



**SUPPLEMENTAL TYPE CERTIFICATE NUMBER SA11103SC  
INCREASED MAXIMUM ZERO FUEL WEIGHT LIMIT AND  
INSTALLATION OF SAFETY SYSTEMS FOR  
BEECHCRAFT B200GT AND B200CGT AIRPLANES  
IN THE KING AIR 250 CONFIGURATION**

**FAA APPROVED  
AIRPLANE FLIGHT MANUAL SUPPLEMENT**

Airplane Serial No: \_\_\_\_\_

This supplement must be attached to the appropriate FAA Approved Airplane Flight Manual when the aircraft is modified in accordance with STC SA11103SC. The information contained herein supplements or supersedes the basic Airplane Flight Manual only in those areas listed herein. For limitations, procedures and performance information not contained in this supplement, consult the basic Beechcraft B200GT or B200CGT Pilot Operating Handbook and BLR Aerospace AFM Supplement No. AFMS-250-1.

FAA APPROVED

\_\_\_\_\_  
Manager, Southwest Flight Test Section, AIR-713

Federal Aviation Administration  
Fort Worth, Texas 76177  
Dated: 01/06/2022

REFERENCE ONLY

HALO 250/275 CONVERSION OPTION 1  
INCREASED MAXIMUM ZERO FUEL WEIGHT LIMIT AND  
INSTALLATION OF SAFETY SYSTEMS FOR  
BEECHCRAFT B200GT AND B200CGT AIRPLANES  
IN THE KING AIR 250 CONFIGURATION

AIRPLANE FLIGHT MANUAL SUPPLEMENT

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**INTRODUCTION**

This supplement should be read carefully by the owner and pilot to become familiar with the operation of the airplane after being modified in accordance with Option 1 of CenTex Aerospace STC SA11103SC (Halo 250/275 conversion), which increases the maximum zero fuel weight limit and installs safety systems. The maximum zero fuel weight limit is increased by 500 pounds. The safety systems increase operational safety by adding functions that are not provided on the standard airplane. Below is a list of the new systems and associated functions. Please note that each safety system is optional. The right most column indicates whether the system is installed in this specific airplane.

SAFETY SYSTEM	DESCRIPTION	Installed in this airplane?
Over-speed Warning System	Aural alert sounds automatically when $V_{MO}/M_{MO}$ is exceeded. Only available for Garmin G1000 & G1000 NXi. This is a standard function provided by Collins Proline 21 & Fusion avionics.	
Takeoff Trim Warning System	Aural alert sounds automatically when elevator trim is not set properly for takeoff.	
Stall Warning System Ice Mode	Aural alert sounds automatically when stall is imminent due to ice accumulation on wings.	
Engine Fire Extinguisher System	Extinguishes fire in engine compartment when activated by pilot.	
Emergency Cabin Lighting System	Illumination of cabin during emergency situations. Activates automatically or manually.	
Escape Path Markings	Shows pathway along the cabin floor to main door and to emergency exit.	

The terminology used in this supplement matches the terminology used in the basic Beechcraft POH and the BLR Aerospace AFM Supplement. This includes the definitions of warnings, cautions, and notes. Also, you will find the format of limitations, procedures, and checklists herein match the POH format for B200GT airplanes.

## COMPATIBLE MODIFICATIONS

The following STC-approved modifications have been found to be compatible with the Halo 250/275 conversion:

1. SA02131SE, BLR Ultimate Performance Package
2. SA02130SE, BLR Hartzell HC-E4N-3A/NC9208K propellers
3. SA01615SE, BLR Winglets
4. SA3366NM, Raisbeck Engineering Ram Air Recovery System
5. SA2698NM-S Raisbeck Engineering Swept Blade Turbofan Propellers
6. SA3831NM, Raisbeck Engineering Inboard Leading Edges
7. SA3591NM, Raisbeck Engineering Aft Body Strakes
8. SA4175NM, Raisbeck Engineering MLG Doors
9. SA3857NM, Raisbeck Engineering Storage Lockers
10. SA3683NM, Raisbeck Engineering Exhaust Stack Fairings
11. SA00184LA, Commuter Air Technology Wildness Tires Conversion
12. SA890GL and SA757GL, Parker Cleveland wheels and brakes
13. SA4157SW, SA02468LA, SA00635WI, Aviation Fabricators cabin seats
14. SA10478SC, Hawker Beechcraft Services FDR & CVR
15. SA02738CH, L-3 Comm ESI-1000 standby instrument
16. SA01213CH, Spectrum Aeromed air ambulance conversion
17. SA02235LA, LifePort Patient Loading and Utility System
18. SA03209NY, MT-Propeller MTV-27-1-E-C-F-R(P)/CFR225-55f
19. SA01769WI, Rockwell Collins, Inc. Installation of Pro Line Fusion
20. SA01535WI-D, Garmin G1000 Avionics (GDC 7400 ADC or NXi required)

It is up to the installer to determine whether any other STC-approved modifications are compatible with the Halo 250/275 conversion.

**LIST OF EFFECTIVE PAGES**

The list of effective pages shown below contains all current pages, with effective revision number or date. This list should be used to verify this supplement contains all the applicable and required pages. When inserting revised pages into this supplement the List of Effective Pages should be updated, as well, to the corresponding new list.

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**LOG OF REVISIONS**

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REFERENCE ONLY

The limitations shown in this section are approved by the Federal Aviation Administration and must be observed while operating Beechcraft King Air B200GT or B200CGT airplanes that have been modified in accordance with Option 1 of CenTex Aerospace STC SA11103SC.

Refer to the Beechcraft B200GT or B200CGT Pilot Operating Handbook and BLR Aerospace AFMS-B250-1 AFM Supplement for limitations not contained in this section.

#### WEIGHT LIMITS

Maximum Zero Fuel Weight ..... 11,500 pounds

#### ICING LIMITATIONS

The limitations and information presented in this subsection have been changed from the basic Airplane Flight Manual and Pilot Operation Handbook. The changes are considered by the FAA to be essential in ensuring the safe operation of the airplane in icing conditions.

Minimum Ambient Temperature for Operation of Deicing Boots ..... -40°C

Minimum Airspeed for Sustained Icing Flight ..... 140 Knots

Sustained flight in icing conditions with flaps extended is prohibited except for approach and landing.

ENGINE ANTI-ICE shall be ON for operations in ambient temperatures of +5°C or below when flight free of visible moisture cannot be assured.

ENGINE ANTI-ICE shall be OFF for all takeoff and flight operations in ambient temperatures above + 15°C.

Takeoff is prohibited with any frost, ice, snow, or slush adhering to the wings, horizontal stabilizer, control surfaces, propeller blades, or engine inlet.

In icing conditions the airplane must be operated, and its ice protection system used as described in the operating procedures section of this AFM Supplement. Where specific operational speeds and performance information have been established for such conditions, this information must be used.

**WARNING**

Severe icing may result from environment conditions outside of those for which the airplane is certificated. Flight in freezing rain, freezing drizzle, or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capacity of the ice protection system, or may result in ice forming aft of the protected surfaces. This ice may not be shed using the ice protection systems and may seriously degrade the performance and controllability of the airplane and an unsafe situation will likely result. It is the responsibility of the pilot to identify severe icing conditions and to exit such condition to ensure safe flight operations.

1. Severe icing conditions that exceed those for which the airplane is certificated shall be determined by the following visual cues. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.
  - Extensive ice accumulation on the airframe and windshield in areas not observed to collect ice during light or moderate icing conditions.
  - Accumulation of ice on the upper surface of the wing, aft of the protected area (i.e., leading-edge boot).
  - Accumulation of ice on the engine nacelles and propeller spinners farther aft than observed during light or moderate icing conditions.
2. DO NOT USE THE AUTOPILOT in severe icing conditions or whenever:
  - Visual cues specified above exist.
  - Unusual aileron trim settings are required.
  - Autopilot trim warnings occur.

Note: an unsafe condition exists when the autopilot is engaged and the airplane handling characteristics are degrading due to ice accumulating on the airplane. The pilot will not be aware of this unsafe condition, which requires an immediate exit from icing conditions, if he/she is not manually flying the airplane.
3. All icing detection lights must be operative prior to flight into known or forecast icing conditions at night.

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## SECTION 3 EMERGENCY PROCEDURES

### EMERGENCY CABIN LIGHTING ACTIVATION

(If installed)

An emergency lighting system has been added to provide lighting in key areas of the passenger cabin in case there is an emergency situation, such as a loss of electrical power or when an evacuation of the aircraft is required. To manually activate the system, place the control switch located on the copilot instrument panel in the ON position. The emergency cabin flood lamps will illuminate the cabin areas near the emergency exit and door. Also, the system will automatically activate the emergency cabin flood lamps whenever the control switch is in the ARM position and electrical power is lost (on dual fed bus no. 2) or the aircraft experiences a horizontal deceleration of 2g's, or more.

### EMERGENCY ESCAPE PATH

(If installed)

Photoluminescent markings have been installed on the cabin floor outlining the aisle and the location of the emergency exit door and cabin door. Under conditions of reduced visibility, such as a cabin filled with smoke, occupants can follow this marked escape path to the exit from the aircraft.

#### NOTE

See BLR Aerospace AFMS-B250-1 AFM Supplement and Beechcraft B200GT or B200CGT Pilot Operating Handbook for other Emergency Procedures.

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## SECTION 3A ABNORMAL PROCEDURES

*If the Stall Warning System Ice Mode is installed and only aircraft with Rockwell Collins Pro Line Fusion:*

### STALL FAIL **Stall Fail**

This CAS message indicates that the stall computer has failed. Maintain airspeed appropriate for phase of flight.

#### NOTE

Airplanes equipped with Stall Warning System Ice Mode have two stall warning computers – one computer is functioning during normal mode operations and the other during Ice Mode operations. The Stall Fail CAS message applies to the computer associated with the mode in use at the time of failure.

#### NOTE

See BLR Aerospace AFMS-B250-1 AFM Supplement and Beechcraft B200GT or B200CGT Pilot Operating Handbook for other Abnormal Procedures.

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## PROCEDURES BY FLIGHT PHASE

### NOTE

Refer to all applicable Supplements for flight phase procedures for optional equipment installed in the airplane. The procedures listed below are required for airplanes modified by the Halo 250/275 conversion.

## PREFLIGHT INSPECTION

### CABIN/COCKPIT

**If the Emergency Cabin Lighting System is installed:**

*Add the following steps while Battery Switch is OFF.*

Emergency Lighting Cabin Switch ..... ON

Emerg Cabin Lt Control Switch.....ARM

Emergency Cabin Flood Lamps ..... CHECK (illuminated)

*Add the following step when Battery Switch is ON.*

Emergency Cabin Flood Lamps .....CHECK (not illuminated)

*Add the following step after Battery Switch is turned OFF.*

Emergency Lighting Cabin Switch ..... OFF

### LEFT WING AND NACELLE

*Change the following:*

Propeller ..... CHECK PROPELLER AND DEICE BOOT CONDITION

### RIGHT WING AND NACELLE

*Change the following:*

Propeller ..... CHECK PROPELLER AND DEICE BOOT CONDITION

## BEFORE ENGINE STARTING

**If the Emergency Cabin Lighting System is installed, add the following step after airstair door is LOCKED.**

Emergency Lighting Cabin Switch ..... ON

**If the Takeoff Trim Warning System is installed, add the following steps after the Battery Switch is ON.**

Left Power Lever ..... ADVANCE TO AT LEAST 80% POSITION

Autofeather Switch .....ARM

Elevator Trim Warning System..... TEST

Elevator Trim Control..... SET FOR TAKEOFF

Autofeather Switch ..... OFF

Left and Right Power Levers ..... IDLE

**If the Over-speed Warning System is installed, add the following step after the Battery Switch is ON.**

Over-speed Aural Warning..... TEST

# BEFORE TAKEOFF (RUNUP)

If the Stall Warning System Ice Mode is installed, add the following steps after the Surface Deice System check.

Stall Warning Ice Mode Annunciator ..... ILLUMINATED  
Stall Warning ..... TEST  
Stall Warning Ice Mode Annunciator ..... PRESS (to select Normal Mode)

## NOTE

The stall warning system must be in the Normal Mode during takeoff and initial climb-out. If a takeoff is conducting with the stall warning system in the Ice Mode, a misleading stall warning following lift-off will likely occur.

# CLIMB

If the Stall Warning System Ice Mode is installed, add the following after the normal climb checklist.

## CLIMB IN ICING CONDITIONS

1. Engine Anti-Ice ..... ON  
Rockwell Collins Pro Line 21 Annunciators:

[L ENG ANTI-ICE] & [R ENG ANTI-ICE] ILLUMINATED

Rockwell Collins Pro Line Fusion CAS Message:

**L-R ENG ANTI-ICE**

CAS MESSAGE DISPLAYED

2. Auto Ignition ..... ARM  
3. Prop Deice ..... AUTO  
4. Stall Warning Heat ..... CONFIRM ON  
5. Left and Right Fuel Vent Heat ..... CONFIRM ON  
6. Left and Right Pitot Heat ..... CONFIRM ON  
7. Windshield Anti-Ice ..... CONFIRM NORMAL OR HI  
At first sign of ice accretion on aircraft.  
8. Surface Deice Switch ..... SINGLE AND RELEASE (repeat as required)  
9. Stall Warning Ice Mode Annunciator ..... ILLUMINATED  
10. Climb Power ..... SET MAX CONT POWER (to expedite climb)  
11. Airspeed ..... 140 KNOTS MINIMUM AIRSPEED

## CRUISE

*If the Stall Warning System Ice Mode is installed, add the following after the normal cruise checklist.*

### CRUISE IN ICING CONDITIONS

*At first sign of ice accretion on aircraft.*

1. Airspeed ..... 140 KNOTS MINIMUM
2. Surface Deice Switch ..... SINGLE AND RELEASE
3. Stall Warning Ice Mode Annunciator ..... VERIFY ILLUMINATED

*Outside of icing conditions and wings free of ice.*

1. Stall Warning Ice Mode Annunciator ..... PRESS (to select Normal Mode)
2. Stall Warning Ice Mode Annunciator ..... EXTINGUISHED

### ICING CONDITIONS

*Replace the warning statement with the following:*

#### WARNING

Due to distortion of the wing airfoil, ice accumulation on the leading edges can cause a significant loss in rate of climb and in cruise speed, as well as increases in stall speed. Even after cycling deicing boots, the ice accumulation remaining on the boots plus ice accumulations on unprotected areas can cause large performance losses. In order to minimize ice accumulation on unprotected surfaces of the wing, maintain a minimum of 140 knots during operations in sustained icing conditions. In the event of windshield icing, reduce airspeed to 226 knots or below. Prior to a landing approach, cycle the deicing boots to shed any accumulated ice. The stall warning system will sound the aural warning at 15 to 20 knots above the normal warning speed when it is in the ice mode, which is appropriate when there is ice on the wings.

*Add the following after Surface Deice.*

*At first sign of ice accretion on aircraft.*

- a. Airspeed ..... 140 KNOTS MINIMUM
- b. Surface Deice Switch ..... SINGLE AND RELEASE
- c. Stall Warning Ice Mode Annunciator ..... VERIFY ILLUMINATED
- d. Repeat as required.

*If Single Position of the Surface Deice Switch Fails:*

- e. Surface Deice Switch ..... MANUAL AND HOLD  
FOR A MINIMUM OF 6 SECONDS, THEN RELEASE
- f. Stall Warning Ice Mode Annunciator ..... VERIFY ILLUMINATED
- g. Repeat as required.

*Add the following.*

### OUTSIDE OF ICING CONDITIONS AND WINGS FREE OF ICE

1. Stall Warning Ice Mode Annunciator ..... PRESS (to select Normal Mode)
2. Stall Warning Ice Mode Annunciator ..... EXTINGUISHED

## BEFORE LANDING

*If the Stall Warning System Ice Mode is installed, change the following steps.*

1. Landing Approach Speed ..... CONFIRM
2. Autofeather..... ARM
3. Pressurization ..... CHECK
4. Cabin Sign..... NO SMOKE & FSB
5. Flaps..... APPROACH
6. Landing Gear ..... DN
7. Lights..... AS REQUIRED

### NOTE

Under low visibility conditions, landing and taxi lights should be left off due to light reflections.

8. Radar..... AS REQUIRED
9. Surface Deice ..... CYCLE AS REQUIRED

*If wings are free of ice:*

10. Stall Warning Ice Mode Switch ..... PRESS (to select Normal Mode)

*If residual ice remains on wing boots and/or unprotected surfaces:*

11. Surface Deice ..... CYCLE
12. Stall Warning Ice Mode Annunciator ..... ILLUMINATED
13. Approach Speed and Landing Distance ..... INCREASE  $V_{REF}$  BY 15 KNOTS  
AND INCREASE EXPECTED LANDING DISTANCE BY 25 PERCENT

*In the NOTE replace last sentence with "Stall speeds can be expected to increase as much as 15 knots if ice is present on the wings and/or horizontal tail surfaces."*

## SHUT DOWN AND SECURING

*If the Emergency Cabin Lighting System is installed, add the following steps.*

- Emerg Cabin Lt Control Switch..... OFF
- Emergency Lighting Cabin Switch ..... OFF

## OTHER PROCEDURES

### ICING FLIGHT

*If the Stall Warning System Ice Mode is installed, add the following.*

Refer to Section 2 Limitations of this Supplement for limitations relating to icing flight. See Section 3A for abnormal procedures associated with icing equipment malfunctions and procedures required for severe icing conditions. See the BEFORE TAKEOFF (RUNUP) and CRUISE checklists in this section for normal ground and in-flight procedures pertaining to flight in icing conditions.

*At first sign of ice accretion on aircraft:*

- a. Airspeed ..... 140 KNOTS MINIMUM
- b. Surface Deice Switch ..... SINGLE AND RELEASE
- c. Stall Warning Ice Mode Annunciator ..... VERIFY ILLUMINATED
- d. Repeat as required.

### TAKEOFF TRIM WARNING TEST

*If the Takeoff Trim Warning System is installed, add the following.*

A warning system has been added that provides a constant tone aural alert in the cockpit when the elevator trim tab is not set within the acceptable range for takeoff and engine power is increased above 90%  $N_1$ . The system should be tested for proper operation before the first flight of each day while conducting the BEFORE ENGINE STARTING procedure. To perform this test the trim warning system must first be activated by placing the Autofeather switch to ARM. Then, the left power lever must be advanced past the 80% position. The system should now be tested by adjusting the elevator trim tab to a position outside of the takeoff range marked on the tab position indicator in both the nose up and the nose down directions. The aural alert should sound just as the tab position indicator moves outside of the takeoff range. The aural alert should be silent when the tab position is inside of the takeoff range.

When the power levers are advanced to initiate a takeoff and the aural alert sounds, immediately reduce power to idle and abort the takeoff. Do not takeoff when the elevator trim tab position is not set within the takeoff range.

### OVER-SPEED WARNING SYSTEM OPERATION

*If the Over-speed Warning System is installed, add the following.*

A warning system has been added to airplanes with GARMIN G1000 avionics that provides a pulsing tone aural alert in the cockpit when the airspeed is greater than  $V_{MO}$  or the Mach number is greater than  $M_{MO}$ . When the alert is heard the pilot must take immediate action to reduce airspeed below the maximum operating limit. The system should be tested while conducting the BEFORE ENGINE STARTING procedure by simply selecting the TEST position on the OVERSPEED WARN TEST switch. A loud pulsing tone should sound if the system is functioning properly.



#### **STALL WARNING SYSTEM OPERATION**

*If the Stall Warning System Ice Mode is installed, add the following.*

An ICE MODE feature has been added to the stall warning system. The ice mode is automatically activated when the Surface Deice system is selected by the pilot. Illumination of the STALL WARNING ICE MODE annunciator indicates the stall warning system is operating in the ice mode. After exiting icing conditions and when the aircraft is free of ice, transfer the stall warning system to the normal mode by pressing and releasing the STALL WARNING ICE MODE annunciator.

#### **EMERGENCY CABIN LIGHTING SYSTEM OPERATION**

*If the Emergency Cabin Lighting System is installed, add the following.*

An emergency lighting system has been added to provide supplemental lighting in the passenger cabin around the emergency exit door and cabin door. Two switches – a cabin switch located in the ceiling and a control switch located in the copilot instrument panel – control operation of the system.

When entering the cabin during the preflight inspection the charge level of the emergency lighting system battery should be verified. To do this, place the cabin switch to ON with the aircraft battery switch OFF. The emergency cabin flood lamps should illuminate. If the lamps do not illuminate, the emergency lighting system battery has been discharged or there is a malfunction in the system.

Before taxiing, place the cabin switch to ON and the control switch to ARMED. This is the switch configuration for normal taxiing and flight operations.

When shutting down and exiting the airplane, place both the control switch and the cabin switch to OFF.

It is acceptable to utilize the flood lamps to illuminate the cabin whenever needed, such as for boarding or to charge the photoluminescent escape path markings. Limit the time the flood lamps are being powered by the emergency lighting system battery to no more than 20 minutes to ensure the battery will have remaining capacity in case of an emergency.

#### CHARGING EMERGENCY ESCAPE PATH MARKINGS

*If the Escape Path Markings are installed, add the following.*

Photoluminescent markings have been installed on the cabin floor outlining the aisle and the paths to the emergency exit door and cabin door. The markings must be charged during preflight operations by illuminating the cabin with either or a combination of sunlight through the cabin windows, the cabin lights, or the emergency cabin flood lamps when any part of that flight will be conducted in darkness. The table below lists the minimum charging time to ensure the markings will perform as intended throughout the respective flight.

**Required Charging of Emergency Escape Path Markings**

Charging Time	Duration of Acceptable Luminance
5 minutes	1.5 hours
10 minutes	2.5 hours
20 minutes	4 hours
30 minutes	5 hours

End

## SECTION 5 PERFORMANCE

No Changes

*See BLR Aerospace AFMS-B250-1 AFM Supplement or AFMS-B250-3 AFM Supplement for airplanes equipped with High Flotation landing gear and Beechcraft B200GT or B200CGT Pilot Operating Handbook.*

REFERENCE ONLY

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## INTRODUCTION

The maximum zero fuel weight limit is increased to 11,500 pounds. Other weight limits are unchanged.

There are no changes to weighing instructions, computing basic empty weight and balance, dimensional and loading data, cabin arrangements, and the procedure for computing weight and balance. For weight and balance information and procedures not contained in this section, see the Beechcraft B200GT or B200CGT Pilot Operating Handbook or the applicable BLR Aerospace AFM Supplement.

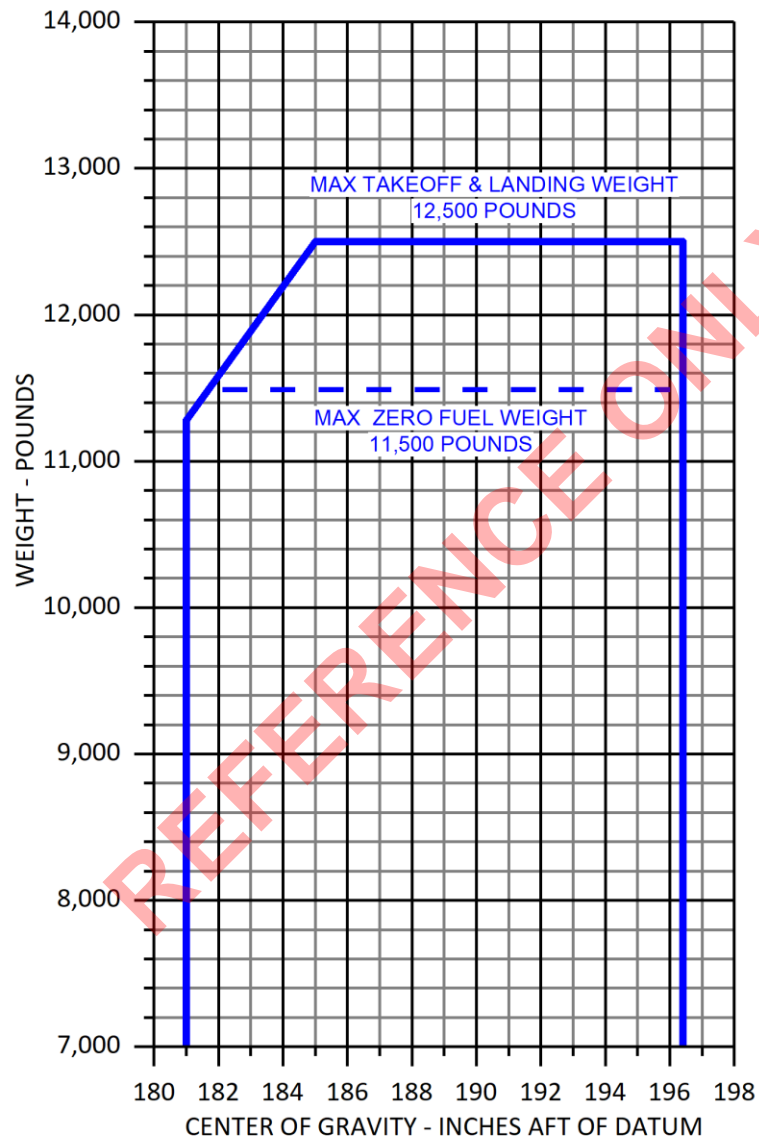
Two weight and balance diagrams are in this section that show the new maximum zero fuel weight limit. The first diagram is useful for verifying the loaded airplane is within the approved center-of-gravity limits when weight computations are made in pounds gross weight. The second diagram should be used when weight and balance computations are made in kilograms.

## WEIGHT AND CENTER-OF-GRAVITY LIMITS

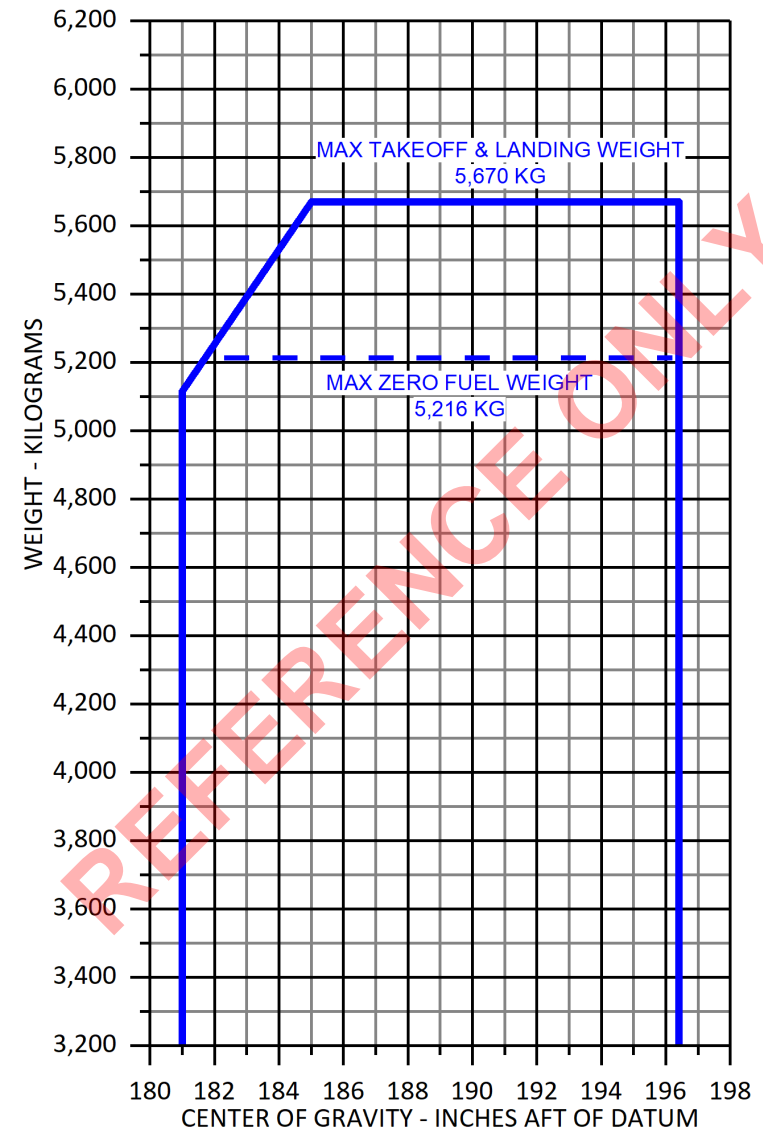
The following weight limit is taken from Section 2 Limitations of this AFM Supplement and repeated here for convenience to the airplane operator. Values that are underlined have been changed by the Halo 250/275 conversion.

Maximum Zero Fuel Weight .....11,500 pounds

**WEIGHT AND BALANCE DIAGRAM**



**WEIGHT AND BALANCE DIAGRAM**  
**KILOGRAMS**





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## INTRODUCTION

New safety systems may have been installed under Option 1 of STC SA11103SC (Halo 250/275 conversion). The table in Section 1 - Introduction identifies each safety system that is installed in this airplane. These safety systems provide functions that are required for airplanes certificated in the Commuter category but are not required when operating this airplane in Normal category. Also, if the Ice Mode has been added to the stall warning system, it will now provide a more accurate and reliable warning when the airplane encounters icing conditions. The result of adding these systems is a King Air 200 series airplane that operates at a higher level of safety.

Below is a list of the added functions:

- Takeoff Trim Warning
- Over-Speed Warning\*
- Engine Fire Extinguisher
- Stall Warning Ice Mode
- Emergency Cabin Lighting
- Escape Path Markings

This section describes the functionality of these systems and the pertinent design details. It is imperative that the pilot be knowledgeable of this information so he/she can fully utilize these new features and thereby realize the added safety they provide. For information on systems other than those described in this section see the BLR Aerospace AFMS-B250-1 AFM Supplement and the Beechcraft B200GT or B200CGT Pilot Operating Handbook.

*\* Only airplanes with Garmin G1000 integrated avionics suite. Airplanes with Rockwell Collins Proline 21/Fusion avionics suite are already equipped with an over-speed warning system.*

#### **TAKEOFF TRIM WARNING**

The Halo 250/275 conversion adds a takeoff trim warning system. The system detects if the elevator trim tab has not been properly set before takeoff and sounds a warning when the pilot initiates a takeoff. The pilot should respond to the warning by immediately aborting the takeoff run.

The trim warning system utilizes the existing elevator tab position indicator to determine tab position. A micro switch actuated by the tab position indicator activates the warning horn when the tab position is outside of the approved range for takeoff. The horn emits a constant, mid-frequency tone. It is located beneath the lower edge of the pilot's instrument panel next to the console. The micro switch is mounted to the console beneath the elevator trim wheel.

The Autofeather/takeoff trim warning system is powered from Dual Fed Bus No. 2 (See FIGURE 7-6 and FIGURE 7-8). Power to the elevator trim warning system comes through the Autofeather system switch when it is in the ARMED position. Power must also pass through the weight-on-wheels switch and the 90%  $N_1$  switch associated with the left engine power lever. The system becomes fully operational once the Autofeather system is ARMED and the left power lever is advanced to the 80% position. The takeoff trim warning system is deactivated through the weight-on-wheels switch after liftoff so no misleading warnings occur during flight. Note the Halo 250/275 conversion requires the Autofeather system to be operative for takeoff.

The warning system should be tested before the first flight of each day, as specified in Section 4 Normal Procedures.

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#### **OVER-SPEED WARNING**

The Rockwell Collins Pro Line 21 or Rockwell Collins Pro Line Fusion integrated avionics provides an aural over-speed warning, which is required for commuter category airplanes. The aural warning automatically alerts the pilot whenever airspeed is greater than  $V_{MO}$  or Mach number is greater than  $M_{MO}$ . This system provides a backup to the function provided by the airspeed tape on the Primary Flight Displays. The pilot should respond to a warning by immediately taking the necessary action to reduce airspeed.

If the airplane is equipped with Garmin G1000 integrated avionics, an aural over-speed warning system is installed as part of the Halo 250/275 conversion. The warning automatically alerts the pilot whenever airspeed is greater than  $V_{MO}$  or Mach number is greater than  $M_{MO}$ . This system provides an aural backup to the function provided by the airspeed tape on each Primary Flight Display. The pilot should respond to a warning by immediately taking the necessary action to reduce airspeed.

The warning sound is a pulsing, high-frequency tone emitted by a Sonalert device located beneath the glareshield in front of the pilot. Power to the system is fed from the main electrical bus through a five (5) amp circuit breaker labeled O/S WARN located in the Warning section of the copilot circuit breaker panel.

The system should be tested when conducting the BEFORE ENGINE STARTING procedure by selecting TEST on the OVERSPEED WARN TEST switch. This switch is located in the lower, left area of the pilot's instrument panel near the engine start switches.

#### **EMERGENCY ESCAPE PATH MARKINGS**

The Halo 250/275 conversion adds photoluminescent markings that highlight the escape path along the floor to the emergency exit door and cabin door. The photoluminescent markings must be visible (not covered by floor mats or any other coverings) and adequately charged before conducting any part of a flight in darkness. Charging can be accomplished with sunlight or with the interior lights or with the emergency flood lamps. See Section 4 Normal Procedures for the required charging time

### ENGINE FIRE EXTINGUISHER

The CenTex Aerospace or the Beechcraft engine fire extinguisher system may be installed. Both systems function and operate in the same manner. Information regarding the engine fire extinguisher system is contained in the basic Airplane Flight Manual or Pilot Operating Handbook.

### STALL WARNING ICE MODE

The King Air 200 series 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. The Halo 250/275 conversion adds additional capability so a reliable and accurate stall warning is available in icing conditions. This new stall warning functionality is called the "ice mode".

The stall warning system will activate the warning horn when the output of the lift transducer reaches a preset voltage. The system has three different voltage settings, one for each flap position; which enables it to provide accurate warning at each flap setting. The Halo 250/275 conversion adds components to the stall warning system that allow three different preset voltages to become active when it is in the ice mode. 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.

The pilot should respond to the warning by pitching the aircraft nose downward until the warning ceases, leveling the wings to orient lift vector for recovery, and adding power to assist in the recovery. The pilot's failure to respond to a stall warning can result in a stall and subsequent loss of control of the airplane.

Switching to the ice mode occurs automatically when the pilot selects either SINGLE or MANUAL on the Surface Deice switch. The STALL WARNING ICE MODE annunciator, which is located in the glareshield in front of the pilot, will illuminate whenever the ice mode is active (See FIGURE 7-2). The ice mode will stay active until it is manually deactivated by the pilot pressing the illuminated annunciator. This should be done when the airplane is outside of icing conditions and is free of ice. Pressing the annunciator when it is extinguished has no effect. Note the stall warning heat must be operating when flying in icing conditions to keep the lift transducer free of ice.

When testing the stall warning system, the mode in operation when the test is performed is the mode that is tested. A constant tone will be heard if the system is functioning properly. The new system components are located inside the aft end of the console.

FIGURE 7-2  
STALL WARNING ICE MODE ANNUNCIATOR**EMERGENCY CABIN LIGHTING**

The Halo 250/275 conversion adds an emergency cabin lighting system. It provides supplemental lighting in the cabin around the emergency exit door and cabin door. The system has two LED flood lamps located in the cabin ceiling that are powered by a dedicated battery pack, which contains two 12-volt, sealed lead-acid batteries connected in series, installed under the cabin floor.

The system automatically turns on the flood lamps in the event of a 2-g, or greater, deceleration or a loss of power on the main electrical bus. This keeps the cabin from becoming unlighted during such critical events. Additionally, the lamps can be used for lighting the cabin when boarding or to charge the photoluminescent escape path markings.

Two switches operate the system and provide required functionality. A cabin switch located next to the aft flood lamp connects the battery pack to the system (See FIGURE 7-3). A control switch located in the pilot's sub-panel arms automatic operation or provides manual operation of the flood lamps from the cockpit (See FIGURE 7-4). Power to charge the battery pack is fed from the main electrical bus through a five (5) amp circuit breaker labeled EMERG LIGHT in the copilot circuit breaker panel (See FIGURE 7-5 thru FIGURE 7-8).

Two amber indicator lights located adjacent to the control switch (See FIGURE 7-4) warn the pilot when the system switches are not set as required for taxi and takeoff operations. The amber indicator lights will be extinguished when the cockpit control switch is ARMED and the cabin switch is ON. Note these are the required positions for taxi and flight operations.

When exiting the airplane both the control switch and the cabin switch should be placed in the OFF position. If left on, a timer prevents the battery from becoming totally discharged by disconnecting the battery pack from the system after 10 minutes. Selecting OFF on the cabin switch reconnects the battery pack and resets the timer. Note recharging of the battery pack occurs automatically whenever the airplane battery switch is ON and the main electrical bus is powered by either the generators or an external power source.

The level of charge of the emergency lighting system battery pack should be checked before the first flight of each day as described in Section 4 NORMAL PROCEDURES. The system must be operational when carrying passengers. If the lamps do not illuminate, the emergency lighting system batteries have been discharged or there is a malfunction in the system. A discharged battery pack must be removed, and the batteries recharged or replaced. The Halo 250 Instructions for Continued Airworthiness, Manual no. 006-30 describes the proper procedures for removing and recharging or replacing the Emergency Cabin Lighting system battery pack.

The battery pack and relays are located beneath the cabin floor at either Fuselage Station 207 or Fuselage Station 270. Also, the battery pack should be inspected at each maintenance Phase Inspection interval for general condition and the time-in-service for the batteries. The batteries must be replaced after 36 calendar months from the time they were installed.

FIGURE 7-3  
EMERGENCY CABIN LIGHTING SYSTEM  
CABIN SWITCH & FLOOD LAMP



FIGURE 7-4  
EMERGENCY CABIN LIGHTING SYSTEM  
COCKPIT CONTROL SWITCH and WARNING LIGHTS



**CREW ALERTING SYSTEM (CAS)**  
*Only For Aircraft with Rockwell Collins Pro Line Fusion:*

CAUTION (AMBER) CAS MESSAGES

CAS Message	Description
Stall Fail	The stall computer has failed.

**NOTE**  
Halo 250/275 equipped aircraft have two stall computer modes, Normal Mode and Ice Mode. The Stall Fail CAS message applies to the mode in use at the time of failure.



FIGURE 7-5



## EMERGENCY LIGHTING SYSTEM CIRCUIT BREAKER

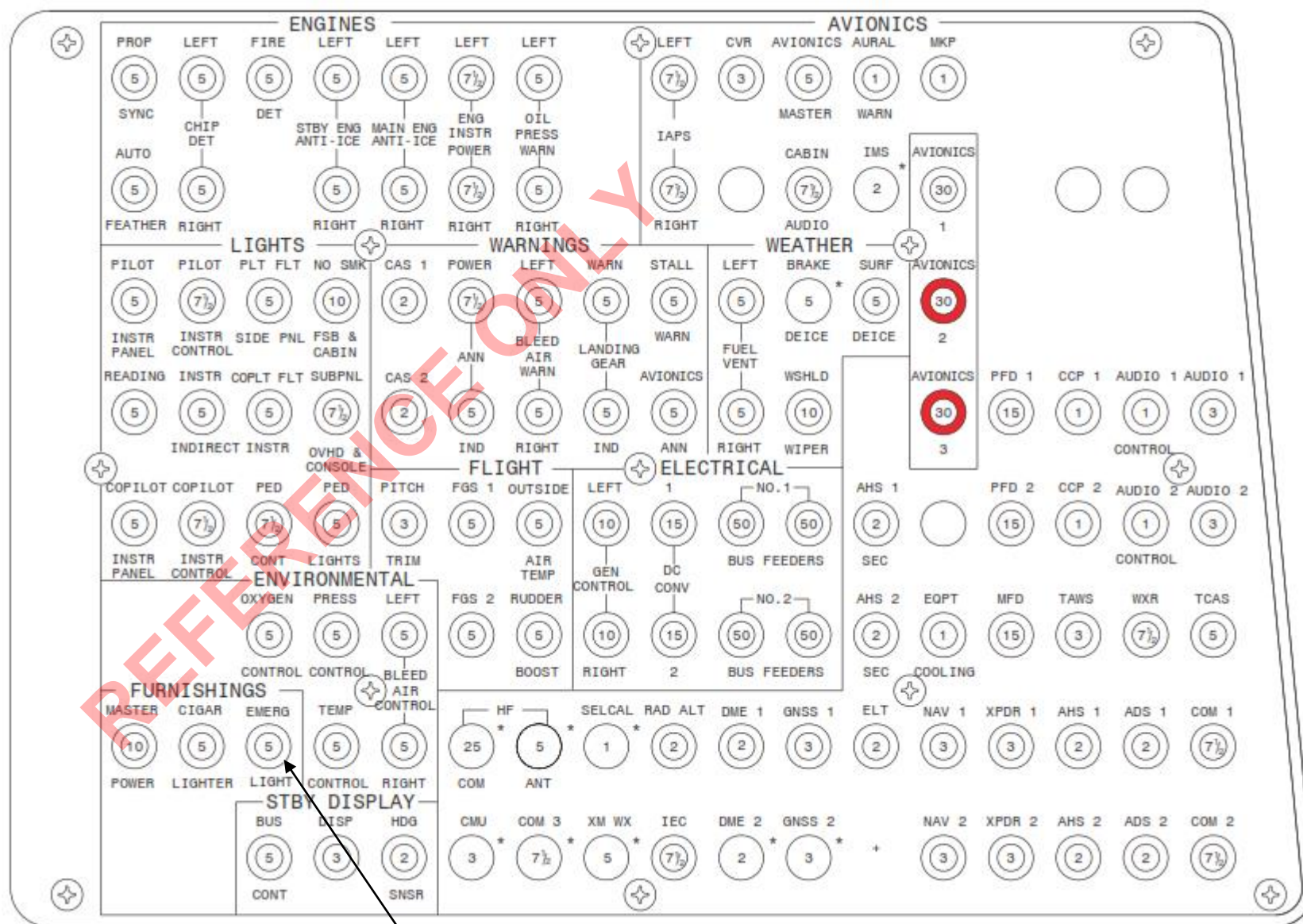
FIGURE 7-6  
AVIONICS/ELECTRICAL EQUIPMENT BUS CONNECTION (PRO LINE 21)

System	No. 1 Dual-Fed Bus	No. 2 Dual-Fed Bus	No. 3 Dual-Fed Bus	No. 4 Dual-Fed Bus	Avionics Bus No. 1 (L Gen Bus)	Avionics Bus No. 2 (R Gen Bus)	Avionics Bus No. 3 (L Gen Bus)	No. 1 Subpanel Bus (L Gen Bus)	No. 2 Subpanel Bus (R Gen Bus)	ESIS Battery Bus (No. 3 Dual-Fed Bus)	Hot Bat Bus (Battery) (RW)
ESIS											
										ESIS BUS CONT	
										ESIS HDG SNSR	
										ESIS DISP	
Electrical	GEN CONTROL, L	GEN CONTROL, R	R CB PANEL NO. 3 (FP) (2)	R CB PANEL NO. 4 (FP) (2)							BATTERY RELAY
	BUS FEEDERS NO. 1 (2 ea.)	BUS FEEDERS NO. 2 (2 ea.)	BUS FEEDERS NO. 3 (2 ea.) (FP)	BUS FEEDERS NO. 4 (2 ea.) (FP)							
Engines (including Engine Instruments and Propellers)	CHIP DTR, L	CHIP DTR, R	START CONTROL, L (FP)	START CONTROL, R (FP)							ENG FIRE EXTINGUISH ER, L
	1 (FP)	DCU SEC, NO. 2 (FP)	EDC NO. 1 (FP)	EDC NO. 2 (FP)							ENG FIRE EXTINGUISH ER, R
	ENG INST POWER, L	ENG INST POWER, R	DCU NO. 1 (FP)	DCU NO. 2 (FP)							
	FIRE DETR		IGNITER POWER, L (FP)	IGNITER POWER, R (FP)							
	MN ENG ANTI ICE, L	MN ENG ANTI ICE, R									
	OIL PRESS, L (FP)	OIL PRESS, R (FP)									
	OIL PRESS WARN, L	OIL PRESS WARN, R									
	PROP SYNC	AUTOFEATHER & TRIM WARN		PROP GOV (FP)							
	STBY ENG ANTI ICE, L	STBY ENG ANTI ICE, R									
	TORQUE, L (FP)	TORQUE, R (FP)									
Furnishings		CIGAR LIGHTER									
		MASTER POWER									
		EMERG LIGHT									

EMERG LIGHTING SYSTEM

TRIM WARN SYSTEM

FIGURE 7-7  
RIGHT CIRCUIT BREAKER PANEL (PRO LINE FUSION)



\* OPTIONAL/IF INSTALLED

NOTE: SOLID RED COLOR BAND AROUND CB IS FOR LOAD SHEDDING.

EMERGENCY LIGHTING SYSTEM CIRCUIT BREAKER

FIGURE 7-8  
AVIONICS/ELECTRICAL EQUIPMENT BUS CONNECTION (PRO LINE FUSION)

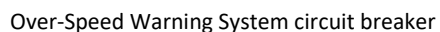
System	Dual Fed Bus No. 1	Dual Fed Bus No. 2	Dual Fed Bus No. 3	Dual Fed Bus No. 4	Avionics Bus No. 1 (L Gen Bus)	Avionics Bus No. 2 (R Gen Bus)	Avionics Bus No. 3 (L Gen Bus)	Subpanel Feeder No. 1 (L Gen Bus)	Subpanel Feeder No. 2 (R Gen Bus)	Hot Bat Bus (Battery) (RW)
Engines (including Engine Instruments and Propellers)	L-Chip Detector	R-Chip Detector	L-Start Control (FP)	R-Start Control (FP)						L-Engine Fire Extinguisher
	L-Engine Instrument	R-Engine Instrument	EDC 1 (FP)	EDC 2 (FP)						R-Engine Fire Extinguisher
	Fire Detector		DCU 1 (FP)	DCU 2 (FP)						
	L-Main Engine Anti Ice	R-Main Engine Anti Ice	L-Ignitor Power (FP)	R-Ignitor Power (FP)						
	L-Oil Press Warn	R-Oil Press Warn								
	Prop Sync	Auto Feather and Trim Warn		Propeller Governor (FP)						
	L-Standby Engine Anti Ice	R-Standby Engine Anti Ice								
Environmental	L-Bleed Air Control	R-Bleed Air Control								Ground Heat
	Auto Oxygen Control	Cabin Temp Control								
	Cabin Pressure Control									
Flight	Pitch Trim	Rudder Boost Control	Flap Motor (FP)							
	OAT		Flap Control and Indicator (FP)							
	FGS 1	FGS 2								
Furnishings		Cigar Lighter								Window Shades
		Furnishings Master Power								
		Emerg Light								

EMERG LIGHTING SYSTEM

TRIM WARN SYSTEM



FIGURE 7-9



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REFERENCE ONLY

## **SECTION 8**

### **HANDLING, SERVICING, & MAINTENANCE**

No Changes except as shown below.

*See BLR Aerospace AFMS-B250-1 AFM Supplement and the Beechcraft B200GT or B200CGT Pilot Operating Handbook for other information.*

#### **EMERGENCY CABIN LIGHTING SYSTEM**

The battery pack that powers the emergency cabin lighting system must be replaced every 36 calendar months.

End

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