TAB BB

Government Documents and Regulations

From: [redacted] LtCol 78 ABW/JA [redacted] @robins.af.mil]
Sent: Friday, June 02, 2006 3:09 PM
To: DeLange Stephen P Maj AMC/JAAM
Cc: Walker Judith A Maj 78 ABW/JA
Subject: RE: AIB request

Major [redacted]

We have reviewed the request from the Accident Investigation Board for the 3 Apr 06 C-5B Mishap, at Dover AFB DE. The AIB requests permission for the use of technical excerpts out of T.O. 1C-5A-1 Tech order. The request was approved by the Technical Content Flight Manual Manager, 730th ACSSS/LTET, Robins AFB. We concur with release, and find no information that would have any adverse effect to the United States or the Air Force.

POC here at Robins AFB is Mr. [redacted], C5/141 TOMA, DSN 497-7164.

V/R

[redacted], LT COL, USAF

Staff Judge Advocate, 78th ABW

Chapter 5

OPERATIONAL PROCEDURES

5.1. Checklists. A checklist is not complete until all items have been accomplished. Momentary hesitations for coordination items, ATC interruptions and deviations specified in the flight manual, etc., are authorized. Notes amplifying checklist procedures or limitations may be added to the checklists. Currency of notes is a crewmember's responsibility and may be evaluated.

5.1.1. Checklist Inserts. MAJCOM Stan/Evals shall approve the use of checklist inserts IAW AFI 11-215. For AMC and AMC-gained units, AMC/A37V is the checklist insert approval authority. The inserts should be placed at the end of the appropriate checklist or in an in-flight guide. All checklist inserts must have a POC. OGVs shall approve local in-flight guides and inserts not affecting T.O. guidance and procedures.

5.1.2. Abbreviated checklist items that do not apply to the unit's aircraft or mission may be lined out.

5.1.3. Emergency checklists. Either pilot may be required to accomplish an emergency checklist from either seat. The pilot accomplishing the checklist must ensure compliance with all checklist items regardless of which crew position (P, CP) is designated to respond.

5.2. Duty Station. Both pilots shall be in their seats during flight. One of the pilots may be out of their seat for brief periods (approximately 15 minutes) to meet physiological needs. With both pilots in their seats, PICs may authorize rest periods for one pilot occupying a primary duty station during non-critical phases of flight (the other pilot will be awake and alert). Only one pilot, or the flight engineer, may be absent from their duty station at a time. When additional aircrew personnel are on board, the observer's seat should be occupied, preferably by a C-5 qualified pilot if available, to assist the crew in avoiding other aircraft during ground operations, takeoffs, departures, penetrations, approaches and landings. Crewmembers will notify the pilot prior to departing assigned primary duty stations.

5.2.1. On augmented missions when two or more ARs are scheduled and the crew contains more than one AR qualified AC, an AR AC, not necessarily the PIC must be in the seat during air refueling operations.

5.3. Flight Station Entry. PICs may authorize passengers and observers access to the flight station during all phases of flight; the total number of persons permitted is limited to the number of seats with operable seat belts and oxygen. Passengers and observers will not be permitted access to primary crew positions.

5.3.1. The PIC may release seats for passenger accommodation in the flight station, relief crew compartment, or courier compartment. A maximum of 20 crewmembers and passengers are authorized seating on the flight deck, subject to oxygen and life vest availability. Consider crew size and duration of flight before releasing seats.

5.3.1.1. When only two loadmasters are on the crew and both are required in the troop compartment, the PIC will designate a C-5 qualified crew member to ensure the safety of passengers on the flight deck. The designated crewmember will not be part of the primary crew, will brief passengers IAW T.O. 1C-5A-1, and will log other time.

C-5 APPROACH BRIEFING

(Multiple approaches may be briefed by exception)

1. **Type Approach:**
   a. Type Approach / Page
   b. DH/MDA & Weather required
   c. Inbound Course / FAF altitude
   d. Step down fix
   e. Landing Runway
   f. TCN / NOTAMS

2. **Landing Considerations:**
   a. Forecast weather
   b. Configuration
   c. Runway length
   d. Landing distance
   e. Latest touchdown

3. **Missed Approach / Climbout Intentions**

4. **Significant Terrain Features:**
   a. Obstacles and Terrain in the Area
   b. Minimum / Emergency Safe Altitudes
   c. Transition Altitude / Level

5. **ACFT Gross Weight / Command Markers / Radar Altimeter Settings**

6. **Use of Anti-Ice**

7. **FMS CDUs / FSAS / MCDU / INS / TCAS / WX Radar Setup**

8. **Navigation / Communication Radio Setup**

9. **Notify Compartments to Prepare for Descent** (Discuss On/Offload Reqmts, Customs Reqmts, Compartment Cleanup, Local WX & Time as Required)

ENGINE OUT	PARTIAL FLAP
Checklist Completed	Landing Distance
Declare Emergency	Approach Airspeed
Fuel Dump?	Tire Limit Speed
Trim and Reversing Requirements	Category E Approach Mins?
Approach Airspeed	X Wind – Spoiler Ratio Shifters?
2/3 engine ceilings	Toggle FSAS
Hydraulic Losses & ATM	Inhibit GPWS

PILOTS	FLIGHT ENGINEER	SCANNER
The local station altimeter setting (QNH) will normally be set when clearance to descend below the transition level is received.		
WARNING The altimeters shall be set to local station pressure (QNH) prior to or when descending through the transition level.		
8. Deleted.	12. Deleted.	
8A. EGPWS - "AS REQUIRED" (CP) Ensure that the EGPWS is operating in the appropriate mode (normal or tactical) with desired inhibits (glideslope or flaps) by observing the NAV display, the CWA display, or by checking the EGPWS MCDU page (accessed from the SYSTEM MENU).	12A. EGPWS - "AS REQUIRED" (CP)	
9. CWAs and Warning Lights - "CHECKED" (CP,P)	12B. CWAs and Warning Lights - "CHECKED" (CP,P)	

APPROACH.

All except the following is contained in TO 1C-5A-1:

PILOTS	FLIGHT ENGINEER	SCANNER
2. Crew Briefing - "COMPLETED" (PF) A complete briefing shall be given prior to each full stop landing and the first of each series of touch-and-go landings. Prior to approach, select appropriate heading source on the PFDs.	2. Crew Briefing - "COMPLETED" (PF)	

See 1- 4S-11, Change (CP) to (PNF)

TO 1C-5A-1-4

PILOTS	FLIGHT ENGINEER	SCANNER
2A. Minimums and FPA - "SET" (CP,P) (PNF) Set barometric and radar altitude minimums, and flight path angle.	2A. Minimums and FPA - "SET" (CP,P) (PNF)	
3A. EGPWS - "AS REQUIRED" (CP) (PNF) Ensure that the EGPWS is operating in the appropriate mode (normal or tactical) with desired inhibits (glideslope or flaps) by observing the NAV display, the CWA display, or by checking the EGPWS MCDU page (accessed from the SYSTEM MENU).	3A. EGPWS - "AS REQUIRED" (CP) (PNF)	
5. Deleted.	5. Deleted.	
7. Deleted.	7. Deleted.	

BEFORE LANDING.

All except the following is contained in TO 1C-5A-1:

PILOTS	FLIGHT ENGINEER	SCANNER
3. EGPWS - "AS REQUIRED" (CP) (PNF) Ensure that the EGPWS is operating in the appropriate mode (normal or tactical) with desired inhibits (glideslope or flaps) by observing the NAV display, the CWA display, or by checking the EGPWS MCDU page (accessed from the SYSTEM MENU).	3. EGPWS - "SET" (CP) 5. Deleted. "AS REQUIRED" (PNF)	

See 1-4S-11, Change to Read

CRUISE.

PILOTS	FLIGHT ENGINEER	SCANNER
	1A. FE Engine Display - SELECTED The FE Engine Display should be displayed during cruise, however other formats may be displayed for brief periods.	

DESCENT.

All except the following is contained in TO 1C-5A-1:

Enroute descent and descent to initial penetration altitude is accomplished by retarding throttles with the landing gear up, flaps up, and thrust reversers retracted and descending at speeds within the speed envelope limit. Below 10,000 feet, maintain 250 knots or less, unless otherwise directed. The FMS VNAV descent mode can be programmed and engaged to provide an enroute descent profile.

The landing data is entered into the FMS to display the landing speed markers on the MFDUs.

The pilot not flying should obtain the station altimeter, weather, winds, temperature, pressure altitude, and runway conditions from Metro, tower, or the controlling agency prior to arrival over the destination. The flight engineer shall compute the landing data based upon the anticipated landing weight and the weather information.

Forecast data may be used to compute landing data; however, prior to landing, this data shall be confirmed and TOLD card updated as required. The crew briefing may be completed prior to descent check.

WARNING

Maintain airspeed above the speed indicated by the minimum maneuvering speed indicator (yellow barber pole) on the PFD for all configurations. If the minimum maneuvering speed indicator is not displayed, the minimum airspeed with the flaps up shall be 100 percent flaps approach speed plus 60 KCAS. When gross weight precludes compliance, slow to flap/slat airspeed limit immediately prior to lowering the flaps.

NOTE

The speed indicated by the minimum maneuvering speed indicator accounts for any variations in stall speed that may occur during maneuvering. Maintaining 5 to 10 knots above the yellow band during level flight normally provides enough margin to keep speed above the yellow band during turns at bank angles up to 30 degrees. Momentary excursions into the yellow band have no appreciable affect on stall margins. However, sustained flight at speeds well below minimum maneuvering speed (approximately 10 knots) will significantly reduce stall margins in turbulent or gusty conditions.

NOTE

Should an engine fail to accelerate properly from idle following unequal power operation, closing the pylon bleed valve should allow the engine to accelerate normally. After the engine has accelerated to the required speed, open the pylon bleed valve.

PILOTS	FLIGHT ENGINEER	SCANNER
1. TOLD - "LOADED AND CHECKED" (CP,P) This step may be accomplished prior to this checklist. a. INIT REF Key - PRESS b. LANDING Prompt (L6) - SELECT c. Enter TOLD data. d. Select the desired approach speed (R1 - R4) and the speed bug display mode (L6). Check that critical airspeed markers are displayed on the PFDs.	1. TOLD - "LOADED AND CHECKED" (CP,P) 1A. FE Engine Display - SELECTED The FE Engine Display will remain displayed until after engine shutdown unless otherwise directed by the pilot.	
1A. Crew Briefing - "COMPLETED" (PF) The pilot briefing should include the following as applicable: a. Type of approach b. Decision height (DH), minimum descent altitude (MDA), ceiling, and visibility requirements/runway visual range (RVR) c. Landing considerations (1) Non standard factors (2) Configuration (3) Landing distance (4) Runway length (5) Latest touchdown point (6) Options and actions if a long landing occurs	1B. Crew Briefing - "COMPLETED" (PF)	

PILOTS	FLIGHT ENGINEER	SCANNER
d. Missed approach intentions		
e. Navigation and communication radios		
f. Significant terrain features		
g. Command markers and minimums For instrument approaches, minimums shall be set on decision height (DH)/ minimum descent altitude (MDA) for the type approach being accomplished. Verify the accuracy of the critical airspeed markers: V_{APP}, and V_{GA}. The command airspeed and command altitude markers shall be set at the discretion of the pilot for the type approach being accomplished.		
h. Alert compartments to prepare for descent If icing conditions are expected during descent or approach, the pilot shall brief on the use of anti-ice systems.		
1B. Minimums and FPA - "SET" (CP,P) Set barometric and radar altitude minimums, and flight path angle appropriately for arrival.		1C. Minimums and FPA - "SET" (CP,P)
* 7. Altimeters - "STATE SETTING AND ALTIMETER READING" (CP,P)		* 11. Altimeters - "STATE SETTING AND ALTIMETER READING" (CP,P)