer are not damaged and securely fastened and electrical connectors are not loose or damaged. Repair loose connectors. Replace any damaged component.

Inspect the batteries as specified below.

Inspect the interior of the battery case for battery leakage, damaged foam padding, burning, melting, or corrosion.

Replace the power supply if there is significant damage.

Check to see that the power supply is securely fastened to the airframe when installed.



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BATTERY REMOVAL

Remove the screw that secures the battery box lid to the battery box (this lid holds the G-switch). See Figure 24.1. For the second generation power supply, shown in Figure 24.3, remove two screws to open the lid.

Open the lid and carefully remove the batteries.

Unplug both batteries at the connectors.

BATTERY INSPECTION

Remove the batteries. Check the battery for signs of damage, chafing, electrolyte leakage, a cracked or bulging case, or loose wires or connectors. Replace the battery if any signs of damage are found.

Check the battery voltage. If the battery voltage is below 12 volts, charge the battery on the bench using the procedure below. A fully charged battery has an open circuit (no load) voltage of 12.9 to 13.3 volts. A discharged battery has an open circuit voltage of 11.5 to 11.7 volts.

BATTERY CHARGING ON BENCH

Connect the battery to a constant voltage battery charger set at a charging voltage of 14.4 to 15.0 volts. Limit the initial charging current to 240 mA.

Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts. Hold the charge at 14.4 to 14.7 volts until the charging current drops below 8 mA.

Disconnect the battery from the charger and let the battery rest for at least one hour.

Check the battery voltage as noted above and verify it is fully charged. If the battery does not fully charge, replace the battery.

BATTERY INSTALLATION

Before installing a new battery, write the installation date on the battery case.

Plug in the battery connector to the power supply wire harness.

Carefully insert the batteries into the battery box with the battery notches facing the opening.

Position the wires and connectors in the battery notch areas or between the batteries.

Reinstall the lid and secure it to the box with the screw(s) provided.

POWER SUPPLY INSTALLATION

Install the power supply in the appropriate location from where it was removed.

Attach the power supply to the airframe with four screws at the existing nutplates or with nuts and washers.

Attach the ground wire terminal to the airframe with a screw, nuts, and washers as shown in Figure 24.1.

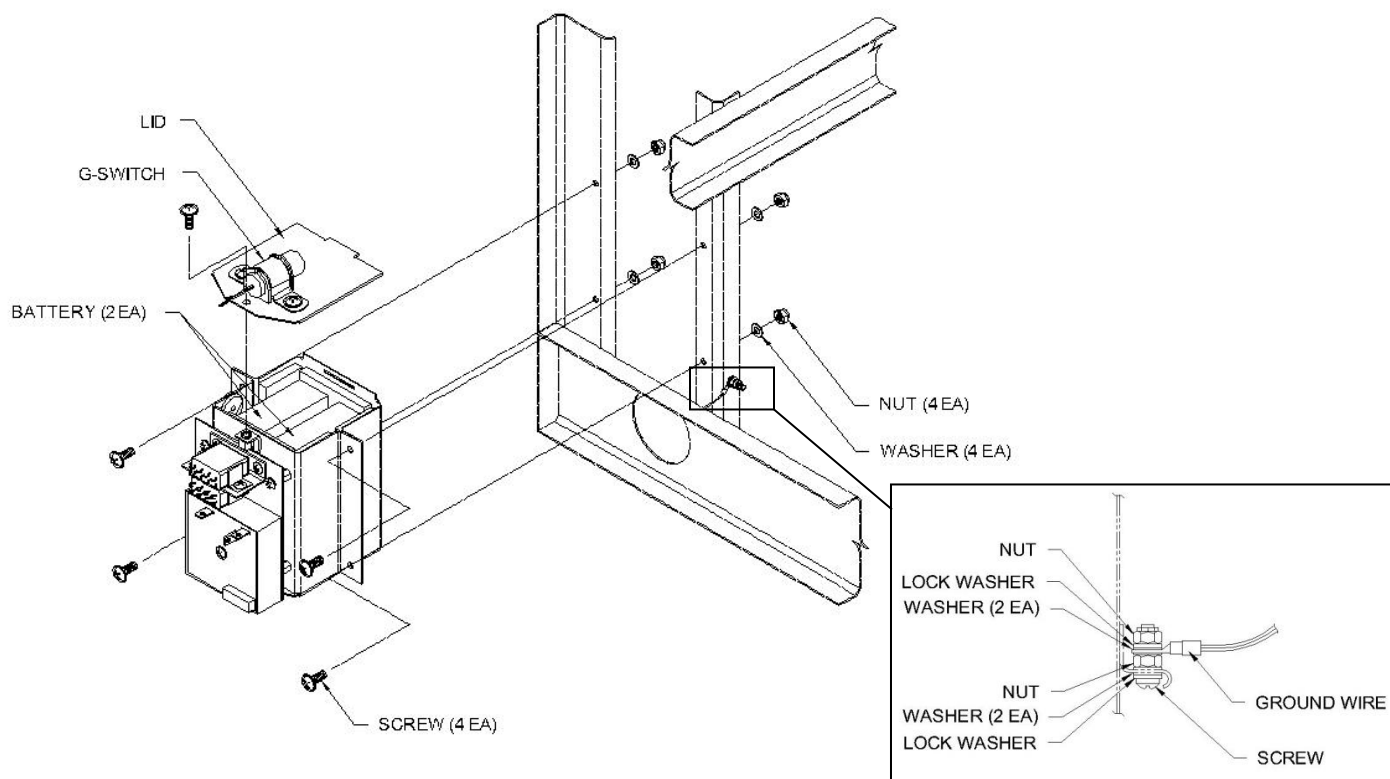
Plug in the two power supply 4- and 6-pin wire harness connectors.

Install the floor panel and carpet.

Install any passenger seat(s) previously removed.

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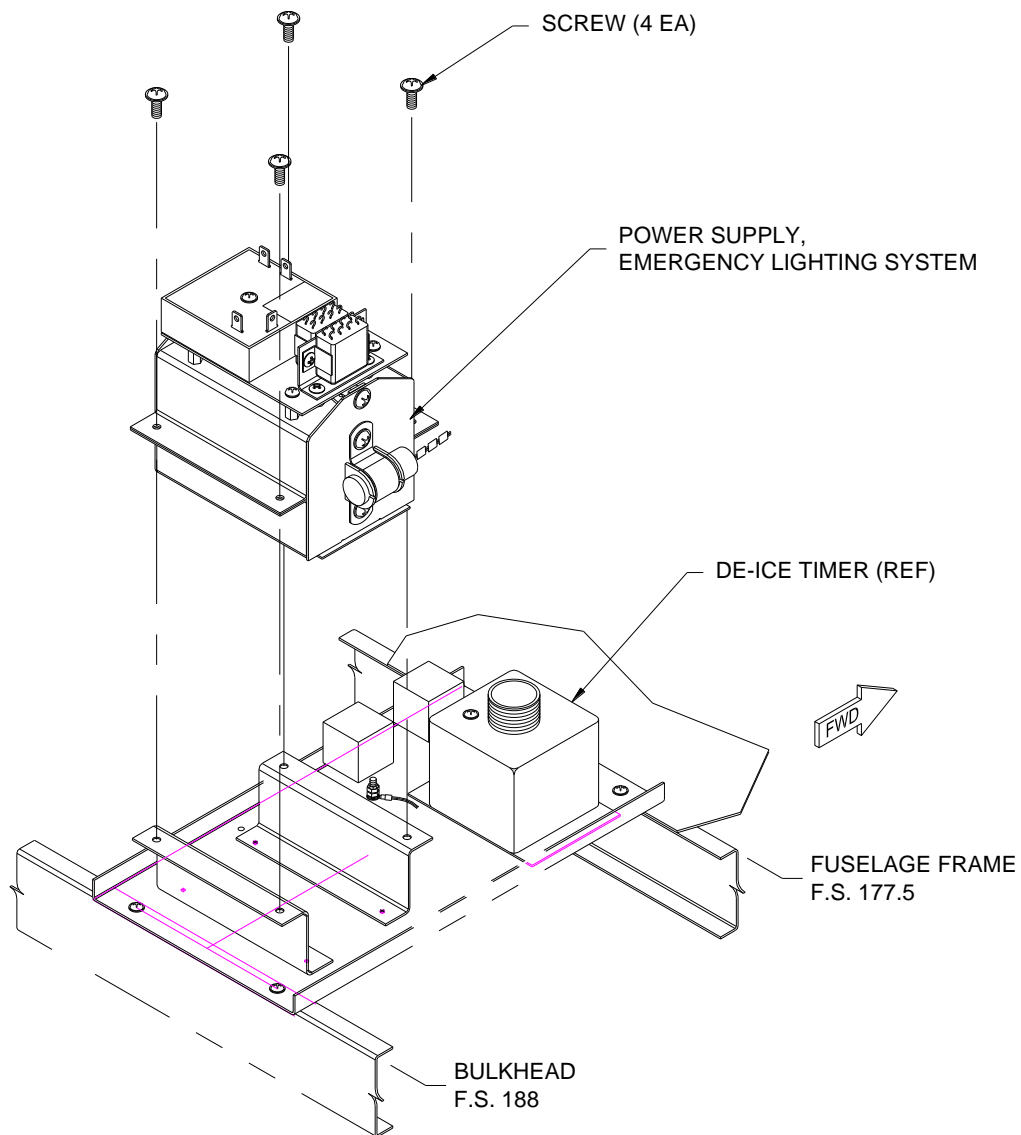
FIGURE 24.1 - Emergency Lighting System Power Supply (Aft of Main Spar, Right Side)



NOTE: Wire harness not shown. Installation at F.S. 198.5 shown; other installations similar.

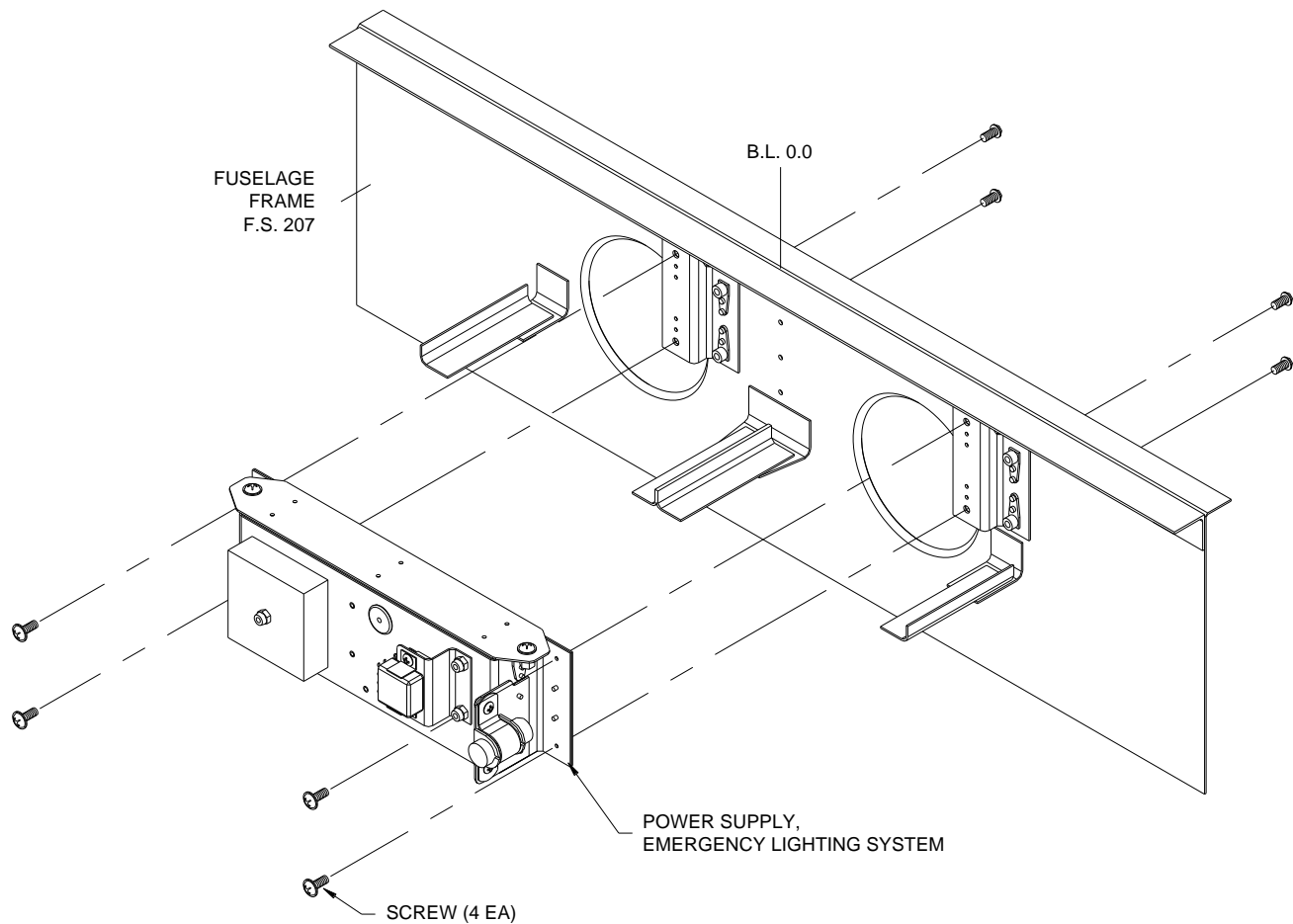
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FIGURE 24.2 - Emergency Lighting System Power Supply at F.S. 188



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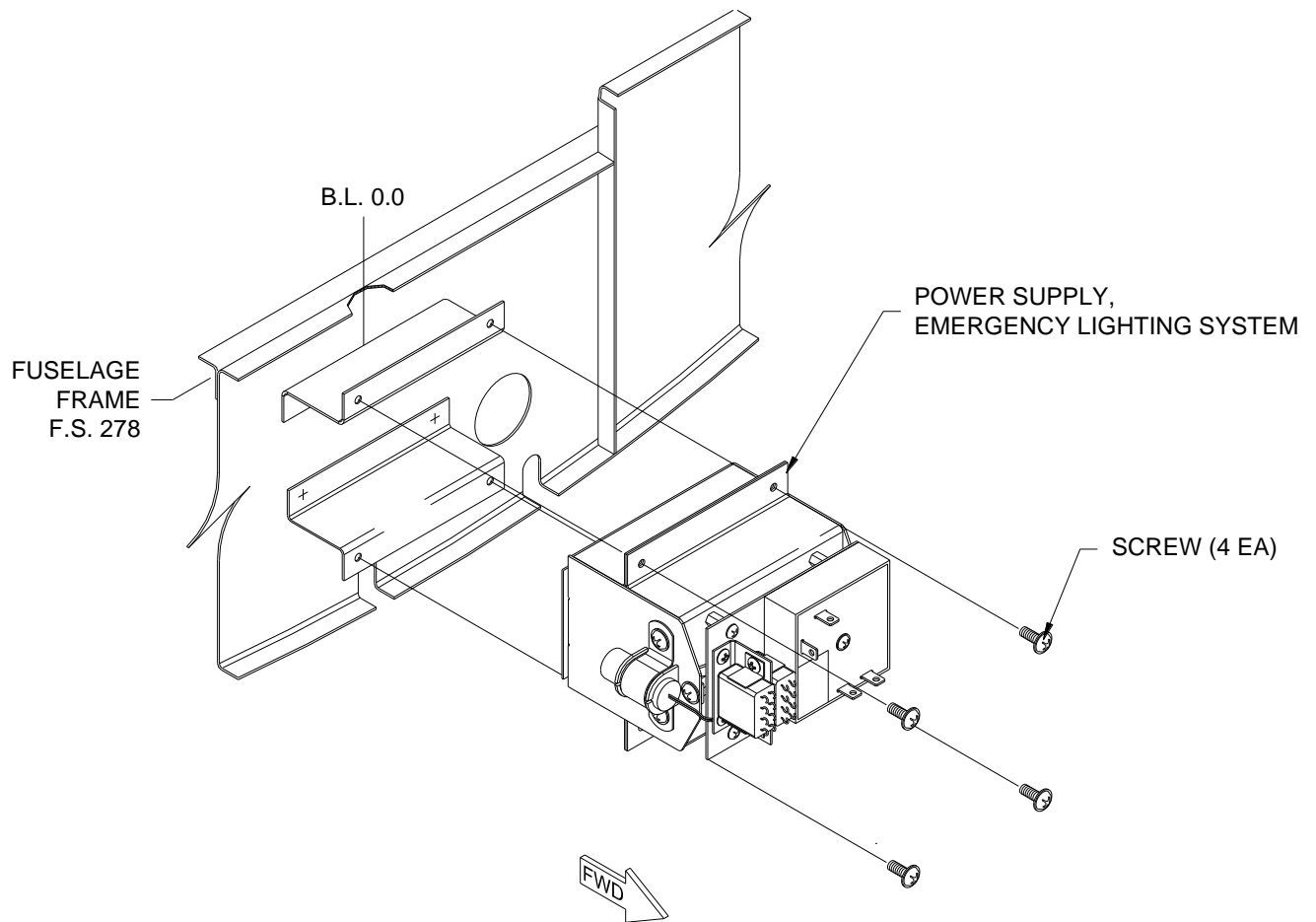
FIGURE 24.3 - Emergency Lighting System Power Supply at F.S. 207



NOTE: This is the second generation power supply that is installed on airplanes with Pro Line Fusion avionics and is an alternate for all other models. This power supply is now used for all airplanes regardless of avionics starting with kits produced in 2016 and later.

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FIGURE 24.4 - Emergency Lighting System Power Supply at F.S. 278





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ELECTRICAL LOAD DISTRIBUTION - MAINTENANCE PRACTICES

In addition to the information specified in Section 24-50-00 of the Beechcraft AMM, the following electrical load data applies for the equipment installed as part of this STC.

ELECTRICAL LOAD UTILIZATION CHARTS

The equipment installed as part of this STC adds the following continuous and intermittent loads.

CONTINUOUS LOAD - ELECTRICAL EQUIPMENT

Equipment	No. Units Used	Load Ea. Unit Amps DC	Total Load Amps DC	Total Load per System Amps DC	Notes
OVER-SPEED WARNING SYSTEM				0.30	6
Warning horn	1	0.01	0.01		
Over-speed pressure switch	1	0.29	0.29		
EMERGENCY LIGHTING SYSTEM - ARMED				0.58	
Aircraft power relay (M83536/10-026)	1	0.10	0.10		
Batteries (charging)	2	0.24	0.48		
TRIM OUT-OF-RANGE WARNING SYSTEM				0.12	
Warning horn	1	0.02	0.02		1
Trim switch relay (M83536/10-026)	1	0.10	0.10		2
ICE MODE STALL WARNING SYSTEM				2.09	
Stall lift computer relay	1	0.01	0.01		3
Stall lift computer	1	2.0	2.0		4
Ice mode light	1	0.08	0.08		3
HALO 250/275 EQUIPMENT SUBTOTAL					5
Condition #1 & #3 - Anti-ice systems off.				3.00 amps	
Condition #2 - Anti-ice systems on.				3.08 amps	

Notes:

- 1) The trim out-of-range warning horn load is added to the existing auto-feather switch circuit.
- 2) The trim switch relay load is added to the existing brake de-ice circuit.
- 3) The ice mode lighted switch and stall lift computer relay loads are added to the existing surface de-ice switch circuit.
- 4) The ice mode stall lift computer load is added to the existing stall warning circuit.
- 5) Add the subtotal for the specified condition corresponding to the condition subtotals in the Beechcraft AMM.
- 6) Not applicable to airplanes with Pro Line 21 or Pro Line Fusion avionics.



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INTERMITTENT LOAD - ELECTRICAL EQUIPMENT

Equipment	No. Units Used	Load Ea. Unit Amps DC	Total Load Amps DC	Total Load per System Amps DC	Notes
EMERGENCY LIGHTING SYSTEM - ON				0.65	
Timer relay	1	0.01	0.01		
G-switch relay (M83536/10-026)	1	0.10	0.10		
Cabin Light	2	0.10	0.20		
24-VDC Exit sign (optional)	2	0.15	0.30		
Caution light	2	0.02	0.04		



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CHAPTER 26 **FIRE PROTECTION**

ENGINE FIRE EXTINGUISHER SYSTEM

The engine fire extinguisher system installed as part of this STC is identical to the optional engine fire extinguisher system provided by Beechcraft. Refer to Section 26-20-00 of the Beechcraft AMM for a description, as well as operation and maintenance information. Follow the engine fire extinguisher system inspection and servicing procedures found in the AMM, except as noted below.

ENGINE FIRE EXTINGUISHER CARTRIDGE SERVICING

Remove and replace the cartridge in accordance with the procedures in Pacific Scientific 17400 Component Maintenance Manual P/N 26-20-200, which are contained in Chapter 26 of Beechcraft Component Maintenance Manual P/N 101-590097-13.

A. Service Life

- 1) The life of a cartridge is determined as starting from the date (month/year) stamped on the cartridge body or marked on the plastic bag containing the cartridge.
- 2) Replace a Pacific Scientific cartridge (squib) at the interval specified in Chapter 4 of this manual (Table 4.4) or sooner if the following exceptions are exceeded
 - a) The storage temperature should not exceed 130°F.
 - b) The service temperature (installed) should be a nominal 200°F.
- 3) Replace a FAA-PMA cartridge according to the replacement schedule specified by the manufacturer of the cartridge.

B. Alternate O-Ring Lubricant

When installing a cartridge, it is permissible to use Dow Corning DC 4 lubricant to lubricate the o-ring on the cartridge as an alternate to Dri-Lube 822.

CAUTION: *Cartridges are classified as hazardous materials. Consult a certified HAZMAT removal company to properly dispose of expired cartridges.*

ENGINE FIRE EXTINGUISHER SUPPLY CYLINDER SERVICING

Remove and replace the cylinder in accordance with the procedures in Pacific Scientific 17400 Component Maintenance Manual P/N 26-20-200, which are contained in Chapter 26 of Beechcraft Component Maintenance Manual P/N 101-590097-13.

A. Service Life

- 1) Check the engine fire extinguisher cylinder at the interval specified in Chapter 4 of this manual (Table 4.4). The cylinder may remain in service beyond the requalification time provided:
 - a) The cylinder was filled before requalification became due.
 - b) The pressure gauge indicates the proper charge specified in Table 301 in Section 26-20-03 of the AMM.
 - c) There is no visible damage, such as dents, deeper than 1/16 inch per inch of average dent diameter, nor any scratches deeper than 0.004 inch.



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- 2) A cylinder that has been emptied or removed for maintenance reasons and is past its' requalification date, which is 5 years from the date of the last hydrostatic test marked on the cylinder, may not be serviced or re-filled until it has been hydrostatically tested and requalified as specified in Table 4.4 of this manual.

B. Recharging

Send the cylinder to a certified recharging station to refill the cylinder with CBrF3 extinguishing agent.

CAUTION: Cylinders are classified as hazardous materials. Consult a certified HAZMAT shipping company in order to properly ship a cylinder.

PORTABLE FIRE EXTINGUISHERS

The portable fire extinguishers installed in the airplane are existing equipment installed by Beechcraft. Refer to the Beechcraft AMM for all inspection, servicing, and maintenance information and procedures.



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CHAPTER 27 **FLIGHT CONTROLS**

TAKEOFF TRIM WARNING SYSTEM - MAINTENANCE PRACTICES

INSPECTION

Remove the trim tab control wheel. NOTE: It is not necessary to remove the dial indicator drum or gears.

Verify the trigger plate is securely fastened to the dial indicator drum.

Verify the roller lever switch is securely fastened to the mounting plate and pedestal side wall. Check the switch for damage or wear. Replace the switch if damaged.

Perform the switch position check. If there is no audible click of the switch, then adjust the position of the switch for proper contact with the trigger plate and dial indicator drum.

Check the wiring connections to the switch and warning horn, which is located at the forward end of the pedestal. Verify the connections are secure and there is no sign of chafing or damage to the wires. Replace any damaged wire.

Verify the warning horn and mounting plate are securely fastened to the pedestal.

Reinstall the trim tab control wheel.

Verify that the trim wheel rotates freely without excessive dragging or resistance.

Perform the system functional test.

ROLLER LEVER SWITCH REMOVAL

Unplug the wires from the switch terminals.

Remove the three screws holding the switch mounting plate to the left side of the pedestal.

Remove the two screws, nuts, and washers attaching the switch and shim plate to the mounting plate.

ROLLER LEVER SWITCH INSTALLATION

Attach the switch to the mounting plate with the shim plate in between the switch and mounting plate. Use the two screws, nuts and washers previously removed.

Attach the mounting plate to the pedestal wall with the three screws previously removed and adjust the position of the roller lever switch.

Reconnect the wire receptacles to their corresponding switch terminals.

ROLLER LEVER SWITCH POSITION CHECK

Check to see that the switch is in the proper position:

- a) Rotate the dial indicator drum.
- b) Verify the roller contacts the drum and trigger plate.
- c) Verify the switch closes with an audible click when the roller moves onto the trigger plate.
- d) Verify the switch opens with an audible click when the roller moves off the trigger plate.

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ROLLER LEVER SWITCH POSITION ADJUSTMENT

Loosen the three screws holding the switch mounting plate to the pedestal side wall.

Move the mounting plate into position so that the switch's lever roller is pressed against the trigger plate enough to close the switch with an audible click. The switch should open with an audible click and lightly touch the dial indicator drum when the roller is off the trigger plate.

Once the switch is in position, tighten screws on the mounting plate.

Check the switch position and make further adjustments as necessary.

SYSTEM FUNCTIONAL TEST

- 1) Turn main battery (BATT) switch ON.
- 2) Move the elevator trim tab wheel to 0 position.
- 3) Select the AUTO FEATHER switch to ARM.
- 4) Move the left engine power lever full forward.
- 5) Turn the trim wheel past the DN takeoff limit mark and verify the warning horn sounds.
- 6) Turn the trim wheel back into the takeoff range and verify the warning horn turns off.
- 7) Turn the trim wheel past the UP takeoff limit mark and verify the warning horn sounds.
- 8) Turn the trim wheel back into the takeoff range and verify the warning horn turns off.

ICE MODE STALL WARNING - TROUBLE SHOOTING

GROUND FUNCTIONAL TEST

If the ice mode stall warning system is not working properly, perform the *Ground Functional Test* procedure specified in Section 27-31-01 of the Beechcraft AMM with the following differences for the ice mode system.

Connect the breakout box between the ice mode lift computer and the wiring harness connected to it. The ice mode lift computer is located under the equipment mounted in the center console.

After turning on the main battery power, select the DEICE CYCLE switch to SINGLE or MANUAL and verify the STALL WARNING ICE MODE lighted switch on the glare shield illuminates. The airplane must be in "ice mode" for the ice mode lift computer to be active.

Where tip grams of force are specified by flap position, use the following values, where positive (+) is a force applied to the lift vane in the aft direction:

- a) Flaps up: $+2.3 \pm 2.0$ tip grams

NOTE: For flaps up, the warning horn will be ON initially while the force on lift vane is zero or below the set point. The warning horn will turn off as the lift vane is pushed past the set point.

- b) Flaps approach: -2.0 ± 2.0 tip grams

- c) Flaps down: -3.7 ± 2.0 tip grams

NOTE: The above tip gram values are the initial calibration values used for installing and setting up the ice mode stall warning system. These tip gram values may have changed as a result of adjustments made during the calibration flight test. In this case, measure the tip gram at each flap setting and compare these values to the tip gram values determined after completion of the flight test calibration and recorded on the ice mode stall warning calibration sheet.



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ICE MODE STALL WARNING - MAINTENANCE PRACTICES

INSPECTION

Check the ice mode stall warning switch on the glare shield for security of attachment.

Open the top of the center console and check the ice mode lift computer and relay are securely fastened to the airframe and wiring and connectors are secure.

Check the wiring for signs of chafing or other damage. Replace any damaged wire.

Perform the *System Operational Test* below.

ICE MODE LIFT COMPUTER AND RELAY REMOVAL

To access the ice mode lift computer or relay, remove the equipment mounted on top of the center console.

Disconnect the electrical connector from the lift computer or relay.

Remove the 4 mounting screws holding the lift computer or relay to the mounting plate.

ICE MODE LIFT COMPUTER AND RELAY INSTALLATION

Install the ice mode lift computer or relay in reverse of the removal procedure.

SYSTEM OPERATIONAL TEST

- 1) Make sure the stall warning heat system is turned off.
- 2) Connect the breakout box (P/N SK100360 or equivalent; ref. AMM) between the ice mode lift computer and the wiring harness connected to it.
NOTE: The alternative to using the breakout box is to manually disconnect the left main landing gear safety switch in order to simulate an in-flight condition.
- 3) Turn main battery (BATT) switch ON.
- 4) Select the DEICE CYCLE switch to SINGLE or MANUAL.
- 5) Verify the STALL WARNING ICE MODE switch illuminates, indicating the system is in "Ice Mode."
- 6) If using the breakout box, place a jumper wire between pins 2 and 7, or otherwise ground pin 7, in order to bypass the landing gear safety switch and simulate an in-flight condition.
- 7) Set Flaps UP:
 - a) The stall warning horn should be ON.
 - b) Move the lift transducer vane aft until the warning horn turns OFF.
 - c) Release the vane and verify the warning horn turns ON.
- 8) Set Flaps APPROACH:
 - a) If the stall warning horn is ON, move the lift transducer vane aft until the warning horn turns OFF.
 - b) If the stall warning horn is OFF, move the lift transducer vane forward until the warning horn turns ON.
 - c) Release the vane and verify the warning horn activates or deactivates accordingly.

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9) Set Flaps DOWN:

- a) The stall warning horn should be OFF.
- b) Move the lift transducer vane forward until the warning horn turns ON.
- c) Release the vane and verify the warning horn turns OFF.

10) Press STALL WARNING ICE MODE switch and verify the light is OFF.

11) Turn the main battery power OFF.

12) Remove the breakout box and reconnect the wire harness to the ice mode lift computer, or reconnect the left main landing gear safety switch.

If the system does not function as expected, troubleshoot the system in accordance with the *Ground Functional Test* procedure on p. 27.2.

ICE MODE LIFT COMPUTER GROUND & FLIGHT CALIBRATION

If the ice mode stall warning horn does not activate within the tip gram force range expected as a result of the *Ground Functional Test* or whenever the ice mode lift computer is replaced, perform the *Ground Calibration* procedure and the *Flight Test and Calibration* procedure specified in Sections 27-31-03 and 27-31-07 of the Beechcraft AMM with the following differences for the ice mode system.

After turning on the main battery power, select the DEICE CYCLE switch to SINGLE or MANUAL and verify the STALL WARNING ICE MODE lighted switch on the glare shield illuminates. The airplane must be in "ice mode" for the ice mode lift computer to be active.

Where tip grams of force are specified by flap position, use the following values as initial calibration settings, where positive (+) is a force applied to the lift vane in the aft direction:

- a) Flaps up: +2.3 tip grams

NOTE: For flaps up, the warning horn will be ON initially while the force on lift vane is zero or below the set point. The warning horn will turn off as the lift vane is pushed past the set point.

- b) Flaps approach: -2.0 tip grams
- c) Flaps down: -3.7 tip grams

Conduct the flight test in "ice mode." In flight, the stall warning horn must sound 15 to 25 knots before the initial buffet speed specified in the AMM.

Use the calibration forms provided in this chapter.



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Ice Mode Stall Warning Ground Calibration

Date: _____
Work Order: _____
Technician: _____

Customer: _____
Aircraft ID: _____
Inspector: _____

Calibration Procedure:

1. Disconnect the left main landing gear safety switch.
2. Install Beech or CTA force applicator may be used in lieu of Beech force applicators.
3. Turn main battery (BATT) switch ON.
4. Turn stall warning system heat OFF.
5. Select the DEICE CYCLE switch to SINGLE or MANUAL (momentary).
6. Verify the STALL WARNING ICE MODE switch illuminates (system in icing mode).
7. Set the flap position.
8. Deflect the lift vane to the force specified and adjust the ice mode lift computer potentiometer so warning horn activates/deactivates at that point.
9. Record the lift transducer vane force required to activate the stall warning horn at each flap position.

Flap Position	Force Applicator Range, tip grams	Lift Computer Potentiometer	Warning Horn Activation Force, tip grams
Up	+2.3 \pm 0.2	0	
Approach	-2.0 \pm 0.2	1	
Down	-3.7 \pm 0.2	2	

10. Turn main battery (BATT) switch OFF.
11. Remove force applicator.
12. Connect left main landing gear safety switch.



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Ice Mode Stall Warning Flight Calibration

Date: _____ Customer: _____
 Work Order: _____ Aircraft ID: _____
 Technician: _____ Pilot: _____
 _____ Inspector: _____

Calibration Procedure:

1. Load airplane between 12,000 to 12,400 pounds and C.G. between F.S. 184.7 to 187.0 inches.
2. Conduct stall tests away from populated area, at safe altitude, and in smooth air.
3. Select the DEICE CYCLE switch to SINGLE or MANUAL and wait for de-ice boots to deflate.
4. Verify the STALL WARNING ICE MODE switch illuminates (system in icing mode).
5. Set propeller levers full forward, condition levers to low idle, and power levers to idle.
6. Set flap position, landing gear position, and trim speed.

Configuration	Trim Speed
Flaps UP, Gear UP	145 KIAS
Flaps APPROACH, Gear DOWN	130 KIAS
Flaps DOWN, Gear DOWN	114 KIAS

7. With wings level, reduce airspeed at a steady rate not to exceed 1 knot per second until a noticeable buffet occurs. Pitch nose down to regain airspeed.
 - a. Record the speed at which the stall warning horn sounds.
 - b. Record the buffet speed.
8. Subtract buffet speed from stall warning speed to determine the warning buffer. For ice mode stall warning, the warning buffer must be 15 to 25 knots.
9. Adjust the potentiometer as needed and repeat the stall test until the proper warning buffer is achieved for each configuration.
10. Once back on the ground, check and record the tip gram force required to activate the ice mode stall warning horn for each flap position.

Flap Position	Stall Warning KIAS	Initial Buffet KIAS	Warning Buffer Knots	Lift Computer Adjustment Pot. # CW=increase airspeed CCW=decrease airspeed	Post-Test Horn Activation Force, tip grams
Up				0	
Approach				1	
Down				2	

CHAPTER 33

LIGHTS

EMERGENCY LIGHTING SYSTEM - MAINTENANCE PRACTICES

SPECIAL TOOLS

In order to test a self-illuminating exit sign, use a T-light Comparator calibrated to 160 +15/-0 microlamberts.

ESCAPE PATH MARKING STRIP CLEANING

The escape path marking photo luminescent strips must be kept clean to maximize light absorption. Brush the strips with a stiff non-metallic bristle head and vacuum up dirt and debris to keep the strips clean. If necessary, use a damp sponge or cloth to wipe the strips clean. Do not use high alkaline or acidic cleaning agents on the strips.

ESCAPE PATH MARKING STRIP INSPECTION

Check to see that the photo-luminescent strips are secure in the track and the track is securely fastened to the carpet or floor runner.

Use double-sided tape to reattach any strip that is peeling up from the metal track.

The luminosity of the strips does not diminish over time except if the photo-luminescent coating is worn off or damaged. Charge the strips with a flood lamp or similar for five to ten minutes. With the cabin darkened, check the strips for damaged and worn areas.

Replace any strips that where the photo-luminescent coating is visibly damaged or worn.

ESCAPE PATH MARKING STRIP REMOVAL

The photo-luminescent strip attaches to the metal track with double sided tape. Peel the damaged or worn strip out of the track using a flat head screw driver, being careful not to damage the track.

ESCAPE PATH MARKING STRIP INSTALLATION

Measure the length of the metal track where the new photo-luminescent strip is to be installed, and cut the new strip to the correct length.

Use double-sided tape to attach the new strip in the metal track.

Align the ends of the strip with the track and push the strip into the track so no part of the strip protrudes above the track.

SELF-ILLUMINATING EXIT SIGN INSPECTION

Check the exit sign to see that it is securely attached and the sign is clean and visible.

If the exit sign is expired according to Table 4.5 of this manual, the exit sign may continue to be used as long as the sign's luminosity is no less than 160 microlamberts. Follow the *Brightness Check* procedure in Section 33-50-01 of the Beechcraft AMM using the T-Light Comparator noted above.

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SELF-ILLUMINATING EXIT SIGN REMOVAL

The exit sign is attached to the rear cabin bulkhead or cabin door overhead panel and emergency exit window with fire resistant hook & loop tape.

Remove the exit sign by pulling it off the bulkhead, panel, or window.

Remove the loop tape from the bulkhead, panel, or window only if it is worn, damaged, or has lost its' adhesion. On the bulkhead, mark the position of the tape prior to removal.

SELF-ILLUMINATING EXIT SIGN INSTALLATION

Adhesive-backed, fire resistant 2" x 6" hook & loop tape is provided with a new exit sign.

Apply the loop tape to the marked position on the rear cabin bulkhead or to the mounting plate on the rear cabin door panel or emergency exit window when replacement is necessary.

Apply the hook tape to the back of the exit sign.

Attach the exit sign to the loop tape.

Check to see that the exit sign is secure.

ELECTRIC EXIT SIGN INSPECTION

Check the wiring connector for security and wires are not chafed or damaged. Replace any damaged wire.

Check to see that the exit sign is working as part of the *Emergency Lighting System Functional Test* on p. 33.5.

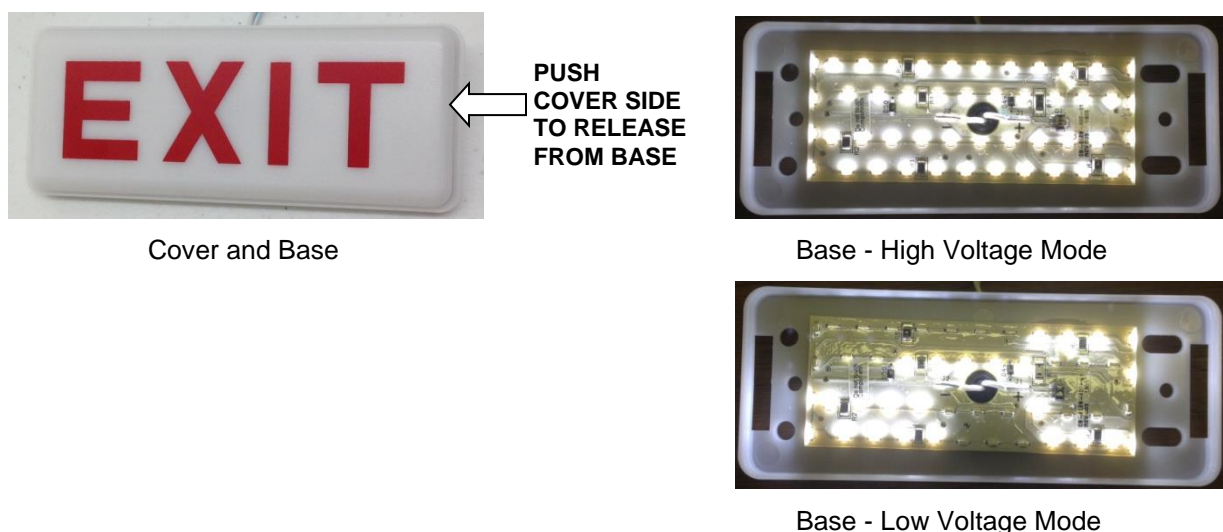
Check for damage and LED bulbs that do not work.

The exit sign has two modes of illumination. In the low voltage mode, 15 to 21 volts excitation, half of the LEDs illuminate. In high voltage mode, 22 to 30 volts, all LEDs illuminate. See Figure 33.1. Replace the exit sign if less than 50% of the LEDs illuminate in either low or high voltage mode.

Replace the exit sign if there are signs of a short circuit (such as scorch marks or melting), or if the cover is cracked, broken, or discolored.

Check to see that the exit sign is secure.

FIGURE 33.1 - Electric Exit Sign





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ELECTRIC EXIT SIGN REMOVAL

Remove the exit sign cover by pushing in on one side of the cover to release the retaining tab, then pull the cover away from the base. See Figure 33.1.

The exit sign located on the rear cabin bulkhead is attached with hook & loop tape. To remove, simply pull the exit sign off its mounting position and unplug the exit sign at the wiring connector.

The exit sign on the emergency exit window and above the cabin door is held to the interior panel with two screws, nuts, and washers. Remove the panel, screws, nuts, and washers. Unplug the exit sign at the wiring connector.

ELECTRIC EXIT SIGN INSTALLATION

To install the exit sign on the rear cabin bulkhead, plug in the exit sign to the existing wiring connector, and attach the exit sign to the bulkhead per the installation procedure for the self-illuminating exit sign.

To install the exit sign on the emergency exit window or cabin door panel, plug in the exit sign to the existing wiring connector, and attach the exit sign base to the panel with two screws, nuts, and washers. Reinstall the panel.

Install the exit sign cover by inserting it into the base. Push the cover in so the retaining tabs snap into the base.

Check to see that the exit sign is secure.

EMERGENCY LIGHT INSPECTION

Check to see that wiring is secure and not chafed or damaged. Replace any damaged wire.

Check to see that the light is working as part of the *Emergency Lighting System Functional Test* on p. 33.5.

Check for damage and LED bulbs that do not work.

Replace the light if more than three out of the six LED bulbs are not working, if there are signs of a short circuit (such as scorch marks or melting), or if the lens is cracked or broken.

Check to see that the exit sign is secure.

EMERGENCY LIGHT REMOVAL

Remove the two screws holding the aluminum bezel to the lamp assembly.

Pull down the center headliner in main cabin to access the nuts in the headliner side.

Remove the four screws, nuts, and washers holding the lamp assembly to the headliner.

Unplug the lamp assembly wire harness connector from the airplane wire harness connector.

EMERGENCY LIGHT INSTALLATION

Plug in the lamp assembly wire harness connector to the airplane wire harness connector.

Install four screws, nuts, and washers to hold the lamp assembly to the headliner.

Install the headliner.

Attach the aluminum bezel to the lamp assembly with two screws.



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LED INDICATOR-CAUTION LIGHT INSPECTION

Check the LED indicator caution light is secure in the panel. Tighten the nut if necessary.

Check to see that the light is working as part of the *Emergency Lighting System Functional Test* on p. 33.5.

Replace a damaged or non-working indicator.

LED INDICATOR-CAUTION LIGHT REMOVAL

Remove the nut holding the LED indicator caution light in the panel.

Pull the indicator out through the back of the panel.

Cut or de-solder the wires from the light terminals, making note of the light's polarity and respective wires.

LED INDICATOR-CAUTION LIGHT INSTALLATION

Be sure to verify the power and ground wires connect to the correct terminal before soldering. The wiring must match the LED light's polarity.

Solder the power wire to the LED "+" terminal.

Solder the ground wire to the other LED terminal.

Insert the LED through the hole in the instrument panel and secure with nut.

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Emergency Lighting System Functional Test

Date: _____
 Work Order: _____
 Technician: _____

Customer: _____
 Aircraft ID: _____
 Inspector: _____

Test Procedure:

NOTE: Use the following procedure for troubleshooting and periodic inspection of the emergency lighting system to verify the system functions properly or to isolate a problem with the system.

1. Turn on the main battery switch and connect external power to the airplane.
2. For each test condition in the Functional Test Chart:
 - a) Set the cabin light switch, circuit breaker, and control switch.
 - b) Verify the two indicator caution lights on the instrument panel, the two emergency lights in the cabin, and, if installed, the two electrically powered exit signs in the cabin are ON or OFF as required.
3. If a light does not come on when required, check the light for damage or expired LED(s). Replace the component as needed.

EMERGENCY LIGHTING FUNCTIONAL TEST CHART

Test Cond. No.	SYSTEM SETTING			SYSTEM OUTPUT								
	CABIN LIGHT SWITCH	"EMERG LIGHT" C.B.	"EMERG CABIN LT" SWITCH	"LT NOT ARMED" INDICATOR		"CABIN SW OFF" INDICATOR		EMERGENCY CABIN LIGHTS			24 VDC ELECTRIC EXIT SIGNS	
1	OFF	IN	OFF	ON		OFF		OFF			OFF	
2	OFF	IN	ARM	OFF		ON		OFF			OFF	
3	OFF	IN	ON	ON		ON		ON			ON	
4	OFF	PULL	OFF	OFF		OFF		OFF			OFF	
5	OFF	PULL	ARM	OFF		OFF		OFF			OFF	
6	OFF	PULL	ON	OFF		OFF		OFF			OFF	
7	ON	IN	OFF	ON		OFF		ON			ON	
8	ON	IN	ARM	OFF		OFF		OFF			OFF	
9	ON	IN	ON	ON		OFF		ON			ON	
10	ON	PULL	OFF	OFF		OFF		ON			ON	
11	ON	PULL	ARM	OFF		OFF		ON			ON	
12	ON	PULL	ON	OFF		OFF		ON			ON	

NOTES: "Cabin Light Switch" is the rocker switch next to one of the emergency lights; push switch position "o" in for OFF and "-" for ON.

"EMERG LIGHT C.B." is the circuit breaker in the copilot circuit breaker panel that provides 28-VDC electrical power from the main power bus to the emergency lighting system.

"EMERG CABIN LT Switch" is the 3-position control switch in the copilot subpanel.

Refer to the system wiring diagram if necessary.



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CHAPTER 34

NAVIGATION

OVER-SPEED WARNING SYSTEM - MAINTENANCE PRACTICES

INSPECTION

Follow the hoses inspection procedures and pitot and static system test procedures in Section 34-00-00 of the Beechcraft AMM.

There are two types of pressure switches. One type is Beech part number 101-380081-1 switch, shown in Figure 34.1. To access the Beech switch:

1. Remove the nine screws holding the box cover located behind the center pedestal.
2. Remove the equipment mounted in the center pedestal.
3. Remove the right side panel of the engine control pedestal.

The second type pressure switch is CTA part number 006-1002-0005-1 switch, shown in Figure 34.2. This switch is mounted either in the center pedestal or behind the instrument panel. To access the CenTex switch mounted in the center pedestal:

1. Remove the equipment mounted in the center pedestal.
2. Remove the right side panel of the engine control pedestal.

Check to see that the pressure switch is securely fastened.

Inspect the pitot & static hoses from the pressure switch to the instrument panel. Check pitot and static lines, fittings, and hoses for signs of wear, looseness, or damage. Replace any damaged components. Replace any cracked, brittle, or hardened rubber hose.

Check the electrical connector and wire harness for security and signs of chafing or damage. Replace any damaged wires.

Check the over-speed warning horn mounted beneath the glare shield is securely fastened and wires are not loose, chafed, or damaged.

Perform the system functional test.

FIGURE 34.1
Beech Over-Speed Pressure Switch

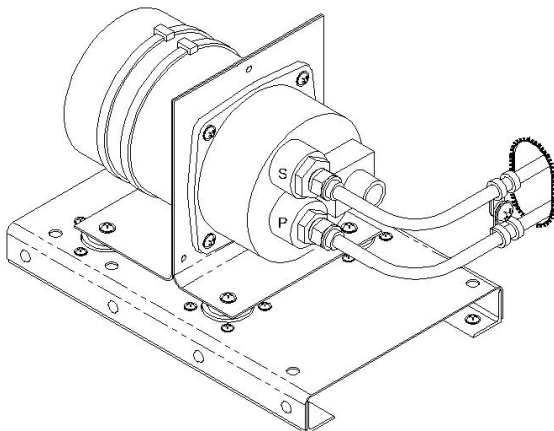
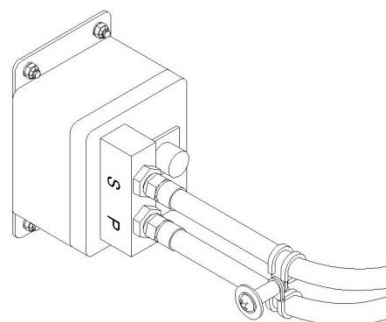


FIGURE 34.2
CenTex Over-Speed Pressure Switch





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BEECH OVER-SPEED PRESSURE SWITCH REMOVAL

Remove the nine screws holding the box cover located behind the center pedestal.

Disconnect the electrical connector and pitot and static lines from the pressure switch.

Remove the four screws holding the mounting bracket to the floor.

Cut the two cable ties holding the switch to the bent tab.

Remove the four screws holding the switch to the mounting bracket.

CENTEX OVER-SPEED PRESSURE SWITCH REMOVAL

When installed in the center pedestal, remove the equipment mounted in the center pedestal.

Disconnect the electrical connector and pitot and static lines from the pressure switch.

Remove the four screws and nuts holding the switch to the airframe.

BEECH OR CENTEX OVER-SPEED PRESSURE SWITCH INSTALLATION

Install the over-speed pressure switch in reverse of the removal procedure.

Secure the Beech pressure switch canister to the mounting bracket tab with two cable ties.

Perform the *Static System Leak Test* procedure in Section 34-00-09 of the AMM.

Perform the system functional test.

SYSTEM FUNCTIONAL TEST

Turn on the main battery switch and connect external power to the airplane.

Perform the *Pitot System Pressure Test* procedure in Section 34-00-05 of the AMM applying sufficient pressure for the airspeed indicator to reach $V_{MO} +6$, -0 knots.

Verify the over-speed warning horn sounds within the airspeed range specified in the table below for the applicable model.

Verify the warning horn deactivates when the airspeed drops below V_{MO} .

If the pressure switch does not activate the warning horn within the required range, replace the switch.

OVER-SPEED WARNING SWITCH ACTIVATION RANGE

Aircraft Model	Airspeed Range
200, 200C, A200, A200C, B200, B200C, B200GT, B200CGT	259 to 265 knots
200CT, 200T, A200CT, B200CT, B200T	244 to 250 knots



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AIRSPEED INDICATOR - ADJUSTMENT AND CALIBRATION

On King Air model 200, 200C, A200, A200C, B200, and B200C airplanes with airspeed indicators labeled "CenTex Mod 006-31", the Mach limit pointer or "Barber Pole" has been changed from 0.52 to 0.58 Mach in accordance with CenTex Engineering Specification no. 006-31. Inspect, adjust, and calibrate the airspeed indicator in accordance with the manufacturer's procedures, except use the calibration specifications shown in the table below for the mach limit pointer. Use NIST traceable standards to calibrate the instrument.

NOTE: Look for the "CenTex Mod 006-31" label on the outside of the instrument case.

NOTE: Contact CenTex Aerospace to obtain a copy of CenTex Engineering Specification no. 006-31 in the event a replacement airspeed indicator is required and needs to be modified. Use an approved facility that is authorized for airspeed instruments to perform the modification.

CENTEX MOD 006-31 AIRSPEED INDICATOR
MACH LIMIT POINTER (BARBER POLE) CALIBRATION CHART

Altitude		Airspeed				
Feet MSL	Static Pressure, PSIA	Target Knots CAS	Pitot Pressure, PSIA	Actual Reading Knots	Minimum Knots	Maximum Knots
-1,500	15.510	259.0	17.149		259.0	263.5
21,093	6.450	259.0	8.089		259.0	263.5
23,000	5.947	249.0	7.457		249.0	253.5
27,000	4.994	228.9	6.263		228.9	233.1
31,000	4.169	209.6	5.228		209.6	213.4
35,000	3.458	191.3	4.337		191.3	194.8



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CHAPTER 57

WINGS

WINGS - MAINTENANCE PRACTICES

Follow all wing inspection times, intervals, and procedures in accordance with Beechcraft Structural Inspection and Repair Manual, P/N 98-39006 Revision D, or subsequent, except where specified in Chapter 4, Airworthiness Limitations, in this manual.

Refer to the Beechcraft AMM for all other wing maintenance information.



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