

Notes on the Expanded King Air B200 (200) Normal Procedures Checklist 18.1

The following is intended to provide flight crews with additional information about the tasks outlined in the Dreamline Aviation Normal Procedures Checklist for the King Air B200 and 200 aircraft. This expanded checklist explains in detail the checks, inspection and testing of aircraft items included on the Normal Procedures Checklist.

Responses on the abbreviated checklist are intentionally limited to allow quick reading; as can be seen below, checklist responses such as “COMPLETE” or “CHECKED” often include multiple pilot tasks.

Checklist Philosophy

The checklist is designed to standardize the procedures of flight crews. The abbreviated checklist can be used by all flight crews regardless whether one or two pilots are assigned to a flight. Pilots flying **SINGLE PILOT** are expected to complete all required checklist items silently.

Responses to checklist challenges are made by the pilot designated in the left column of each checklist section. In some cases the responses are designated by flying position (“C” for Captain/Left Seat or “F” for First Officer/Right Seat), in others, by activity (“PF” for Pilot Flying or “PM” for Pilot Monitoring). The Normal Procedures Checklist is performed by the First Officer when the aircraft is on the ground and by the Pilot Monitoring the aircraft while in flight.

Note: For ground operations, the “C” designation refers the pilot occupying the left seat.

Checklists that are required to be read aloud are boxed. Checklist items that are reverse printed must be repeated by the crew whenever runway assignment is changed and the checklist has already been completed. The checklist is written for use in both the B200 and the straight 200 aircraft. Checklist items that apply specifically to the -200 type aircraft are either explicit or denoted by the (200) designation.

It is important to have all crewmembers respond to challenges in the manner indicated. Incorrect responses should be brought to the attention of the pilot responding for clarification or correction. Regardless of whether a checklist is required to be read aloud or not, when a **FULL CREW** is assigned to a flight, the pilot completing a checklist will so indicate by stating that “The _____ checklist is complete.”

As a matter of technique, pilots who respond to checklist items, where appropriate, should physically point to or touch the relevant switch, panel or indicator. The Normal Procedure Checklist is a **CHECK**-list and not a **DO**-list. In most cases checklist procedures will be completed prior to the initiation of the checklist. Performance of checklist items is not necessarily the responsibility of the respondent. For example, an aircraft preflight might be completed by the First Officer, but the checklist response will

be from the Captain. Conversely, other tasks will be performed by the Captain but will require the First Officer to respond to the checklist challenge.

Note: All abnormal procedures are covered by the Flight Safety checklist and the POH onboard each aircraft. The last leaf of the Dreamline checklist is for quick reference and directs pilots to the appropriate Flight Safety abnormal procedure checklist.

EXPANDED NORMAL PROCEDURES

To the extent possible, first flight of the day items should nominally be performed prior to any passenger's arrival. First flight of day items for the King Air include:

***Fire Warning Test**
***Rudder Boost Check**

***Autofeather Check**
***Fuel Panel Function Check**

In the above list, only the Fire Warning Test and Fuel Panel Function Check can be performed without the engines running. Checks that require engine operation are normally performed after the passengers have arrived and are often included in later checklist patterns. **Regardless, after the items have been checked on the first flight, they need not be checked again unless a subsequent check is desired by the crew.**

BEFORE START CHECKLIST

C AIRCRAFT INSPECTION.....COMPLETE

The interior preflight is normally performed before the exterior preflight of the aircraft. As part of the preflight, crewmembers should pay particular attention to the appearance of the aircraft interior and passenger amenities. As part of the specific cabin inspection, pilots must insure that the following items/documents are aboard.

Documentation/Paperwork

Aircraft Registration/Radio Station License./Airworthiness

Beechcraft Pilot Operating Handbook (POH)

Flight Log Binder

-check currency of status sheet and compare to current aircraft times

-check currency of VOT check (must be within last 30 days)

Mechanical Discrepancy Log, Form 1

-check outstanding squawks

-check for deferred items

-review past write-ups and corrections to assess aircraft history

Flight Safety Operating Handbook/Checklist

Dreamline Aviation General Operations Manual

Pertinent VFR charts, when required

Interior Inspection

Control Locks REMOVE

Circuit Breakers check IN

Brakes SET

Microphone selector NORMAL

Start Switches OFF

Electrical Switches OFF

Lights Panel SET

De Ice/Anti Ice Panel Switches OFF

Landing Gear Handle DOWN

Throttles IDLE

Propellers FEATHER

Condition Levers CUTOFF

Environmental Panel SET

-mode selector set to OFF

-fan switch AUTO

*in hot weather, verify a/c operable

Elevator/Aileron/Rudder Trim set 0/0/4 Units Nose Up

Rudder Boost Switch ON
Pressurization Switch PRESS
Electric Trim Switch ON
Fuel Panel
-firewall cutoff valves CLOSE
-Standby Fuel Pumps ON

Battery Switch ON
Current Limiters CHECK
Voltage CHECK
-check Current Limiters
-minimum voltage for battery start is 22 volts
-minimum voltage for ground cart start is 20 volts
(GPU, when applicable, Battery must be ON prior to GPU use)
Annunciator Panel CHECK
-panel lights check
-low pressure fuel lights L/R illuminated
Fuel Panel
-fuel firewall valves OPEN
-annunciator panel low pressure fuel lights OUT
-standby fuel pumps OFF
-annunciator fuel panel lights ILLUMINATED
-fuel crossfeed switch LEFT then RIGHT observe both low pressure fuel lts OUT
Landing Gear 3 GREEN
-push to test unsafe/handle lights
-Hyd Fluid Sensor TEST
Stall Warning TEST
Fire Detectors and Extinguishers (if installed) CHECK
Oxygen Pressure CHECK
-1200 psi Minimum, 1500 psi desired
Battery Switch OFF

Passenger Cabin

Passenger Convenience Items
First Aid Kit
Emergency Exit is Unlocked
Passenger Briefing Cards
-One card for each pax seat
Cabin Cleanliness/General Appearance
Waste Can
Cargo Restraint

Exterior Inspection

The exterior inspection is completed in conformity with manufacturer's procedures outlined in the Pilot Operating Handbook, Chapter Four, Normal Procedures. Aircraft will be given an external inspection before each flight to

insure airworthiness. Aircraft fluids should be drained prior to the first flight of the day when required and other times when appropriate. It is desirable to check engine oil quantity levels within 10 minutes of shutdown.

**C DISPATCHBOOK/FLIGHT
LOG.....CKD**

**C OXYGEN
SYSTEM.....CKD/ARMED**

The oxygen handle should be armed for all flights. Push the vent button on both pilot masks to verify oxygen flow. Inspect each mask for condition and mic connection.

**C CIRCUIT
BREAKERS.....CKD**

Circuit breakers are located below the fuel panel, adjacent to the gear handle, along the First Officer side of the cockpit and below the battery on the bottom of the right wing stub. Some circuit breakers are identified by the addition of a colored collar. All circuit breakers should be “pushed in” unless “pulled and collared” in compliance with MEL dictates.

**C CONTROL
LOCKS.....REMOVED**

Control locks should be installed every time the aircraft is parked. Rudder gust locks are not generally installed unless high winds or storms are expected.

Note: The aircraft must never be towed or moved with the rudder gust lock installed. If there is a possibility the aircraft might be towed, do not set the rudder control lock.

**C PARKING
BRAKE.....SET**

The parking brake must be set when the aircraft is in a position to accept passengers. Wheel chocks must be pulled prior to engine start.

**C START
SWITCHES.....OFF**

**C AVIONICS/INVERTER
SWS.....OFF**

**C LANDING GEAR HANDLE.....DN/CB
CKD**

Landing gear handle is checked for down position, landing gear motor CB set.

**C BATTERY
SWITCH.....ON**

The battery must be ON prior to connecting external ground power.

**C VOLTAGE/CURRENT
LIMITERS.....CKD**

22 Volts required for a battery start; 20 for ground power start. Both generator busses must indicate voltage. The absence of a voltage reading may indicate a blown current limiter for the respective bus.

**C ANNUNCIATOR
LIGHTS.....CKD**

Check annunciated items to confirm correct aircraft configuration. Depress the annunciator test button to test light operation.

**C FUEL
QUANTITY/PANEL.....CKD/SET**

The check has already been completed. Both pilots must confirm that fuel load and distribution is adequate and within limits for planned flight. Fuel panel switches are set with the Crossfeed Switch OFF, Standby Pumps OFF, Fuel Transfer O'ride AUTO, and No Transfer lights TESTED. Fuel firewall shutoff valves on the B200 aircraft are not powered by the hot battery bus and require the battery switch to ON prior to checking valve function.

**C MIC
SWITCHES.....NORMAL**

Verify these switches are in the MIC position. Failure to insure proper microphone selection will result in carrier tone transmission only.

**C ENG ANTI-ICE.....AS
REQ**

Both pilots must agree on the selection of ice vanes. Consideration for use should include a discussion of weather, ramp conditions, temperature and use of other anti/de-ice equipment. In the absence of icing conditions, ice vanes are normally used for FOD prevention. Oil cooling is affected by the use of engine anti-ice and oil temperatures must be monitored whenever OAT is above 15 degrees C. Later model King Airs have two identical motors powering the engine ice vanes. On these aircraft prior to the first flight each day, pilots should switch motor selections.

C LIGHTS.....S
ET

Lights should be set according to the available light and weather conditions. Pilots must use judgment with respect to the use of lights in order not to deplete the battery. Pilots should use lights to enhance external visibility. Prior to engine start, the aircraft rotating beacon must be turned ON.

C ANTI-ICE
SYSTEMS.....OFF

Electrical anti-ice systems should be selected to OFF prior to engine start. A discussion of weather/icing hazards should include the use of anti-icing precautions after engine start.

C LANDING GEAR.....DN/3
GREEN

Confirm the landing gear handle in the DOWN position, warning lights test properly, and position lights indicate properly.

C HYDRAULIC FLUID SENSOR (if installed).....CKD

Push the hydraulic test button and observe the Hyd Fluid Low annunciator illuminates.

C FURNISHINGS.....OFF

If installed, check the forward panel adjacent to the lower annunciator panel and ensure that the furnishings control switch is OFF. Check Mapco switches to ensure they are in the OFF position.

C CABIN LIGHTS/SIGNS.....ON

The Cabin Lights should be selected to BRIGHT for passenger boarding during daylight and DIM for boarding at night. The cabin No Smoking/Fasten Seat Belt signs shall be ON during passenger boarding.

C ENVIRONMENTAL
PANEL.....CKD/SET

The Cabin Temp Mode selector shall be verified in the OFF position. **Cabin fans shall be operating during passenger loading and deplaning.** In cold weather conditions, Radiant Heat may be used when ground power is available and powering the aircraft.

C STALL
WARNING.....CKD

C FIRE PROTECTION.....CKD

Rotate the fire detection switch to each position and verify the red fire annunciator and Master Warning lights illuminate. When installed, verify all of the fire protection lights illuminate and that the fire protection switch cover is safety-wired.

C BLEED AIR SWITCHES.....ENV OFF

Bleed switches shall be selected to the ENV OFF position for engine start.

C OXYGEN PRESSURE.....CKD

Minimum pressure for dispatch is 1200 psi, 1500 psi or greater is desired.

C ALTERNATE STATIC.....NORMAL

C CVR (if installed).....CKD

Press CVR test button and note 3-4 second delay before indicator needle registers green. For aural confirmation that the CVR is functioning correctly, insert headphone jack into receptacle and listen for slightly delayed cabin audio.

C POWER CONTROLS.....SET

Power levers set to IDLE and Fuel Cutoff levers IDLE CUTOFF. Propeller controls are normally left in the feather position for engine start. If the ramp surface is loose and/or when conditions permit, propeller controls should be moved to the full forward position. Prop Sync shall be selected to OFF for Type I systems and selected to ON for Type II systems.

C FLAPS.....SET

Confirm flap position by comparing flap selector with indicator.

C AIL/RUD/STAB TRIM.....0/0/___SET

Trim wheels should be selected to neutral positions. Elevator trim should be set to a value reflecting the computed CG. Elevator trim must be within the green takeoff band indicated on the trim wheel.

C EFIS SWITCHES (as applicable).....OFF

C ELEV TRIM/RUDDER BOOST SWS.....ON

The electric trim button on early King Air models must be cycled in order to enable system operation. Verify proper function of the electric trim; cycle electric trim switch to ON, when required. Verify electric trim is operating correctly by moving the pilot trim switches in both directions and observing elevator trim wheel movement. Check Rudder Boost switch is in the Armed position.

C PRESS SW/PANEL.....PRESS/SET

Verify pressurization control switch is in PRESS position. Adjust pressurization panel for departure airport elevation, planned cruise altitude or corresponding destination field elevation, whichever is highest. The rate knob range is 200 to 2000 fpm and the knob should initially be set with the arrow pointing to about the 11 o'clock position. **Note:** Most pilots add a small additive to prevent exceeding maximum cabin differential or cabin "dumping" on touchdown.

PRIOR TO ENGINE START

F PARKING BRAKE.....SET

F BATTERY SWITCH.....ON

Verify battery or GPU voltage and current limiter integrity.

START

The Start checklist is to be completed by the First Officer. Although the FO may not be the crewmember actually performing the tasks listed, he will verify task completion.

F DOOR LIGHT.....CKD

The door can only be closed and locked by a qualified crewmember.
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To assure the proper condition of the door, pilots **must** visually check the door's four pin indicators and the over-center lock.

F BEACON.....O
N

The rotating beacon alerts personnel and other aircraft that engine start or aircraft movement is imminent (e.g. towing).

F	ELECTRICAL.....DOWNLOA
D	

All unnecessary electric components should be selected to OFF prior to engine start. Regardless whether a GPU is utilized, electrical items that should be selected OFF for engine start include the avionics master, inverters, some lights, window heat, passenger convenience items, and electrical environmental components.

ENGINE STARTS are accomplished with either aircraft battery or a ground power unit. **Minimum battery voltage** for engine start is **22 volts** for a battery start **and 20 volts** with a ground power assist.

Note: Start limitations must be observed for all engine starts and when a start is aborted, company engine clearing procedures require engine motoring for a minimum of 15 seconds or until engine ITT below 300 degrees C is obtained. Both crewmembers must monitor engine starts and respond appropriately to any abnormality. FOs cannot reach the required start switches from the right seat and must verbally alert the Captain to any observed start deviation.
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AFTER ENGINE START

The After Engine Start Checklist follows the successful start of aircraft engines. The After Start Checklist is read aloud by the FO.

F	ENGINE INSTRUMENTS.....CKD
F	AVIONICS MASTER/EFIS SWS.....ON
F	INVERTER (if installed).....CKD/ON

Inverters shall be tested each leg and selection alternated every leg. Verify volts and frequency using the overhead meter.

C&F	ANTI-ICE.....AS
REQ	

Engine anti-ice must be used whenever outside air temperature is +5 degrees C or colder and visible moisture is present. Visible moisture may be defined as rain, sleet, snow, fog (with visibilities less than 1 mile), or accumulations of water

on the taxi or runway surfaces. Both pilots must agree on the selection of ice vanes. Consideration for use should include a discussion of weather, ramp conditions, temperature and use of other anti/de-ice equipment. **When possible, ice vanes will be used for FOD prevention during all ground operations**

Note: Oil cooling is affected by the use of engine anti-ice and oil temperatures must be carefully monitored whenever OAT is above 15 degrees C.

Propeller de-ice should be used whenever engine anti-ice is used or when ice accumulation is detected. The prop de-ice ammeter should be monitored periodically to insure proper function (14 to 18 amps per cycle). Do not operate the propeller de-ice unless the engine is operating.

Windshield anti-ice is used to *prevent* ice build-up; it is not very effective for de-ice purposes. Windshield anti-ice can be used on the ground and should be selected ON prior to flight or ground operation in icing conditions.

Warning: Due to possible window failure, window heat must be operated in the NORMAL selection for a minimum of 10 minutes prior operating the system in the HI position.

Regardless of temperature, fuel vent, stall and pitot heat are normally selected ON when cleared onto the runway.

F LIGHTS.....SET

For all aircraft operations, Beacon and Position lights should be ON. At night, Tail illumination lights should be ON. The Taxi Light shall be ON during taxi and turned OFF whenever the aircraft is stopped other than momentarily. All Exterior lights shall be selected ON whenever crossing an active runway.

F FURNISHINGS.....ON

Check the furnishing switches atop the Mapco unit and the furnishing control-switch on the forward panel adjacent to the lower annunciator panel, if installed.

F ENV PANEL.....SET

The air conditioning should be selected to produce a temperature comfortable for the passengers. Normally operated in the AUTO mode, the airflow to the passengers can be controlled by adjusting the CABIN AIR knob and by use of circulating fans. The aft blower fan should be used on the ground only.

Note: On the ground, when operating the air conditioner, the condenser blower will activate approximately seven to ten seconds after selection. Flight crews should monitor the generator load during this operation and to confirm an

increase in generator load accompanied by the sound of the blower operating. If these indications are not observed, the air conditioner will be inoperative, but may be recovered by resetting the air conditioner circuit breaker located either in the nose gear well or on earlier models, on a panel below the aircraft battery box.

Note: During cold weather operations, engine bleed switches must be selected to the OPEN position in order for engine bleed air to be available to warm the cabin.

Radiant Heat is installed on some aircraft and can be used in all phases of flight. However, its purpose is to allow aircraft using ground power to warm the cabin **prior** to engine start. It is not regulated by the any environmental control and **should** be selected OFF prior to takeoff.

F GEN LOAD METERS.....CKD

Proper load distribution can be checked by comparing left and right generator loads. When generator loads differ significantly, a current limiter may have blown. To verify this, turn one generator OFF and compare bus voltage. If a generator bus reads zero, the current limiter has failed on that side. If either generator bus reads 24 volts, the current limiter for the opposite bus has failed. If both busses read 28 volts, the current limiters are intact. The load meters should be monitored when air conditioning is selected. The load meters will register a 5 to 10% increase within ten seconds indicating condenser blower operation. Failure to detect an increase in electrical load will require a reset of the air conditioning system.

F FLAPS.....SET

Wing flaps shall be extended or retracted to the appropriate takeoff selection. The FO shall verify that the indicated flap position corresponds to the configuration briefed by the PF. Depending upon the King Air model, flaps selection may be shown as a percentage of full (40%, 60%, 100%) or as a position (Approach, Down). The FO will announce the indicated flap value.

C LRNAV SET UP.....COMPLETE

When it is possible to do so, and particularly when an FMS or other LRNAV system is to be used for the flight, crews should load the required flight plan items prior to the boarding of passengers. Whether LRNAV systems are used or not, flight crews must insure that the correct navigation modes have been selected (i.e. HDG, NAV or RNAV, etc.). Pilots must pay particular attention to the DME selector to be sure that it is also in the desired position. The Captain verifies that the navigation information is correctly entered and that the proper NAV mode has been selected.

**C DEPARTURE
BRIEFING.....COMPLETE**

The Captain, as PIC, will respond to this challenge but **the departure briefing is actually given by the pilot who will be flying the leg.** There is no requirement for when the Departure Briefing is conducted; it may be conducted any time prior to and up to the completion of this Checklist. Flight Crews should conduct the briefing at a time that offers as few distractions as possible. The briefing will follow the acronym **WARTS** and cover the following subjects:

Wweather: The PF will discuss the terminal weather and how the weather affects takeoff and departure considerations. In the event of an emergency, pilots must consider the possibility of a RTB (return to base) and the limitations weather would then impose. If required due to weather, pilots will discuss the designation of a takeoff alternate.

Specific items include:

- Takeoff minimums
- Takeoff alternate
- Low visibility takeoff procedures
- Modification of noise abatement procedures, if applicable
- Discussion of wind and possible windshear, if applicable

Abnormals: The CA will establish guidelines for dealing with abnormal situations. General procedures can be modified by specific airport or departure requirements. Techniques and modification of abnormal procedures will be discussed by the PF and the PM.

Specific items include:

- Crew duties during a low and high speed rejected takeoff
- Terrain considerations and how they might be a factor in the event of an engine failure or a RTB.
- When flying multiple legs with the same crew, subsequent briefings need only include applicable differences or changes.

Runway: Condition of runway, and how it may affect performance.

Specific items include:

- Usable runway length
- Runway surface contamination, grooving, etc.
- Alternative runway options

Terrain: The immediate airport and departure environment. Mountains, hills or other obstacles that are or could become a factor for departing and arriving aircraft.

Specific items include:

- In consideration of terrain, most favorable runway, initial climb requirements/clean-up altitudes
- Transition altitude

- MVA, MOCA, and MEAs. In mountainous areas, one pilot must monitor flight progress with the appropriate LOW altitude enroute chart.
- Possible Threats for the planned operation (e.g.: MEL items, crew experience level, familiarity with departure procedures, etc.)
- Expected Taxi routing
- Threats: Identify the greatest threat(s) and a plan(s) to meet it (them) (e.g.”The weather is a threat. We’ll use our radar to avoid it.”)

Special Procedures: SIDS, ODP and Noise Abatement procedures. Any other special procedure required to ensure flight safety and passenger comfort.

Note: Even though he may not be the Pilot Flying, the Captain will acknowledge the completion of the Takeoff Briefing by responding “complete” to the checklist challenge.

TAXI

C&F FLIGHT INSTRUMENTS.....XCKD

Each pilot will scan his flight instruments to insure no flags are present and that RDMI and HSI heading cards agree.

**C&F
D ALTIMETERS.....SET ___/.XCK**

Each pilot shall verbally confirm their own and the other pilot’s correct altimeter setting. Altimeter reading should correspond to the ramp elevation where the aircraft is located. Field (ramp) elevation and aircraft altimeter readings should not differ by more than 75 feet. Pilot altimeter differences should be noted and continuously monitored. If the pilot altimeters differ by more than 150 feet, the Captain’s altimeter will be used for altitude selection (the FO may adjust his altimeter to match that of the Captain’s).

**C&F FLIGHT
CONTROLS.....CKD**

Both crewmembers will acknowledge free and proper movement of controls. Normally the FO will check the elevator and aileron controls and the Captain (because he/she is taxiing) will check the rudder.

**F ELECTRIC
TRIM.....CKD**

Check electric trim for proper function and recycle electric trim ON/OFF switch, if necessary. The electric trim switch on early model King Air aircraft will turn off each time power is removed from the generator busses and must be reset when power is reapplied. When performing an electrical trim check on early model

King Airs, the Captain's control wheel switch will cancel the FO's trim switch input. On later model King Airs, the Captain's trim switch will override the FO's trim switch input.

**F MANUAL PROP
FEATHER.....CKD**

This check is performed by the PIC shortly after engine start or on a straight portion of a taxiway, if the aircraft is underway. When circumstances allow, the propeller levers are pulled into the full feather detent.

Note: When performing this check, pilots **must** insure that the engine throttles are not in Beta.

**F PRESS
PANEL.....SET**

Verify the pressurization panel is correct for the assigned altitude contained in the ATC clearance. The pressurization selector should be set to the highest of the departure field elevation, the planned cruise altitude, or the destination field elevation.

BEFORE TAKEOFF

C&F NAV SOURCE.....SELECTED/SET

Flight and NAV instruments must be configured for the planned route of flight. Normal procedure is for the PF to set the primary navigation radio to his display and to have the other radios set as needed. Communication radios shall have the departure frequency preset on the second head of the no. 1 radio. The appropriate company or guard frequency (121.5) shall be tuned on the no. 2 radio. **Pilots must insure that the correct navigation modes have been selected and are correct for the 1) assigned departure runway 2) SID and 3) first navigation fix.**

C&F AIL/RUD/ELEV TRIM.....0/0 SET

The position of the trim control wheel must be in the green takeoff band and verified by both pilots.

C&F FLAPS..... SET

Both pilots will verify and verbally confirm that the wing flaps are in the desired position. (e.g. "Flaps 40%, set." Or "Flaps Approach, set." Or "Flaps Up, set.")

**C OVERSPEED/RUD
BOOST.....CKD/ARMED**

Captain’s response to this challenge acknowledges that a test was completed in accordance with the **first flight of the day** requirements and that the Rudder Boost switch is in the ARMED position. This test must be performed with the nose wheel aligned straight and the aircraft stationary.

- 1. Set parking brake.
- 2. Rudder Boost switch - ON.
- 3. Propeller controls - full forward.
- 4. Prop Test Switch - hold to PROP GOV TEST

Perform the following one engine at a time:

- 5. Advance throttle until the prop is stabilized in a range from 1830 to 1910 RPM (resets and tests overspeed gov.).
- 6. Continue to advance the throttle until rudder movement is detected.
- 7. Slowly reduce throttle to idle.
- 8. Release Prop Test Switch.

Note: When use of air conditioning is responsible for high N1 settings, prior to performing this test, select cabin blowers to Low or High and the Cabin Temp Mode to OFF. Then adjust the condition levers to low idle and perform the Rudder Boost test.

Note: Do not release the Prop Test Switch until the throttles have been moved to idle.

Upon completion of the test, readjust idle controls and reselect the appropriate Cabin Temp Mode (delay restoring the air conditioning if subsequently performing the Autofeather test).

**F BLEED AIR
SWITCHES.....CKD/OPEN**

While observing the pneumatic pressure gauges, the FO will select the left bleed valve to the INSTR & ENVIR OFF position. Observe normal pressure and suction. Next, select the right bleed to OFF. Observe zero pressure and suction indications. Note BLEED FAIL annunciator lights illuminate. Restore system by selecting the left bleed to the OPEN position and read normal pressure and suction. Next, select the right bleed to the OPEN position and observe that the bleed annunciator lights are extinguished.

C AUTOFEATHER.....CKD/ARMED

Captain’s response to this challenge acknowledges that a test was completed in accordance with the **first flight of the day** requirements and that the Autofeather

system switch is in the ARMED position. The Autofeather check is performed with the nose wheel aligned straight and the aircraft stationary.

1. Set parking brake.
2. Hold autofeather selector switch in the TEST position.
3. Advance both power levers to approximately 500 ft-lbs of torque. (Advance throttles as necessary until both AUTOFEATHER annunciators illuminate; the test bypasses the set screw that arms the respective engine system. Accordingly during the test, as each throttle advances, torque value arms the opposite system.)
4. Retard and restore power levers individually and observe the following indications for each side:
 - a. At approx. 400 ft-lbs., the opposite autofeather annunciator extinguishes.
 - b. At approx. 200 ft-lbs., propeller feathering cycles and corresponding annunciator light flashes.
5. Power levers - both retard.
6. Autofeather selector switch - ARM

Note: Some aircraft equipped with four blade props have high idle speeds and the props may not cycle to feather during the autofeather test. Engines idling at speeds greater than 60 % N1 may have a torque reading above the 200 ft-lb threshold required for auto feathering. When use of air conditioning is responsible for high N1 settings, prior to performing this test, switch cabin blowers to Low or High and select the Cabin Temp Mode to OFF. Adjust the condition levers to low idle before performing the test. Upon completion of the test, readjust idle controls and reselect the appropriate Cabin Temp Mode.

C&F ENGINE ANTI-ICE.....AS REQ

If engine anti-ice has been used for FOD protection and is not required for icing or FOD protection considerations, separators shall be retracted at this time.

Note: Check annunciator panel to verify engine anti-ice vane position.

F ANNUNCIATOR LIGHTS.....CKD

C TAKEOFF BRIEFINGCOMPLETE

The PF will brief the PM what to expect during the initial departure. The outline of this briefing will follow the acronym HAS.

Hheading: The initial heading or departure procedure. The procedure description shall include the **departure runway, name of the departure procedure** and the **name of the first fix of the departure**, as applicable (e.g. “We’re departing Runway 25R, on the CASTA 9, DOCKR first fix.”). The PF shall confirm the FD mode planning to be used (LNAV, NAV or Heading).

Altitude: The initial altitude assigned by ATC or required by a SID and any pertinent restrictions. Altitudes required for noise abatement should be reviewed at this time.

Speed: Speed restrictions required by conditions, ATC or departure procedure.

Note: MEL and other operational considerations/limitations affecting the departure should be included in this brief.

FINAL ITEMS

**F ENGINE
IGNITION.....ARMED**

The ignitors shall be selected to ARMED when cleared onto the runway. Like many items, the FO will verify that the switches have been selected by observing the Captain and by checking the annunciator panel.

**F EXTERIOR
LIGHTS.....SET**

When cleared for takeoff, all forward and strobe lights shall be selected ON. When cleared to Line Up and Wait, delay selecting Landing Lights until cleared for takeoff.

**F PITOT/WINDOW/STALL ANTI-
ICE.....ON**

This includes selecting Fuel Vent Heat ON.

**F
ET RADAR.....S**

Radar shall be set when weather conditions warrant. When required for weather avoidance during departure, the radar range should be set to no more than 20 or 25 NM and tilt should be adjusted to approximately 5 -8 degrees UP.

F RADIANT HEAT.....OFF

Recall that the Radiant Heat is neither monitored nor controlled by the Environmental System. Also, it is a high load item that should be OFF in the event of an engine or generator failure.

AFTER TAKEOFF

PM LANDING
GEAR.....UP

PM LANDING LTS.....OFF

Landing and Taxi lights will remain illuminated if left ON after gear retraction.

PM
FLAPS.....
UP

PM CLIMB
POWER.....SET

PM PROP
SYNC.....ON

Aircraft with the Type II propeller synchrophaser systems may operate their aircraft in all regimes with the prop sync in the ON position. Aircraft equipped with Type I systems must select the system to OFF for takeoff and landing.

PM YAW
DAMP.....ON

Use of the Yaw Damp should be delayed until climb power is set. Yaw Damp operation will restrict the Rudder Boost feature in the event an engine failure occurs shortly after takeoff.

CLIMB

PM CABIN SIGN.....AS
REQ

Cabin signs shall be left ON until reaching smooth air and/or climbing through 10,000 feet. Use of the cabin sign may be augmented by use of the cabin PA system. Passengers will obey sign instructions better when the sign is used thoughtfully.

PM
D PRESSURIZATION.....CK

The pressurization controller must be checked during the climb to insure proper operation. Adjustment of the rate controller may be required if the cabin pressurization schedule is out of variance.

**PM AFT
BLOWER.....OFF**

CLIMBING THRU TRANSITION ALTITUDE

C&F ALTIMETERS.....SET 29.92/XCKD
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Both baro altimeter bugs, if installed, shall now be set to the 12 o'clock (00) position.

**PM EXTERIOR
LIGHTS.....SET**

Lights are reset passing FL180. Recognition lights are selected OFF. For day operations, beacon and strobe lights shall remain ON. For night operations recognition lights shall be selected OFF; position lights, beacon, strobe and tail illumination lights, when installed, shall remain ON.

CRUISE

PM CRUISE POWER.....SET

**PM
FF AUTOFEATHER.....O**

DESCENT

PM T PRESSURIZATION.....SE

Destination field elevation shall be selected/verified. Adjust the cabin rate knob to meet the descent profile.

PM AUTOFEATHER.....ARMED

The Autofeather System annunciator lights may or may not illuminate, depending upon throttle position.

Note: When descending into warm, moist air from high altitude, window heat will be required for anti-fogging.
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DESCENDING THRU FL180

PM EXTERIOR LIGHTS.....AS
REQ

Whenever operating below 18,000 feet (regardless of transition altitude), all exterior lights shall be selected ON. This shall include position lights, recog, beacon, strobe and wing and tail illumination lights, if installed.

PM CABIN
SIGNS.....ON

At top of descent and/or no later than descending through the transition altitude, the FASTEN SEAT BELT sign shall be illuminated. A cabin PA should accompany illumination of this sign.

DESCENDING THROUGH TRANSITION FLIGHT LEVEL

C&F
ALTIMETERS.....SET ___XCK
D

Verify correct altimeter settings. When the transition altitude is other than 18,000 feet, delay resetting the altimeters until reaching the transition altitude; pilots shall then state, "Transition Altitude, Altimeters: SET _____XCKD."

APPROACH

PM APPROACH
BRIEFING.....COMPLETE

The approach briefing should be given prior to descent, if possible, as soon as the approach runway can be determined. The acronym that covers briefing items is NATS.

Notams: Published or ATIS notams pertinent to the airport or specific approach or runway must be covered.

Approach: Type approach to be flown. This should include information about the STAR and transition to the approach. For instrument approaches, the briefing shall include approach plate number, approach type, runway, frequencies, course, altitudes, MDA/DA, speed, terrain, **missed approach procedure**, runway length, approach lighting system, wx minimums, notes, etc.). When a VFR approach is anticipated and an ILS also serves the landing runway, the PF shall tune the ILS as a backup for the visual approach. Pilots will review the airport page for information about lighting systems, visual guidance systems, runway length, surface treatment, and planned runway exit.

Terrain: Relevant terrain considerations must be discussed with particular attention given MSAs and significant obstacles. Possible Threats (e.g. weather, MEL restrictions, familiarity with approach/arrival, crew experience level, etc. and the plan to offset each threat). Planned Taxi route.

Special Procedures: Special airport procedures must be discussed. This will include any company, noise abatement or airport procedures.

Note: MEL and other operational considerations/limitations should be included in this brief.

Note: Pilots shall brief the missed approach procedure for every approach (e.g. “If we execute a Missed Approach, I will select Go Around, advance the throttles and follow the pitch guidance. I’ll call flaps UP and after you verify a positive ROC, I’ll call for gear UP.”) When this is included in the approach briefing, crews are better prepared and more likely to correctly execute the maneuver should it become necessary. **When either pilot calls for a Missed Approach or Go Around, IT MUST BE EXECUTED.**

C&F NAV SOURCE.....SELECTED/SET

After a review of the planned approach, navigation radios, FMS, GPS, radio altimeters, DME and barometric altimeter bugs, if installed, shall be set for the approach. When a VFR or visual approach is anticipated, underlying instrument approach nav aids shall be tuned to provide supplemental navigation information to the flight crew. Whenever a visual approach to a runway that has an ILS is conducted, pilots shall tune and display the ILS for that runway. Whether or not GPS is used for an approach, **pilots must verify that their LRNAV/GPS controls are correctly configured for the intended approach.**

Both altimeter bugs, if installed, must be set to the DA for an instrument approach and to either the approach DA or airport elevation for visual approaches. Radio altimeter bugs are not required for any CAT I approach and may be set to the HAA or some other value meaningful to the flight crew. (One technique is to add 100’ to the DA HAA value and to use that as an RA “approaching minimums” alert.) The most current altimeter settings will be given by the tower, approach control and ATIS in that order.

C&F
ALTIMETERS....._/XCK
D

PM CABIN
PREPARATION.....COMPLETE

It is important that passengers be notified of the approach and landing. Passengers must be seated with seat belts on, tables stowed and seat backs placed in the vertical position.

BEFORE LANDING

C&F LANDING GEAR.....DN/3 GREEN
--

Landing gear handle warning lights are out, three green position lights illuminated.

PM LANDING LIGHTS.....ON

All aircraft lights shall be used to enhance illumination.

PM PROP SYNC.....AS REQ

Aircraft equipped with the Type II propeller syncrophaser may leave the selector ON. Aircraft equipped with the Type I propeller synchrophaser shall select the prop sync to OFF.

PM YAW DAMP.....OFF

C&F T FLAPS.....SE

Note: Aircraft must be in landing configuration with landing flaps position selected no later than 1000' AFE.

AFTER LANDING

F AUTO IGNITION.....OFF

F ENGINE ANTI-ICE.....AS REQ

In addition to use in icing considerations, temperature permitting, ice vanes should be used for FOD prevention during all ground operations.

F AUTOFEATHER.....**OF**

F

F EXTERIOR LIGHTS.....**AS**
REQ

F PITOT/WINDOW/STALL ANTI-
ICE.....**OFF**

F RADAR, RADIOS,
XPNDR.....**SET**

F BLEED AIR VALVES.....**AS**
REQ

Bleed air is required for aircraft heating, but when ambient weather conditions permit, may be selected to ENVIR OFF for improved cabin cooling and engine idle temperatures during taxi.

F

F FLAPS.....
UP

F TRIM TABS.....**0/0** **SET**
0/0/3

Reset aileron and rudder trim tabs to zero and the stab trim to the middle of the green band.

SHUTDOWN

F PARKING BRAKE.....**AS**
REQ

The aircraft parking brake should be set until the aircraft is chocked and ground personnel have given the flight crew the appropriate visual indication. At that time, the brake may be released. If no ground personnel are available to chock the aircraft, the brakes should be set until a set of chocks can be located. No aircraft should be left with the wheels un-chocked.

F AVIONICS/INVERTER(if installed)/EFIS
SWS.....**OFF**

F FURNISHINGS.....**OFF**

Select both the forward panel and upper Mapco switches to OFF.

**F ENVIRONMENTAL
PANEL.....SET**

In some instances, flight crews may wish to leave the cabin fan on LOW to circulate air while passengers deplane.

**F CABIN
SIGN.....OFF**

**F CONDITION
LEVERS.....CUTOFF**

Pilots must monitor engine parameters to insure a proper engine shutdown. In particular, ITT must be monitored during shutdown. If sustained combustion is observed, proceed immediately to the ENGINE CLEARING procedure. During shutdown, ensure that the compressors decelerate freely. Do not close the fuel firewall shutoff valves for normal engine shutdown. **It is desirable to operate the engines at idle for three minutes or more prior to shutdown. The engines will be operated at idle for no less than 1 minute prior to shutdown.**

**F
PROPELLERS.....FEATHER**

It is desirable for flight crews to allow the engines to wait until N1 is less than 10% before pulling the prop controls into feather. This will allow residual prop thrust to dissipate engine heat and smoke away from the engine.

**F CURRENT
LIMITERS.....CKD**

Check left and right bus voltage to ensure current limiters are intact. Failure to read a battery voltage on an individual bus indicates a possible current limiter failure.

**F EXTERIOR
LIGHTS.....OFF**

**F INTERIOR
LIGHTS.....SET**

If operating at night, consideration should be given to leaving cabin lighting on DIM or BRIGHT to facilitate egress.

**F OXYGEN
VALVE.....OFF**

Failure to close this valve may result over time in a loss of oxygen system pressure.

F BATTERY/GENERATOR
SWS.....OFF

TERMINATION

F CONTROL
LOCKS.....INSTALLED

Flight crews must install control locks whenever the aircraft is left outside. Rudder locks should not be installed unless high winds are expected and there is no possibility that the aircraft will be towed.

F PARKING BRAKE.....AS
REQ

Parking brakes may be released only when the aircraft is properly chocked.

F CABIN
WINDOWS.....BRIGHT

Passenger windows must be rotated so that the polarizing panes are as light as possible. This will prevent excessive heat build-up, deformation and darkening of the plastic.

F BAGGAGE COMP/ENTRY
LTS.....OFF

Recall that the baggage compartment and cabin entry lights are powered by the battery hot bus.

F EXTERNAL
COVERS.....INSTALLED

Whenever the aircraft is left outside for long periods during the day or overnight, engine covers and prop-stoppers shall be installed.

F TIE
DOWN/CHOCKS.....INSTALLED

If available, tiedowns should be used.

F **AIRCRAFT.....SECUR**
E

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