King Air BE-200/B200

Flash Cards

Memory Items

King Air BE-200/B200

Memory Items

ENGINE FAILURE/EMERGENCY ENGINE SHUTDOWN

King Air BE-200/B200

Memory Items

ENGINE FAILURE/EMERGENCY ENGINE SHUTDOWN

1. Condition lever – FUEL CUTOFF
2. Propeller lever – FEATHER
3. Firewall shutoff valve – CLOSE
4. Fire extinguisher (if installed) – ACTUATE IF FIRE WARNING PERSISTS

King Air BE-200/B200

Memory Items

ENGINE FAILURE IN-FLIGHT BELOW V_{MCA}

King Air BE-200/B200

Memory Items

ENGINE FAILURE IN-FLIGHT BELOW V_{MCA}

1. **Power – REDUCE AS REQUIRED TO MAINTAIN DIRECTIONAL CONTROL**
2. **Nose – LOWER TO ACCELERATE ABOVE V_{MCA}**
3. **Power (operating engine) – ADJUST AS REQUIRED**
4. **Failed engine – SECURE (EMERGENCY ENGINE SHUTDOWN)**

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF
(AT OR BELOW V_1) TAKEOFF ABORTED

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF (AT OR BELOW V_1) TAKEOFF ABORTED

1. **Power levers – IDLE**
2. **Brakes – AS REQUIRED**
3. **Operating engine – MAXIMUM REVERSE (if required)**

Warning: **Exercise extreme care when using single engine reversing on surfaces with reduced traction.**

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF (AT OR BELOW V_1) TAKEOFF ABORTED (Cont'd.)

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF (AT OR BELOW V_1) TAKEOFF ABORTED (Cont'd.)

If insufficient runway remains for stopping:

Emergency Engine Shutdown — EXECUTE

4. **Condition Levers — FUEL CUTOFF**
5. **Propeller Levers — FEATHER**
6. **Fuel Firewall Valves — CLOSED**
7. **Master Switch — OFF (gang bar down)**

King Air BE-200/B200

Memory Items

ENGINE FIRE ON GROUND

King Air BE-200/B200

Memory Items

ENGINE FIRE ON GROUND

1. **Condition lever – FUEL CUTOFF**
2. **Fuel firewall valve – CLOSE**
3. **Ignition and engine start switch – STARTER ONLY**

If fire persists:

4. **Fire extinguisher – ACTUATE**

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF (AT OR ABOVE V_1) TAKEOFF CONTINUED

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF (AT OR ABOVE V_1) TAKEOFF CONTINUED

King Air BE-200/B200

Memory Items

ENGINE FAILURE DURING TAKEOFF (AT OR ABOVE V_1) TAKEOFF CONTINUED

1. **Power – MAXIMUM ALLOWABLE**
2. **Airspeed – MAINTAIN TAKEOFF SPEED OR ABOVE**
3. **Landing gear – UP**
4. **Propeller (inop engine) – CONFIRM AUTOFEATHER OR FEATHER**
5. **Airspeed – V_2 (after obstacles cleared, V_{YSE})**

King Air BE-200/B200

Memory Items

ENGINE FLAMEOUT (2ND ENGINE)

King Air BE-200/B200

Memory Items

ENGINE FLAMEOUT (2ND ENGINE)

1. **Power lever – IDLE**
2. **Propeller – DO NOT FEATHER**
3. **Condition lever – FUEL CUTOFF**
4. **Airstart procedures – CONDUCT**

King Air BE-200/B200

Memory Items

GLIDE (BOTH ENGINES INOPERATIVE)

King Air BE-200/B200

Memory Items

GLIDE (BOTH ENGINES INOPERATIVE)

1. **Landing gear – UP**
2. **Flaps – UP**
3. **Propellers – FEATHERED**
4. **Airspeed – 135 KTS**

King Air BE-200/B200

Memory Items

CHIP DETECT

King Air BE-200/B200

Memory Items

CHIP DETECT

1. **Affected engine – EMERGENCY SHUTDOWN (BE-200 Only)**
2. **BE-B200 – No memory items**

King Air BE-200/B200

Memory Items

DUAL GENERATOR FAILURE

King Air BE-200/B200

Memory Items

DUAL GENERATOR FAILURE

1. **Generators – RESET, THEN ON**

If either generator will reset:

2. **Operating generator loadmeter – DO NOT EXCEED 100% (88% above 31,000 ft.)**

Note: This checklist applies to BB-1439, BB-1444 thru BB-1842 except BB-1463 and BB-1834; BL-139 thru BL-147; BW-1 thru BW-29

King Air BE-200/B200

Memory Items

INVERTER FAILURE

King Air BE-200/B200

Memory Items

INVERTER FAILURE

1. Other inverter – SELECT

King Air BE-200/B200

Memory Items

L or R FUEL PRESS

King Air BE-200/B200

Memory Items

L or R FUEL PRESS

1. **Standby boost pump (failed side) – ON**

King Air BE-200/B200

Memory Items

UNSCHEDULED ELECTRIC ELEVATOR TRIM

King Air BE-200/B200

Memory Items

UNSCHEDULED ELECTRIC ELEVATOR TRIM

1. **Aircraft attitude – MAINTAIN USING ELEVATOR CONTROL**
2. **Control wheel disconnect – DEPRESS FULLY (2nd level)**

King Air BE-200/B200

Memory Items

UNSCHEDULED RUDDER BOOST ACTIVATION

King Air BE-200/B200

Memory Items

UNSCHEDULED RUDDER BOOST ACTIVATION

1. **Directional control – MAINTAIN WITH RUDDER PEDALS**
2. **Rudder boost – OFF**

If condition persists:

3. **Rudder boost CB – PULL**

King Air BE-200/B200

Memory Items

INADVERTENT SPIN

King Air BE-200/B200

Memory Items

INADVERTENT SPIN

1. Control column – FULL FORWARD, AILERONS NEUTRAL
2. Full rudder – OPPOSITE DIRECTION OF SPIN
3. Power levers – IDLE
4. Controls – NEUTRALIZE WHEN ROTATION STOPS
5. Execute smooth pullout

King Air BE-200/B200

Memory Items

EMERGENCY DESCENT

King Air BE-200/B200

Memory Items

EMERGENCY DESCENT

1. Power levers – IDLE
2. Propeller levers – FULL FORWARD
3. Flaps – APPROACH
4. Landing gear – DOWN
5. Airspeed – 181 KIAS

King Air BE-200/B200

Memory Items

ENGINE FIRE IN-FLIGHT

King Air BE-200/B200

Memory Items

ENGINE FIRE IN-FLIGHT

If visual indication of fire:

1. **Engine shutdown checklist – ACCOMPLISH**

If fire persists:

2. **Emergency descent – ACCOMPLISH**

King Air BE-200/B200

Memory Items

ENVIRONMENTAL SYSTEM SMOKE OR FUMES

King Air BE-200/B200

Memory Items

ENVIRONMENTAL SYSTEM SMOKE OR FUMES

1. **Crew masks (diluter demand) – DON/EMERG**
2. **Oxygen system ready – CONFIRM ON (BB-1439; BB-1444 and sub. – EMERG)**
3. **Audio speaker – ON**
4. **Mic selector – OXYGEN MASK**

King Air BE-200/B200

Memory Items

CABIN OR CARGO DOOR UNLOCKED

King Air BE-200/B200

Memory Items

CABIN OR CARGO DOOR UNLOCKED

1. **All Occupants – SEATED/SEAT BELTS FASTENED SECURELY**

King Air BE-200/B200

Memory Items

PRESSURIZATION LOSS

King Air BE-200/B200

Memory Items

PRESSURIZATION LOSS

1. Crew masks – DON
2. Oxygen system ready – PULL ON (verify)
3. Passenger manual dropout – PULL ON
4. Audio speaker – ON
5. Mic selector – OXYGEN MASK
6. Descend – AS REQUIRED

King Air BE-200/B200

Memory Items

AUTO-DEPLOYMENT OXYGEN SYSTEM FAILURE

King Air BE-200/B200

Memory Items

AUTO-DEPLOYMENT OXYGEN SYSTEM FAILURE

1. **Passenger manual dropout – PULL ON**

King Air BE-200/B200

Memory Items

USE OF OXYGEN

King Air BE-200/B200

Memory Items

USE OF OXYGEN

Crew:

1. **Crew masks (diluter demand) – DON**
2. **Oxygen system ready – PULL ON (verify)**
3. **Audio speaker – ON**
4. **Mic selector – OXYGEN MASK**

King Air BE-200/B200

Memory Items

BLEED AIR LINE FAILURE

King Air BE-200/B200

Memory Items

BLEED AIR LINE FAILURE

1. Bleed air valve (affected engine) – INSTR/ENVIR OFF (monitor ITT and torque to ensure valve closed)

BL AIR FAIL L or R

Annunciators

Engine and Propeller

King Air BE-200/B200

Annunciators - ENGINE FIRE IN DESIGNATED ENGINE

L ENG FIRE

R ENG FIRE

King Air BE-200/B200

Annunciators - ENGINE FIRE IN DESIGNATED ENGINE

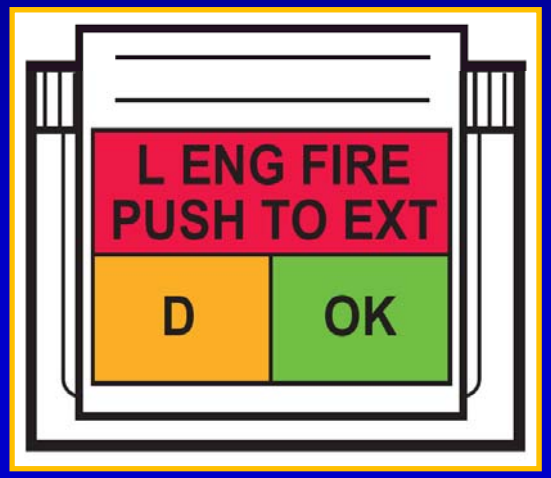
L ENG FIRE

R ENG FIRE

- **Illumination of ENG FIRE lights indicates fire detected in nacelle area. Moisture in system or reflected sunlight can activate annunciator(s) for aircraft prior to BB1439, 1444, BL 139 and BW1 except BB 1463**

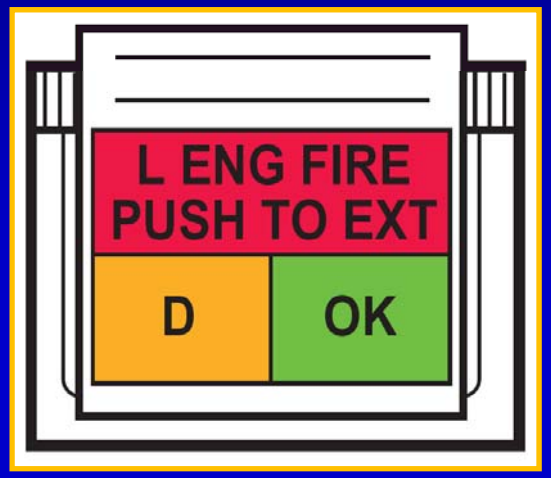
King Air BE-200/B200

Annunciators - ENGINE FIRE TEST LIGHTS



King Air BE-200/B200

Annunciators - ENGINE FIRE TEST LIGHTS



- Illumination of D light indicates extinguisher explosive squib has discharged. In test mode, light bulb tests OK
- Illumination of OK light indicates explosive squib has not discharged; electrical circuitry for fire extinguisher system is intact. Does not indicate bottle pressure

King Air BE-200/B200

Annunciator - CHIP DETECT (200 only)

L CHIP DETECT

King Air BE-200/B200

Annunciator - CHIP DETECT (200 only)

L CHIP DETECT

- **Indicates possible metal contamination in the engine oil supply. May indicate N_2 power section failure or impending failure**

King Air BE-200/B200

Annunciators - CHIP DETECT (B200 only)

R CHIP DETECT

R CHIP DETECT

King Air BE-200/B200

Annunciators - CHIP DETECT (B200 only)

R CHIP DETECT

R CHIP DETECT

- **Indicates possible metal contamination in the engine oil supply. May indicate N_2 power section failure or impending failure**

King Air BE-200/B200

Annunciators – ENGINE LOW OIL PRESSURE

L OIL PRESS

L OIL PRESS

King Air BE-200/B200

Annunciators – ENGINE LOW OIL PRESSURE

L OIL PRESS

L OIL PRESS

- Indicates engine oil pressure is below 60 PSI

King Air BE-200/B200

Annunciators – ENGINE IGNITERS ON

L IGNITION ON

R IGNITION ON

King Air BE-200/B200

Annunciators – ENGINE IGNITERS ON

L IGNITION ON

R IGNITION ON

- **Indicates ignition system is activated; either the ignition and start switch is in ON, or auto ignition switch is in ARM and engine torque is below approximately 400 ft. lbs**

King Air BE-200/B200

Annunciator – RVS NOT READY

RVS NOT READY

King Air BE-200/B200

Annunciator – RVS NOT READY

RVS NOT READY

- **Propeller control lever(s) not full forward when landing gear switch handle is in DOWN**

King Air BE-200/B200

Annunciator - PROPELLER SYNCHROPHASER IS ON

PROP SYNC ON

King Air BE-200/B200

Annunciator - PROPELLER SYNCHROPHASER IS ON

PROP SYNC ON

- **Propeller synchrophaser is ON with landing gear extended**

King Air BE-200/B200

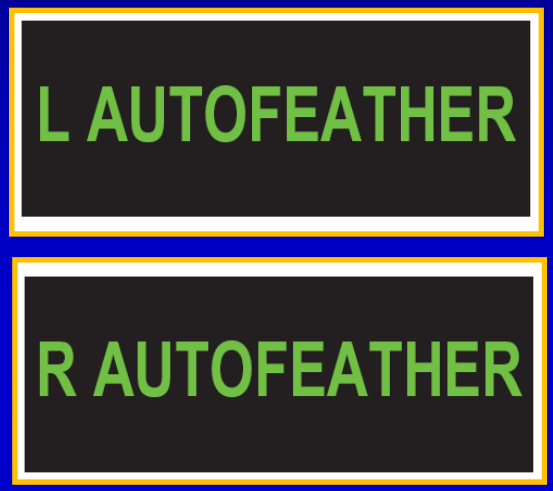
Annunciators – LEFT AND RIGHT AUTOFEATHER

L AUTOFEATHER

R AUTOFEATHER

King Air BE-200/B200

Annunciators – LEFT AND RIGHT AUTOFEATHER



- **llumination of both lights indicates the AUTOFEATHER is active. Unless both annunciators are illuminated, the autofeather system is not fully armed and operational.**

Electrical System

King Air BE-200/B200

Annunciators - DUAL GENERATOR FAILURE

L DC GEN

AND

R DC GEN

King Air BE-200/B200

Annunciators - DUAL GENERATOR FAILURE

L DC GEN

AND

R DC GEN

Indicates both generators are off-line

King Air BE-200/B200

Annunciator – INVERTER FAILURE

King Air BE-200/B200

Annunciator – INVERTER FAILURE

INVERTER

- **Indicates the selected inverter is inoperative**

King Air BE-200/B200

Annunciators – GENERATOR OVERHEAT

R GEN OVHT

L GEN OVHT

King Air BE-200/B200

Annunciators – GENERATOR OVERHEAT

R GEN OVHT

L GEN OVHT

- Indicates the generator frame temperature is above 157°C (315°F)

King Air BE-200/B200

Annunciators – GENERATOR OFF-LINE

L DC GEN

R DC GEN

King Air BE-200/B200

Annunciators – GENERATOR OFF-LINE

L DC GEN

R DC GEN

- **Indicates the associated generator is off-line or failed**

King Air BE-200/B200

Annunciator – EXTERNAL POWER

EXT PWR

King Air BE-200/B200

Annunciator – EXTERNAL POWER

EXT PWR

- **Indicates external power plug is connected to the aircraft; does not indicate the operational status of the external power unit**

King Air BE-200/B200

Annunciator – BATTERY CHARGING

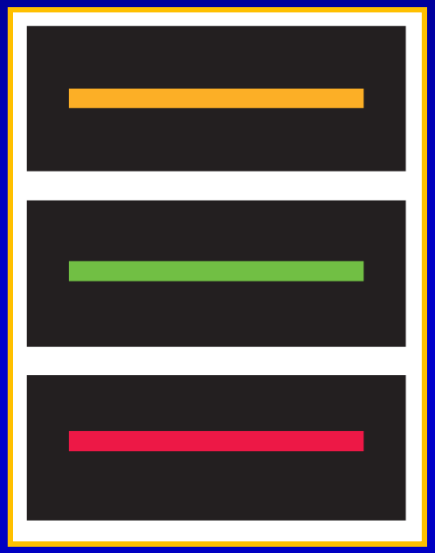
King Air BE-200/B200

Annunciator – BATTERY CHARGING

- **Illumination indicates battery is being charged with 7 Amps or more for 6 seconds or more**

King Air BE-200/B200

Annunciators – BLANK ANNUNCIATOR



King Air BE-200/B200

Annunciators – BLANK ANNUNCIATOR

- **Spare annunciator light position for optional equipment not installed. Spare lights should illuminate during annunciator test**

Fuel System

King Air BE-200/B200

Annunciators - FUEL PRESSURE

L FUEL PRESS

R FUEL PRESS

King Air BE-200/B200

Annunciators - FUEL PRESSURE

L FUEL PRESS

R FUEL PRESS

- **Indicates fuel pressure between the engine driven boost pump and the main fuel pump is below 10 ±1 PSI**

King Air BE-200/B200

Annunciator – FUEL TRANSFER FAILURE

King Air BE-200/B200

Annunciator – FUEL TRANSFER FAILURE

- **Indicates fuel is the auxiliary tank, and fuel is not transferring from the auxiliary tank to the nacelle tank**

King Air BE-200/B200

Annunciator – FUEL CROSSFEED SELECTED

King Air BE-200/B200

Annunciator – FUEL CROSSFEED SELECTED

FUEL CROSSFEED

- **Indicates the fuel crossfeed switch is in the crossfeed position (left or right); the annunciator does not prove the valve is open**

Landing Gear System

King Air BE-200/B200

Annunciator – HYDRAULIC FLUID LOW

King Air BE-200/B200

Annunciator – HYDRAULIC FLUID LOW

HYD FLUID LOW

- **Indicates hydraulic fluid level in power pack is below critical level on the following:**
  - **aircraft with Beech Kit P/N 101-8018-1;**
  - **BB-1158 and BB-1167;**
  - **BB-1193 and subsequent;**
  - **BL-73 and subsequent**

King Air BE-200/B200

Annunciator – LANDING OR TAXI LIGHT ON

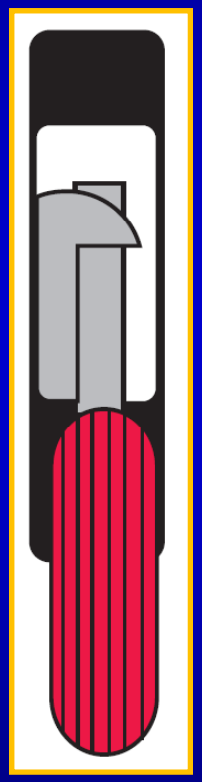
King Air BE-200/B200

Annunciator – LANDING OR TAXI LIGHT ON

- **Indicates the landing and/or taxi lights are ON with the gear retracted**

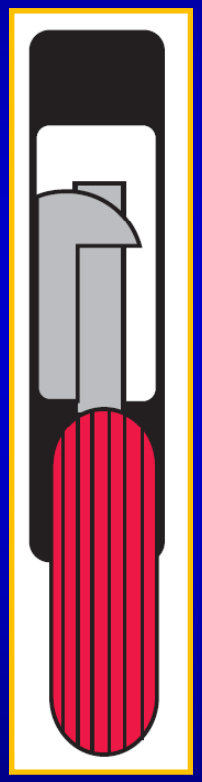
King Air BE-200/B200

Annunciator - LANDING GEAR IN TRANSITION OR UNSAFE



King Air BE-200/B200

Annunciator - LANDING GEAR IN TRANSITION OR UNSAFE



- **Indicates one ore more of the following:**
  - **landing gear in transit**
  - **one or more gear not down and locked**
  - **one or more gear not fully retracted**
  - **landing gear UP and one or both power levers below approximately 78% N_1**
  - **landing gear UP and flaps extended beyond APPROACH position (regardless of power lever position)**

King Air BE-200/B200

Annunciator - LANDING GEAR DOWN

King Air BE-200/B200

Annunciator - LANDING GEAR DOWN

- **If all three lights are not on, Left, right main gear, or nose gear may not be down and locked**

Flight Controls

King Air BE-200/B200

Annunciators – AUTOPILOT DISCONNECT

A/P DISC

A/P FAIL

King Air BE-200/B200

Annunciators – AUTOPILOT DISCONNECT

A/P DISC

A/P FAIL

- **Sperry Equipped Aircraft: Autopilot disengaged by other than pilot's AP/YD (control wheel) disconnect switch**

King Air BE-200/B200

Annunciators – AUTOPILOT TRIM FAIL

A/P TRIM FAIL

King Air BE-200/B200

Annunciators – AUTOPILOT TRIM FAIL

- **Sperry Equipped Aircraft: Indicates improper trim commands, trim runaway, or trim failure. Control wheel trim switches activated with autopilot engaged**

King Air BE-200/B200

Annunciators – ELECTRIC TRIM OFF

King Air BE-200/B200

Annunciators – ELECTRIC TRIM OFF

- **Sperry Equipped Aircraft: Electric elevator trim system is disarmed**

Environmental

King Air BE-200/B200

Annunciators - CABIN OR CARGO DOOR UNLOCKED

King Air BE-200/B200

Annunciators - CABIN OR CARGO DOOR UNLOCKED

- Indicates cabin airstair or cargo door is unlocked or open

King Air BE-200/B200

Annunciators - CABIN ALTITUDE WARNING

ALT WARN

King Air BE-200/B200

Annunciators - CABIN ALTITUDE WARNING

ALT WARN

- Indicates cabin altitude is 12,500 ft or higher

King Air BE-200/B200

Annunciator – PASSENGER OXYGEN DEPLOYED

PASS OXY ON

King Air BE-200/B200

Annunciator – PASSENGER OXYGEN DEPLOYED

PASS OXY ON

- Indicates passenger oxygen masks deployed. If masks automatically deploy and cabin altitudes descend below 12,500 ft, annunciator extinguishes. If manually deployed, annunciators will remain on

King Air BE-200/B200

Annunciator – ALT WARN ON AND PASS OXY OFF

King Air BE-200/B200

Annunciator – ALT WARN ON AND PASS OXY OFF

- **ALT WARN annunciator illuminated; PASS OXY ON annunciator not illuminated. Indicates the failure of automatic passenger mask deployment**

King Air BE-200/B200

Annunciators – ASSOCIATED BLEED AIR OFF

L BL AIR OFF

R BL AIR OFF

King Air BE-200/B200

Annunciators – ASSOCIATED BLEED AIR OFF

L BL AIR OFF

R BL AIR OFF

- Indicates the environmental bleed air valves are selected closed

King Air BE-200/B200

Annunciators – BLEED AIR FAILURE

L BL AIR FAIL

R BL AIR FAIL

King Air BE-200/B200

Annunciators – BLEED AIR FAILURE

L BL AIR FAIL

R BL AIR FAIL

- **Indicates a possible rupture of the bleed air line. Bleed air warning system is depressurized**

King Air BE-200/B200

Annunciator – AIR CONDITION N_1 LOW

King Air BE-200/B200

Annunciator – AIR CONDITION N_1 LOW

- **Indicates air conditioning compressor clutch has disengaged due to right engine N_1 below approximately 62%.**

King Air BE-200/B200

Annunciator – ELECTRIC HEAT ON

King Air BE-200/B200

Annunciator – ELECTRIC HEAT ON

- Illumination indicates electric heat system operating. When system selected to OFF, the annunciator must extinguish before blowers are switched to OFF

King Air BE-200/B200

Annunciator – DUCT OVER-TEMPERATURE

DUCT OVERTEMP

King Air BE-200/B200

Annunciator – DUCT OVER-TEMPERATURE

DUCT OVERTEMP

- **Indicates the environmental air duct temperature exceeds 149°C (300°F)**

Ice and Rain

King Air BE-200/B200

Annunciator –BRAKE DE-ICE ON

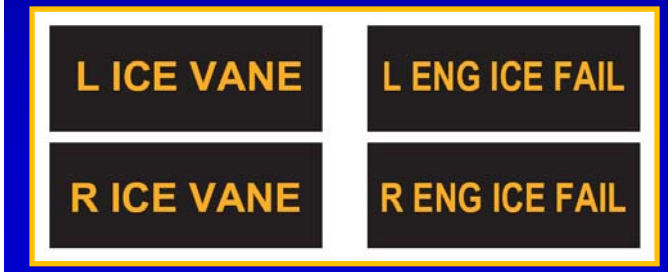
King Air BE-200/B200

Annunciator –BRAKE DE-ICE ON

- **Indicates the brake deice switch is ON**

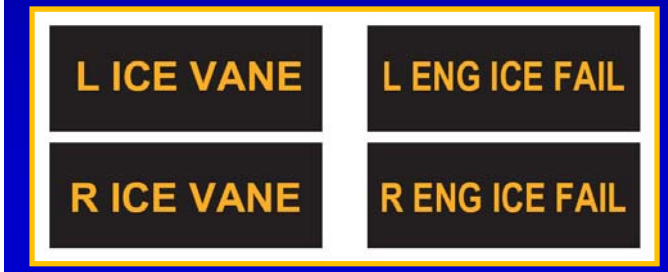
King Air BE-200/B200

Annunciators – ASSOCIATED ICE VANE FAIL



King Air BE-200/B200

Annunciators – ASSOCIATED ICE VANE FAIL



- **Engine anti-ice vane position does not agree with the position of the ice vane switch**

Miscellaneous

King Air BE-200/B200

Annunciators - ENGINE ANTI-ICE/ICE VANE ON

King Air BE-200/B200

Annunciators - ENGINE ANTI-ICE/ICE VANE ON

- Indicates the associated engine anti-ice / ice vane is on / extended

Airspeeds and Limitations

King Air BE-200/B200

Airspeeds and Limitations

Single engine best angle of climb (V_{XSE}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **115 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Single engine best rate of climb (V_{YSE}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **121 KIAS (blue line)**

King Air BE-200/B200

Airspeeds and Limitations

Single engine en-route climb:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **121 KIAS (blue line)**

King Air BE-200/B200

Airspeeds and Limitations

Air minimum control speed (V_{MCA}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **86 KIAS (red line)**

King Air BE-200/B200

Airspeeds and Limitations

Emergency descent maximum speed:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **181 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Maximum range glide:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **135 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Minimum airspeed in icing conditions:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **140 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Turbulent air penetration:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **170 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Airborne maneuvering speed (V_A):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **181 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Ground maneuvering speed:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **84 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Maximum landing gear extend (V_{LE})/operate (V_{LO}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **181 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Maximum gear retraction:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **163 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Maximum flaps 40% (V_{FE}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **200 KIAS (white triangle)**

King Air BE-200/B200

Airspeeds and Limitations

Flaps 100%:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **146 KIAS (top of white arc) BE-200**
- **157 KIAS (top of white arc) BE-B200**

King Air BE-200/B200

Airspeeds and Limitations

Balked landing climb speed (V_X) full flaps:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **100 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Stall speed – flaps up (V_{S1}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **99 KIAS (top of wide white arc)**

King Air BE-200/B200

Airspeeds and Limitations

Stall speed – flaps 40%:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **85 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Stall speed – flaps 100% (V_{SO}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **75 KIAS (bottom of white arc)**

King Air BE-200/B200

Airspeeds and Limitations

Safe single engine speed:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **104 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Maximum speed (V_{NE}/V_{MO}):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **259 KIAS/.52 Mach or depending on serial no**
- **269 KIAS/.48 Mach (red line for V_{NE}/Barber pole for V_{MO})**

King Air BE-200/B200

Airspeeds and Limitations

Cruise climb profile:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **To 10,000 ft. 160 KIAS**
- **To 20,000 ft. 140 KIAS**
- **To 25,000 ft. 130 KIAS**
- **Above 25,000 ft. 125 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

V_{NE}/V_{MO}:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **BE-200 – 269 KIAS/.48 Mach**
- **BE-B200 – 259 KIAS/.52 Mach**

King Air BE-200/B200

Airspeeds and Limitations

Maximum effective windshield de-ice:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **226 KIAS**

King Air BE-200/B200

Airspeeds and Limitations

Maximum operating pressure altitude:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **BE-200 – 31,000 ft. (some later SN 35,000 ft.) (see AFM)**
- **BE-B200 – 35,000 ft.**

King Air BE-200/B200

Airspeeds and Limitations

Maximum PSID (pressurization):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **BE-200 – 6.1 PSID**
- **BE-B200 – 6.6 PSID**

King Air BE-200/B200

Airspeeds and Limitations

Minimum battery volts for a battery start:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **23 Volts**

King Air BE-200/B200

Airspeeds and Limitations

Minimum battery volts for plugging in a ground power unit:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **20 Volts**

King Air BE-200/B200

Airspeeds and Limitations

GPU limits:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- BE-200
  - 28 to 28.2 Volts
  - 400 Amps continuous
  - 1,000 Amps surge
- BE-B200
  - 28 to 28.4 Volts
  - 300 Amps continuous
  - 1,000 Amps surge

King Air BE-200/B200

Airspeeds and Limitations

Generator limits:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Up to 31,000 ft. – 100%**
- **Above 31,000 ft. – 88%**
- **On ground – 85%**

King Air BE-200/B200

Airspeeds and Limitations

Starter limits:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **40 sec. on/60 sec. off**
- **40 sec. on/60 sec. off**
- **40 sec. on/30 min. off**
- **Optional 300 Amps Lear Siegler generator has different limits. See AFM.**

King Air BE-200/B200

Airspeeds and Limitations

OAT limits:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Sea level to 25,000 ft. – ISA + 37°C**
- **Above 25,000 ft. – ISA + 31°C**

King Air BE-200/B200

Airspeeds and Limitations

Towing limits:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Do not tow with rudder gust lock installed**
- **Do not tow with deflated strut**
- **Do not exceed turn limit set by crush block**

King Air BE-200/B200

Airspeeds and Limitations

Maximum ramp weight:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **12,590 lbs**

King Air BE-200/B200

Airspeeds and Limitations

Maximum takeoff weight:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **12,000 lbs**

King Air BE-200/B200

Airspeeds and Limitations

Maximum zero fuel weight:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **BE-200 – 10,400 lbs**
- **BE-B200 – 11,000 lbs**

King Air BE-200/B200

Airspeeds and Limitations

Maximum landing weight:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **12,500 lbs**

King Air BE-200/B200

Airspeeds and Limitations

Aviation gasoline limits:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **150 hours/engine overhaul period**
- **31,000 ft maximum altitude**
- **20,000 ft maximum without crossfeed or if electric boost pump MEL'd**

King Air BE-200/B200

Airspeeds and Limitations

Aux fueling limits (order of fueling):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Do not put any fuel in the Aux tanks unless the main tanks are full**

King Air BE-200/B200

Airspeeds and Limitations

When is crossfeed permitted?

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Single engine operations only**

King Air BE-200/B200

Airspeeds and Limitations

Minimum fuel quantity for takeoff:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **265 lbs or top of yellow arc**

King Air BE-200/B200

Airspeeds and Limitations

Maximum fuel imbalance:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **1,000 lbs**

King Air BE-200/B200

Airspeeds and Limitations

How long can an engine be operated with the L/R FUEL PRESS annunciator on?

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **10 hours/high pressure fuel pump overhaul period**

King Air BE-200/B200

Airspeeds and Limitations

Maximum brake de-ice temperature:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **15°C**

King Air BE-200/B200

Airspeeds and Limitations

Maximum brake de-ice time (landing gear retracted):

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **10 min.**

King Air BE-200/B200

Airspeeds and Limitations

Minimum de-icing boot operating temperature:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **-40°C or -40°F**

King Air BE-200/B200

Airspeeds and Limitations

Maximum engine anti-ice temperature:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **15°C (in-flight)**

King Air BE-200/B200

Airspeeds and Limitations

When must the engine anti-ice be on?

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **On ground for FOD protection**
- **In-flight:**
  - **Below +5°C and flight free of visible moisture cannot be assured**

ENG ANTI-ICE L or R

King Air BE-200/B200

Airspeeds and Limitations

What are the gear cycle limits?

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Mechanical gear – no limit**
- **Hydraulic gear – 1 cycle each 5 minutes with a 15 minute cooldown after the 6th cycle**

King Air BE-200/B200

Airspeeds and Limitations

Are there any operational restrictions on the use of brake de-ice?

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **Yes**
  - **Brake de-ice cannot be operated more than 10 min after gear retraction**
  - **Cannot use if OAT is above 15°C**
  - **If also using the de-ice boots, the min N_1 is 85%**
  - **Both sources of bleed air must be operating**
  - **Rudder boost may not function**

King Air BE-200/B200

Airspeeds and Limitations

Maximum continuous ITT:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **PT6A-41 is 750°C (solid red line)**
- **PT6A-42 is 800°C (solid red line)**

King Air BE-200/B200

Airspeeds and Limitations

Maximum ITT for start:

King Air BE-200/B200

Airspeeds and Limitations

Answer:

- **1,000°C for maximum 5 seconds**

General Overview

King Air BE-200/B200

General Overview

What is the wing span?

King Air BE-200/B200

General Overview

Answer:

- **54 ft. 6 inches.**

King Air BE-200/B200

General Overview

How tall is a King Air?

King Air BE-200/B200

General Overview

Answer:

- **15 ft. to top of rudder**

King Air BE-200/B200

General Overview

Air stair door limits:

King Air BE-200/B200

General Overview

Answer:

- **One person on the air stair at any time**
- **300 lbs weight limit (military C12 only)**

King Air BE-200/B200

General Overview

Occupancy limits:

King Air BE-200/B200

General Overview

Answer:

- **Part 91 – 15 (including crew)**
- **Part 135 – 9 Passengers (plus crew)**

King Air BE-200/B200

General Overview

Maneuver category:

King Air BE-200/B200

General Overview

Answer:

- **NORMAL – All aerobatic maneuvers including spins are prohibited**

King Air BE-200/B200

General Overview

Maximum demonstrated crosswind component:

King Air BE-200/B200

General Overview

Answer:

- **25 Kts**

King Air BE-200/B200

General Overview

Maximum tailwind component (takeoff/landing):

King Air BE-200/B200

General Overview

Answer:

- **10 Kts**

Engine and Propeller

King Air BE-200/B200

Engine and Propeller

What is the maximum prop RPM under normal conditions?

King Air BE-200/B200

Engine and Propeller

Answer:

- **2,000 RPM (redline)**

King Air BE-200/B200

Engine and Propeller

What does it mean if the propeller is not controllable and is at 2,080 RPM?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Primary governor has failed**
- **Fuel topping governor has also failed**
- **Reverse cannot be used as engine speed will not be controllable with primary/fuel topping governor failure**

King Air BE-200/B200

Engine and Propeller

What conditions have to be met for autofeather to function?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Switch must be in “ARM” position**
- **Power levers must be above the 90% micro switches**
- **Both engines must be operating**

AUTOFEATHER L or R

King Air BE-200/B200

Engine and Propeller

Is it possible for the second engine to autofeather?

King Air BE-200/B200

Engine and Propeller

Answer:

- **No:**
  - **The first engine to autofeather will remove power from the second engine autofeather circuit**

King Air BE-200/B200

Engine and Propeller

What should the pilot do if the autofeather does not feather the propeller?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Feather the propeller manually**

King Air BE-200/B200

Engine and Propeller

Should the pilot feather the second engine in the event of a failure?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Only if a restart is not possible**

King Air BE-200/B200

Engine and Propeller

Should the propeller syncrophaser be on during takeoff?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Type 1 – No, it should be OFF**
  - **If left on, the PROP SYNC ON annunciator will illuminate**
- **Type 2 – It does not matter**

PROP SYNC ON

King Air BE-200/B200

Engine and Propeller

What RPM should be avoided with 3-bladed props in the approach phase?

King Air BE-200/B200

Engine and Propeller

Answer:

- **1,750 to 1,850 RPM**
  - **Should be avoided as it may cause ILS signal interference**

King Air BE-200/B200

Engine and Propeller

What type of engine is installed on the BE-200/BE-B200:

King Air BE-200/B200

Engine and Propeller

Answer:

- **BE-200 – PT6A-41**
- **BE-B200 – PT6A-42**

King Air BE-200/B200

Engine and Propeller

How much horsepower does the engine develop under ideal conditions?

King Air BE-200/B200

Engine and Propeller

Answer:

- **850 shaft horsepower**

King Air BE-200/B200

Engine and Propeller

On a PT-6, what does free turbine (split shaft) mean?

King Air BE-200/B200

Engine and Propeller

Answer:

- **The N_1 and N_2 shafts are not physically connected**
- **The engine can be started or idled with the propeller feathered (maximum of 1,100 lbs torque)**

King Air BE-200/B200

Engine and Propeller

Are there potential problems with a feathered propeller on the ground for extended periods?

King Air BE-200/B200

Engine and Propeller

Answer:

- **FOD on contaminated surfaces entering the engine, or eroding the propeller blades**
- **Higher-than-normal oil temperatures**
- **In certain wind conditions, damage may occur to the de-ice boots, or side windows due to excessive heat**
  - **Very low quartering tail wind, and not a common event**

King Air BE-200/B200

Engine and Propeller

What does "reverse flow" mean on this engine?

King Air BE-200/B200

Engine and Propeller

Answer:

- **The intake air enters the engine at the rear, and the exhaust air exits at the front of the engine**
- **The airflow reverses at the combustion chamber in order to shorten the overall length of the engine**

King Air BE-200/B200

Engine and Propeller

What is the function of the P2.5 (low and high pressure) bleed valves?

King Air BE-200/B200

Engine and Propeller

Answer:

- **To automatically open and close in order to vent excess pressure at power settings**
  - **This prevents compressor stalls**

King Air BE-200/B200

Engine and Propeller

What items are driven by the oil pump shaft?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Oil pump**
- **Two dual-element oil scavenge pumps**
- **The low pressure, engine-driven fuel pump**

King Air BE-200/B200

Engine and Propeller

How is the fuel de-iced prior to the fuel control unit?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Hot oil is used to warm the fuel in the oil-to-fuel heat exchanger**

King Air BE-200/B200

Engine and Propeller

When is the most accurate time to check the oil level?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Within 15 minutes after shutdown**

King Air BE-200/B200

Engine and Propeller

If the oil dipstick comes loose in-flight, what will happen?

King Air BE-200/B200

Engine and Propeller

Answer:

- **All of the oil will be vented out of the engine**

King Air BE-200/B200

Engine and Propeller

Does the engine have flame-out protection?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Yes:**
  - **Auto-ignition comes on any time the torque drops below 400 lbs (if armed)**

IGNITION ON L or R

King Air BE-200/B200

Engine and Propeller

Is the torque limited in the event of power being set too high?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Yes:**
  - **The torque limiter will vent air from the FCU resulting in power reduction**
- **Torque limiter is Calibrated at 2,430 lbs torque**
- **Engine surging is likely**

King Air BE-200/B200

Engine and Propeller

What should the pilot do if ITT limits are exceeded during start?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Condition lever – CUTTOFF**
- **Starter – STARTER ONLY**
- **Observe starter limits**

King Air BE-200/B200

Engine and Propeller

What should the pilot do if there is no ITT rise within 10 seconds after adding fuel during start?

King Air BE-200/B200

Engine and Propeller

Answer:

- **Condition lever – CUTTOFF**
- **Starter – OFF**
  - **Wait 60 seconds (minimum) for unburned fuel to drain**
- **Starter – STARTER ONLY**
  - **Observe starter limits**

Pneumatic and Pressurization

King Air BE-200/B200

Pneumatic and Pressurization

What is the source of pressurization air?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **P_3 air (bleed air) from each engine using a flow pack on each side**

King Air BE-200/B200

Pneumatic and Pressurization

How does a flow pack cool P_3 air?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **It uses expansion**
- **It uses mixing of ambient air**
- **The flow packs do not function on the ground**

King Air BE-200/B200

Pneumatic and Pressurization

How is vacuum air generated?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **Instrument air is passed through an injector (Venturi)**

King Air BE-200/B200

Pneumatic and Pressurization

What is vacuum air used for?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- Deflating and holding the boots to the wings while not inflated
- Powering the copilot instruments
  - Attitude indicator
  - Turn and slip
- Powering the outflow valves to control pressurization

King Air BE-200/B200

Pneumatic and Pressurization

What powers the flight hour meter?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **28 VDC power, controlled by a pressure switch measuring instrument air**

King Air BE-200/B200

Pneumatic and Pressurization

Which engine must be running for the Freon AC system to operate?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **Right engine**

King Air BE-200/B200

Pneumatic and Pressurization

What will happen if the aft blower is left on in-flight?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **The rear heater vents will only be used for AC cooling**

King Air BE-200/B200

Pneumatic and Pressurization

What causes the BLEED AIR FAIL annunciator to illuminate?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **If a bleed air leak melts the Polyflow tubing, the pressure drop is detected**

BL AIR FAIL L or R

King Air BE-200/B200

Pneumatic and Pressurization

If the bleed air switch is set to "INSTR&ENVIR OFF", will the rudder boost function?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **No**

BL AIR OFF L or R

King Air BE-200/B200

Pneumatic and Pressurization

What is the function of the outflow valve?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **To control pressurization at the command of the pressurization controller**

King Air BE-200/B200

Pneumatic and Pressurization

What is the function of the safety valve?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **To open if the pressure exceeds maximum PSID**
- **To open if DUMP is selected**
- **To open on the ground (weight on wheels switch)**

King Air BE-200/B200

Pneumatic and Pressurization

How should the pressurization be set prior to landing?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- Such that there is 0 PSID upon landing
- 500 ft. above field pressure altitude
- Use chart to determine proper setting for current field altimeter setting

King Air BE-200/B200

Pneumatic and Pressurization

Why is the pressurization set for 1,000 ft above cruise altitude?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **To ensure that the max PSID is not reached**

King Air BE-200/B200

Pneumatic and Pressurization

At what cabin altitude does the ALT WARN annunciator illuminate?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **12,500 ft.**

ALT WARN

King Air BE-200/B200

Pneumatic and Pressurization

At what cabin altitude do the passenger masks automatically drop?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **12,000 ft.**

King Air BE-200/B200

Pneumatic and Pressurization

If the cabin is above 12,000 ft. and the passenger masks have not dropped, what can you do?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **Pull the manual drop handle**

King Air BE-200/B200

Pneumatic and Pressurization

If the O_2 system is not armed, is oxygen available?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **No**
  - **Oxygen must be armed for the entire flight in order to prevent the arming mechanism from freezing in the OFF position**

King Air BE-200/B200

Pneumatic and Pressurization

If the cabin is below 12,000 ft. and the passenger masks have dropped, how can the O_2 flow be stopped?

King Air BE-200/B200

Pneumatic and Pressurization

Answer:

- **Push the manual drop handle back in**
- **To de-activate the Barometric switch, pull the OXY CONTROL breaker**

Electrical System

King Air BE-200/B200

Electrical System

What type of battery is used?
Where is it located?

King Air BE-200/B200

Electrical System

Answer:

- **24 Volt NiCd (original equipment on older aircraft) or 24 Volt lead acid battery (most aircraft now have the lead acid battery)**
- **Located in the right wing center section forward of the spar**

King Air BE-200/B200

Electrical System

Why is it important to know if your aircraft has the NiCd battery?

King Air BE-200/B200

Electrical System

Answer:

- **They are subject to thermal runaway in-flight**
- **They have periodic maintenance requirements for deep cycle checks that do not apply to lead acid types**

King Air BE-200/B200

Electrical System

If the battery is below 23 Volts, how can the engine be started?

King Air BE-200/B200

Electrical System

Answer:

- **Ground power unit only**

King Air BE-200/B200

Electrical System

If the battery is below 20 volts, how can the engine be started?

King Air BE-200/B200

Electrical System

Answer:

- **It cannot be started**
- **The battery must be removed from the aircraft and recharged or replaced**

King Air BE-200/B200

Electrical System

If the battery is below 20 volts, will the GPU recharge the battery?

King Air BE-200/B200

Electrical System

Answer:

- **Yes, but in a harmful way**
  - **The wiring will be overloaded**
  - **The start contactor may weld**
  - **The battery will recharge at the max amperage of the GPU and potentially be damaged or overheat**
- **This is a violation of a limitation**

King Air BE-200/B200

Electrical System

Can the GPU connect if the battery switch is off?

King Air BE-200/B200

Electrical System

Answer:

- **No:**
  - **The GPU switch and the battery switch are the same**
- **The battery switch should be ON**

King Air BE-200/B200

Electrical System

What causes the "EXT PWR" to illuminate?

King Air BE-200/B200

Electrical System

Answer:

- **A GPU plug is connected**
  - **It is detected by a micro switch**

EXT PWR

King Air BE-200/B200

Electrical System

How do you detect a failed isolation limiter?

King Air BE-200/B200

Electrical System

Answer:

- **With less than two generators online, the voltage on both sides should be equal**
  - **If not, an isolation limiter has failed**

King Air BE-200/B200

Electrical System

May the dual-fed buss 50 Amps breakers be reset in-flight?

King Air BE-200/B200

Electrical System

Answer:

- **No**

King Air BE-200/B200

Electrical System

What causes the battery charge annunciator to illuminate?

King Air BE-200/B200

Electrical System

Answer:

- **A battery charge rate of at least 7 Amps for 6 seconds**

BATTERY CHARGE

Fire Protection

King Air BE-200/B200

Electrical System

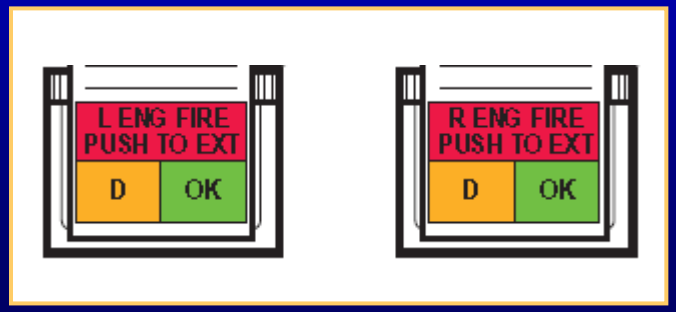
How does the older infrared system work?

King Air BE-200/B200

Electrical System

Answer:

- Three photoconductive cells for each engine
- Detects higher-than-normal heat (infrared) source and triggers L/R ENGINE FIRE annunciation
- Prone to false triggers due to stray light and rain in the engine cowl



King Air BE-200/B200

Electrical System

How does the fire detection system with the temperature detecting loop work?

King Air BE-200/B200

Electrical System

Answer:

- **Coaxial tube with dissimilar gasses detects heat using differing expansion rates**
- **System is very reliable**
  - **Detection could be a result of fire or possibly a bleed air leak**
  - **SN BB 1444 and after**

King Air BE-200/B200

Electrical System

Where would you find the optional fire extinguisher bottle?

King Air BE-200/B200

Electrical System

Answer:

- **Inside of the main landing gear well**

King Air BE-200/B200

Electrical System

Why would you need to check the fire bottle during preflight?

King Air BE-200/B200

Electrical System

Answer:

- **To verify that the charge pressure has not leaked**

King Air BE-200/B200

Electrical System

After using the first fire bottle, can the other bottle be used to fight the fire?

King Air BE-200/B200

Electrical System

Answer:

- **No:**
  - **The fire bottle cannot cross over to the other side**

King Air BE-200/B200

Electrical System

What does the "FIRE EXT" test do?

King Air BE-200/B200

Electrical System

Answer:

- **It tests the electrical capability of the system to fire**

King Air BE-200/B200

Electrical System

If the battery switch is OFF, and the FIRE EXTINGUISHER switch is pushed, will it fire?

King Air BE-200/B200

Electrical System

Answer:

- **Yes:**
  - **The fire extinguisher is on the hot battery bus, and will fire any time**

King Air BE-200/B200

Electrical System

How many hand fire extinguishers should be inside the aircraft?

King Air BE-200/B200

Electrical System

Answer:

- **Two:**
  - **One in the cockpit, under the copilot seat**
  - **One in the back, near the air stair door**

King Air BE-200/B200

Electrical System

How are the portable fire extinguishers preflighted?

King Air BE-200/B200

Electrical System

Answer:

- **Check pressure inside of the green arc**
- **Check expiration date on tag**

Ice and Rain

King Air BE-200/B200

Ice and Rain

Procedure for L/R ENG ANTI-ICE FAIL (electric standby system):

King Air BE-200/B200

Ice and Rain

Answer:

- **Use standby actuator motor to extend and retract**

ENG ICE FAIL L or R

King Air BE-200/B200

Ice and Rain

What powers the de-ice boots?

King Air BE-200/B200

Ice and Rain

Answer:

- **Pneumatic air (18 PSI) inflates and suction air deflates and holds them to the surface**

King Air BE-200/B200

Ice and Rain

What does "SINGLE CYCLE" do?

King Air BE-200/B200

Ice and Rain

Answer:

- **Inflates the wing boots for 6 seconds, followed by 4 seconds to the wing**

King Air BE-200/B200

Ice and Rain

Referring to the de-ice boots, what does the "MANUAL" switch position do?

King Air BE-200/B200

Ice and Rain

Answer:

- **Inflates all boots for the period of time that the switch is held**

King Air BE-200/B200

Ice and Rain

When should the de-ice boots be cycled?

King Air BE-200/B200

Ice and Rain

Answer:

- **After ½ to 1 inch of ice**
- **Never during takeoff**

King Air BE-200/B200

Ice and Rain

How is the engine inlet heated?

King Air BE-200/B200

Ice and Rain

Answer:

- **Engine exhaust is directed through the engine inlet ring**

King Air BE-200/B200

Ice and Rain

How do the ice vanes (engine anti-ice) work?

King Air BE-200/B200

Ice and Rain

Answer:

- **When the system is on, particulate matter (FOD or ice) is vented out to the bottom of the engine cowling, while the clean air is drawn up into the engine.**

King Air BE-200/B200

Ice and Rain

When must the engine anti-ice be on?

King Air BE-200/B200

Ice and Rain

Answer:

- **On ground for FOD protection**
  - **Oil temps may be higher than normal**
- **In-flight**
  - **Below +5°C and flight free of visible moisture cannot be assured**

King Air BE-200/B200

Ice and Rain

Are there any limitations on propeller heat?

King Air BE-200/B200

Ice and Rain

Answer:

- **Yes:**
  - **The propeller must be turning in order to prevent damage**

King Air BE-200/B200

Ice and Rain

When the prop heat is set to "AUTO", what is the cycle?

King Air BE-200/B200

Ice and Rain

Answer:

- **Three-blade props (with dual boots)**
  - **4-30 sec timer sequence**
  - **Outer, inner, – other side – outer, inner**
  - **14 to 18 Amps for each segment**
- **Four-blade props (single boot system)**
  - **90 sec sequentially on each prop**
  - **18 to 24 Amps for each segment**

King Air BE-200/B200

Ice and Rain

When the prop heat is set to "MANUAL", what is the cycle?

King Air BE-200/B200

Ice and Rain

Answer:

- **Three-blade props (with dual boots)**
  - **No timer sequence**
  - **Manual inner heats both prop inner boots while switch is held**
  - **Manual outer heats both outer while switch held**
- **Four-blade props (single boot system)**
  - **No timer sequence, both props heated while switch held**

King Air BE-200/B200

Ice and Rain

How can the pilot tell that the prop heat is functioning in manual mode?

King Air BE-200/B200

Ice and Rain

Answer:

- **The prop amp meter will not work**
- **The pilot must observe the slight increase in load meters when activated**

King Air BE-200/B200

Ice and Rain

When operating the windshield anti-ice system, what are the best practices?

King Air BE-200/B200

Ice and Rain

Answer:

- **Do not allow windshield to become cold soaked**
  - **Use windshield heat any time the temp is below 5°C**
  - **Some checklists have windshield heat in the climb check**
  - **Windshield heat should be off on ground in warm weather to avoid delaminating**

King Air BE-200/B200

Ice and Rain

What does the "NORMAL" windshield heat switch position do?

King Air BE-200/B200

Ice and Rain

Answer:

- **Heats the entire windshield panel**
- **Heat is not thermostatically controlled**

King Air BE-200/B200

Ice and Rain

What does the "HIGH" windshield heat switch position do?

King Air BE-200/B200

Ice and Rain

Answer:

- **Heats only the outer two-thirds of windshield panel**
- **Heat is thermostatically controlled at 100 to 105°F**

King Air BE-200/B200

Ice and Rain

What is the max effective windshield anti-ice speed?

King Air BE-200/B200

Ice and Rain

Answer:

- **226 Kts**

King Air BE-200/B200

Ice and Rain

What is meant by the slang term "hot 5 ON"?

King Air BE-200/B200

Ice and Rain

Answer:

- **Left and right pitot heat – ON**
- **Left and right fuel vent heat – ON**
- **Stall warning heat – ON**
- **These should be final items before each takeoff**

King Air BE-200/B200

Ice and Rain

Will the stall warning heat function on the ground?

King Air BE-200/B200

Ice and Rain

Answer:

- **Yes, but at a reduced power**

King Air BE-200/B200

Ice and Rain

Can the windshield wipers be used on a dry windshield?

King Air BE-200/B200

Ice and Rain

Answer:

- **No:**
  - **It causes windshield damage**

King Air BE-200/B200

Ice and Rain

Procedure for L/R ICE VANE FAIL (manual backup system)

King Air BE-200/B200

Ice and Rain

Answer:

- **Extend and retract with manual handles**
- **Do not use electric motors until system reset in maintenance**
- **Pull ice vane breakers, and use switches to match position of handles in order to retain function of annunciators**

Flight Controls

King Air BE-200/B200

Flight Controls

What powers the primary flight controls?

King Air BE-200/B200

Flight Controls

Answer:

- **The pilot, through cables and push rods**

King Air BE-200/B200

Flight Controls

What powers the flaps?

King Air BE-200/B200

Flight Controls

Answer:

- **Electric motor through flexible drives and screw-type actuators**

King Air BE-200/B200

Flight Controls

Is there split flap protection?

King Air BE-200/B200

Flight Controls

Answer:

- **Yes, between inside and outside flap panels only**
- **There is no split flap protection between the right and left side of the aircraft**
- **If activated, the flaps will not move**

King Air BE-200/B200

Flight Controls

How are the trim tabs preflighted?

King Air BE-200/B200

Flight Controls

Answer:

- **With tabs set to zero, all tabs should align with trailing edge of respective surface**
- **There is no tolerance on the elevator trim**

King Air BE-200/B200

Flight Controls

What powers the rudder boost?

King Air BE-200/B200

Flight Controls

Answer:

- **Instrument air (18 PSI bleed air)**

King Air BE-200/B200

Flight Controls

What causes the rudder boost to activate?

King Air BE-200/B200

Flight Controls

Answer:

- **Rudder boost activation occurs if there is a 60 PSI difference between P_3 output of each engine**

Landing Gear System

King Air BE-200/B200

Landing Gear System

What causes the gear horn warn to sound?

King Air BE-200/B200

Landing Gear System

Answer:

- **Throttle below a preset position (approximately 70%)**
- **Flaps past approach**

King Air BE-200/B200

Landing Gear System

Can the gear warning be silenced?

King Air BE-200/B200

Landing Gear System

Answer:

- **If caused by power lever position, it can be silenced**
- **If caused by flaps past approach, then it cannot be silenced**
- **In either case, the gear handle will remain red**

King Air BE-200/B200

Landing Gear System

Does a King Air have uplocks?

King Air BE-200/B200

Landing Gear System

Answer:

- **No**
- **On the mechanical gear, they are held in the up position by friction**
- **On the hydraulic gear, they are held up by hydraulic pressure**

King Air BE-200/B200

Landing Gear System

What holds the gear down?

King Air BE-200/B200

Landing Gear System

Answer:

- **On the mains, over-center locks**
- **On the nose:**
  - **Mechanical nose gear held in position by geometry of actuator**
  - **Hydraulic nose gear has a locking pin in the nose gear hydraulic ram actuator**

King Air BE-200/B200

Landing Gear System

How much system pressure does the hydraulic gear use?

King Air BE-200/B200

Landing Gear System

Answer:

- **2,775 PSI in the up position**
  - **When the system pressure drops 300 lbs, the pressure switch cycles the pump on**
- **0 PSI in the down position:**
  - **The system uses mechanical locks**

King Air BE-200/B200

Landing Gear System

What type of fluid does the hydraulic gear use?

King Air BE-200/B200

Landing Gear System

Answer:

- **MIL-H-5606**

King Air BE-200/B200

Landing Gear System

What type of fluid is used in the brakes?

King Air BE-200/B200

Landing Gear System

Answer:

- **MIL-H-5606**

King Air BE-200/B200

Landing Gear System

How is the parking brake set?

King Air BE-200/B200

Landing Gear System

Answer:

- **Depress brakes and hold, then pull the parking brake handle**

King Air BE-200/B200

Landing Gear System

How is the parking brake released?

King Air BE-200/B200

Landing Gear System

Answer:

- **Depress brakes and hold, then push the parking brake handle**

Fuel System

King Air BE-200/B200

Fuel System

What is the capacity of each main tank?

King Air BE-200/B200

Fuel System

Answer:

- **193 U.S. gallons (usable)**

King Air BE-200/B200

Fuel System

What is the capacity of each auxiliary tank?

King Air BE-200/B200

Fuel System

Answer:

- **79 U.S. gallons (usable)**

King Air BE-200/B200

Fuel System

What is the total capacity of each wing?

King Air BE-200/B200

Fuel System

Answer:

- **272 U.S. gallons**

King Air BE-200/B200

Fuel System

How does fuel get from the wing to the nacelle?

King Air BE-200/B200

Fuel System

Answer:

- **Gravity flow**

King Air BE-200/B200

Fuel System

How does fuel get from the auxiliary tank up to the nacelle?

King Air BE-200/B200

Fuel System

Answer:

- **Motive flow; fuel, under pressure, flows through a jet pump (Venturi) and drawn out of the auxiliary tank and routed into the nacelle**

King Air BE-200/B200

Fuel System

What is a jet transfer pump?

King Air BE-200/B200

Fuel System

Answer:

- **It is a Venturi**
- **It uses suction generated by the fuel flow to draw the fuel from the auxiliary tank**

King Air BE-200/B200

Fuel System

What is the purpose of the standby boost pump?

King Air BE-200/B200

Fuel System

Answer:

- **It is to provide backup for the engine-driven fuel boost pump**
- **It is used if crossfeed is selected**

King Air BE-200/B200

Fuel System

When crossfeed is selected, what four things occur?

King Air BE-200/B200

Fuel System

Answer:

- Crossfeed light comes on
- Standby boost pump activates on the supply side
- Crossfeed valve opens
- Motive flow valve closes on the receiving side

King Air BE-200/B200

Fuel System

How long is engine operation permissible with the "L/R LOW FUEL PRESS" light on?

King Air BE-200/B200

Fuel System

Answer:

- **10 hours between overhaul/replacement of the high pressure fuel pump**

FUEL PRESS L or R

King Air BE-200/B200

Fuel System

What is indicated by the illumination of the "L/R LOW FUEL PRESS" light?

King Air BE-200/B200

Fuel System

Answer:

- **Low pressure, engine-driven boost pump has failed**
- **Also could indicate failure of an oil scavenge pump as they share the same drive shaft**

King Air BE-200/B200

Fuel System

What does illumination of the "NO TRANSFER" light indicate?

King Air BE-200/B200

Fuel System

Answer:

- It is normal for this light to be on for 30 to 45 seconds after engine start
- Fuel is not transferring from the aux tank to the nacelle
  - There is fuel in the Aux Tank
  - Motive flow pressure switch does not see pressure

King Air BE-200/B200

Fuel System

Why would the "NO TRANSFER" light flicker in-flight?

King Air BE-200/B200

Fuel System

Answer:

- **It is the unusable fuel sloshing in turbulence**
- **The float switch must indicate fuel continuously for 30 to 45 sec for the timer to open the motive flow valve**

King Air BE-200/B200

Fuel System

What operational limitations would exist if flying with a standby boost pump out of inoperative?

King Air BE-200/B200

Fuel System

Answer:

- **Crossfeed would not be available from the side of the inoperative boost pump**

King Air BE-200/B200

Fuel System

What will be the indication of a high pressure fuel pump failure?

King Air BE-200/B200

Fuel System

Answer:

- **The engine will fail**

King Air BE-200/B200

Fuel System

When draining fuel for the purpose of separating water and debris, how long must you wait after moving or refueling the aircraft?

King Air BE-200/B200

Fuel System

Answer:

- **A minimum of three hours**

King Air BE-200/B200

Fuel System

Why should the fuel tanks be sumped regularly in order to reduce water content?

King Air BE-200/B200

Fuel System

Answer:

- **To reduce fungus growth**
- **To reduce fuel gauge inaccuracy**

King Air BE-200/B200

Fuel System

What fuel additive should be used in order to reduce fungus growth?

King Air BE-200/B200

Fuel System

Answer:

- **Biobor JF (preferred)**
- **Prist can also be used**

King Air BE-200/B200

Fuel System

Can Prist be added any time?

King Air BE-200/B200

Fuel System

Answer:

- **It must be properly blended with the fuel**
  - **Pre-mix**
  - **Blended as the fuel is pumped into the tank**

King Air BE-200/B200

Fuel System

Is the use of Prist required?

King Air BE-200/B200

Fuel System

Answer:

- **No, it is optional, but should be used if the fuel is allowed to cool below approximately -20°C**