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*Flying Operations*

**EC-130E/H--AIRCREW EVALUATION  
CRITERIA**



**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes evaluation criteria for initial and periodic aircrew qualification in the EC-130E ABCCC and EC-130H COMPASS CALL aircraft. This volume does not apply to the Air National Guard (ANG) or Air Force Reserve Command (AFRC). It is used in conjunction with AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, and MAJCOM supplements thereto. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. See paragraph 1.5. of this volume for guidance on submitting comments and suggesting improvements to this publication.

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## Chapter 1

### GENERAL INFORMATION

**1.1. General.** This volume provides flight examiners and aircrews with procedures and evaluation criteria/tolerances to be used during both flight and ground phases of initial and periodic evaluations. All EC-130E/H evaluations will be conducted according to this volume and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, as supplemented. Specific areas for evaluation are prescribed to ensure an accurate assessment of the proficiency and capabilities of aircrews. Flight examiners use this AFI when conducting aircrew evaluations. Instructors use this AFI when preparing aircrews for qualification.

**1.2. Applicability.** This volume is applicable to all individuals performing crew duties on EC-130E ABCCC or EC-130H Compass Call aircraft.

#### 1.3. Key Words and Definitions:

- 1.3.1. "Will" and "Shall" indicate a mandatory requirement.
- 1.3.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.
- 1.3.3. "May" indicates an acceptable or suggested means of accomplishment.
- 1.3.4. "Note" indicates operating procedures, techniques, etc., considered essential to emphasize.

**1.4. Waivers.** Waiver authority for the contents of this document is ACC/DO. Forward waiver requests to HQ ACC/DOT through 355 OG/OGV and 12 AF/OV. Courtesy copies of all waiver requests will be sent to ACC/DOZ or ACC/DOY.

**1.5. Recommended Changes.** Submit recommendations for changes to this volume on AF Form 847, Recommendation for Change of Publication, IAW AFI 11-215, Flight Manuals Program, to ACC/DOTV, through 355 OG/OGV and 12 AF/OV, for review. ACC/DOTV address is 205 Dodd Blvd, Suite 101, Langley AFB VA 23665-2789.

#### 1.6. Procedures:

- 1.6.1. Flight examiners will use the criteria contained in this volume for conducting all flight, simulator, and emergency procedures evaluations. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.
- 1.6.2. Unless specified, the examinee or flight examiner may fly in any seat that will best enable the examiner to conduct a thorough evaluation.
- 1.6.3. Flight examiners will brief the examinee on the conduct, purpose, and requirements of the evaluation, as well as all applicable evaluation criteria, prior to flight. The examinee will accomplish all required mission planning. If mission planning is accomplished by an Operations Planning Team (OPT) or Deployment Planning Team (DPT), the examinee is ultimately responsible for the accuracy and completeness of all mission-planning paperwork. Flight examiners will be furnished a copy of necessary charts, flight logs, mission folders, and any additional items they deem necessary.

1.6.4. Flight examiners will not intentionally fail any equipment during flight evaluations, but may deny the use of systems not affecting safety of flight.

1.6.5. Under no circumstances will a pilot or flight engineer flight examiner allow the aircraft to slow to below one engine inoperative air minimum control speed ( $V_{mca}$ ), regardless of airspeed tolerances listed for specific areas.

1.6.6. The flight examiner will thoroughly debrief/critique all aspects of the flight. During the critique, the flight examiner will review the examinee's overall rating, specific deviations, area/sub area grades assigned, and any additional training required.

1.6.7. When grading criteria specify that airspeed will be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed for that area, the examinee will brief the desired airspeed, if applicable.

### 1.7. Grading Instructions:

1.7.1. The grading system for most areas in this volume is a three-level system (Q/Q-/U). Areas identified as "Critical" in [Table 2.1.](#) through [Table 2.9.](#) have a two-level system (Q/U).

A critical area is defined as an area or event in which unsatisfactory performance by the examinee could result in loss of life or damage to equipment. If the examinee receives a U in any critical area, assign an overall Qualification Level 3 (Q-3).

1.7.2. Required areas are indicated with an "R" in [Table 2.1.](#) through [Table 2.9.](#) for specific evaluations. All required areas must be evaluated. Flight examiners may evaluate any other areas observed, at their discretion.

1.7.2.1. When it is impossible to evaluate a required area in the aircraft due to equipment malfunctions, operational requirements, scheduling restrictions, or weather, that area may be evaluated by an alternate method (simulator, procedural trainer, or verbal examination) unless otherwise noted. If, in the flight examiner's judgment, a required item cannot be adequately evaluated by an alternate method, complete the evaluation on an additional flight.

1.7.2.2. If an alternate method is used to complete the evaluation, the reason why required area(s) were not evaluated in flight and the alternate method of evaluation used will be documented in the Additional Comments portion of the AF Form 8, **Certificate of Aircrew Qualification.**

1.7.3. The flight examiner will compare the examinee's performance for each area with the standards provided in this volume and assign an appropriate grade for the area. Derive the overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW AFI 11-202V2 and this volume.

1.7.3.1. To the maximum extent possible, flight examiners will use the grading criteria in this volume to determine individual area grades. Exercise judgment when the wording of areas is subjective and when specific areas are not covered.

1.7.3.2. Flight examiner judgment will be the determining factor in arriving at the overall grade.

### 1.8. Additional Training:

1.8.1. Flight examiners are responsible for assigning additional training, at their discretion. Document additional training and completion IAW AFI 11-202V2, as supplemented. Any approved training device or medium may be used for additional training.

1.8.2. Additional training may be accomplished on the same flight as the evaluation, when unique situations present valuable training opportunities (i.e., crosswind landings). However, this option requires flight examiner discretion and judicious application. The examinee must be informed when the additional training begins and ends.

### **1.9. Unsatisfactory Performance:**

1.9.1. Rechecks may be accomplished on the ground or in flight, at the discretion of the flight examiner. Rechecks will normally be administered by a flight examiner other than the one who administered the original evaluation.

1.9.2. If the flight examiner observes an aircrew counterpart jeopardizing safe flight, the examiner will assume the duties of that aircrew member. This does not mean the examiner must assume the examinee's position any time unsatisfactory performance is observed. If the examiner feels the examinee can continue safely with supervision, the examiner is not required to assume the examinee's duties. However, if the flight examiner assumes the examinee's duties, assign a Qualification Level 3 (Q-3) as the overall grade.

1.9.3. Evaluators must report deviations/discrepancies from established procedures/directives in any area, regardless of the individual's crew specialty, to OGV for evaluation and necessary action. If the deviation/discrepancy is found to warrant overall Q-3, AF Form 8 documentation, annotate SPOT in the Flight Phase block. The Chief of OGV will sign as the flight examiner. If an evaluator is flying as an instructor or basic crewmember and deviations are observed, report deviations to the appropriate supervisor for action (no AF Form 8 required).

**1.10. Emergency Procedures Evaluation (EPE).** Conduct EPEs as a ground-phase requisite to all flight evaluations. The EPE will include areas commensurate with the examinee's qualification and Ready Aircrew Program (RAP) training level. Publish specifics for these evaluations in the unit supplement to AFI 11-202V2. **NOTE:** The term "EPE" is considered synonymous with "ground eval."

1.10.1. Do not conduct EPEs in flight or immediately before a flight evaluation. Evaluators may ask questions at any time, but must use judgment so as not to interfere with the examinee's performance. Mission Crew and Battle Staff evaluators may conduct EPEs in flight, during cruise or other periods when the examinee is not performing their primary duties. Grade simulated emergency procedures conducted in flight under area 13, and do not consider them part of the EPE.

1.10.2. Flight examiners may conduct EPEs verbally, in a simulator, or by another method determined by the examiner or unit stan/eval. Flight examiners determine EPE content and individual EPE areas. Units should develop EPE guides for flight examiner use.

1.10.2.1. EPEs should be scenario driven, and tailored to the specific crew position. Emphasize emergency procedures and systems knowledge, related to the situation. Flight examiners may use one continuous scenario throughout the EPE or different scenarios for each emergency procedure. For mission evaluations, evaluate mission-specific equipment and situations.

1.10.2.2. Examinees may use publications that are normally available in-flight. The examinee must recite all Bold Face items from memory and should provide the initial steps of emergency procedures that, in the opinion of the examiner, would not allow time for reference.

1.10.3. Pilot and flight engineer EPEs will include a minimum of two emergency procedures per phase of flight (ground operations, takeoff, en route, approach/landing), Bold Face Procedures, take-off and landing data (TOLD) definitions/calculations, and unusual attitude recoveries (pilots/copilots only).

1.10.4. Pilot and FE EPEs should cover a cross section of aircraft systems such as bleed air, fuel/oil, electrical, engines, avionics, hydraulics, Self Contained Navigation Systems/Inertial Navigation System (SCNS/INS) (if applicable), and propellers. Examinees should be able to demonstrate an understanding of aircraft systems beyond the actual steps required for an emergency procedure.

1.10.5. Navigator, AMT, Mission Crew, and Battle Staff EPEs will include sufficient in flight and ground emergencies to evaluate the examinee's knowledge of systems and procedures to the flight examiner's satisfaction.

1.10.6. Tailor mission evaluation scenarios to unit tasking and include areas not normally evaluated in flight, such as defensive systems operation (if applicable), threat interpretation, and evasive action (pilot/navigator mission evaluations only).

1.10.7. Place examinees receiving overall EPE unqualified grades in supervised status until recommended additional training and re-evaluation are successfully accomplished. Examinees receiving an overall unqualified grade because of an unsatisfactory Bold Face Procedure will not be permitted to fly in their aircrew position until a successful re-evaluation is accomplished. For EPEs graded as qualified with additional training, the examiner will indicate whether to accomplish the additional training before the flight evaluation. Accomplish additional training and re-evaluation IAW AFI 11-202V2, as supplemented.

1.10.8. The following grading criteria will be used to grade individual items on EPEs for all crew positions (except Bold Face--see paragraph 1.7.2.2.):

1.10.8.1. Q-1. Satisfactory systems/procedural knowledge. Operated within prescribed limits and correctly diagnosed problems. Performed and/or explained proper corrective action, in the proper sequence, for each type of malfunction. Accomplished all required checklists and/or effectively used available aids. Thoroughly described the location, use and limitations of emergency equipment.

1.10.8.2. Q-2. Marginal systems/procedural knowledge. Slow to analyze problems or apply proper corrective actions. Did not effectively use checklist and/or available aids. Minor omissions or deviations in describing the location, use and limitations of emergency equipment.

1.10.8.3. Q-3. Unsatisfactory systems/procedural knowledge. Unable to analyze problem or take corrective action. Failed to accomplish required checklists and/or unable to locate information in available aids. Major omissions or deviations in describing the location, use and limitations of emergency equipment.

**1.11. Examinations.** Conduct requisite examinations IAW AFI 11-202V2, as supplemented.

1.11.1. Open book examinations will consist of at least 50 questions. Derive the questions from flight manuals and governing AFI's and command directives. Units may publish a list of question references in the unit supplement to this volume.

1.11.2. Closed book examinations will consist of two parts. One is a general knowledge written test with at least 25 questions; the other is the written Bold Face exam (if applicable).

1.11.3. Pilots and navigators will take an instrument examination. The classroom instruction portion of the IRC will be accomplished in the eligibility period, prior to taking the instrument exam.

## Chapter 2

### EVALUATION REQUIREMENTS

#### 2.1. General:

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2, as supplemented, and this volume. **Table 2.1.** through **Table 2.9.** depict grading areas for all evaluations. Before the Aircraft Commander Briefing, the flight examiner will brief the examinee on specific evaluation areas and, if applicable, will inform the aircraft commander of any special requirements. Use criteria in the appropriate crew position chapter for evaluations.

2.1.2. In accordance with AFI 11-290, *Cockpit/Crew Resource Management*, Crew Resource Management (CRM) skills will be evaluated during initial and recurring evaluations. CRM skills are integral to all phases of flight; therefore no specific area titled CRM exists. CRM skills are evaluated either as separate areas or as part of an existing area that includes a particular skill. Document discrepancies in the appropriate area(s). Enter comments on the AF Form 8 only if discrepancies are noted.

2.1.3. In accordance with AFI 11-202V2, compliance with National Airspace System (NAS) rules and procedures will be evaluated during initial and recurring evaluations. Document discrepancies in Area 5, Area 6, or Area 9, as appropriate. Enter comments on the AF Form 8 only if discrepancies are noted. Document procedures for annual review of Military Training Routes in the Unit Supplement to AFI 11-202V2.

**2.2. Requirements.** This volume requires completion only of those evaluations specified in this chapter or a combination thereof. Special qualifications (i.e., Functional Check Flight) do not require initial or recurring evaluations; annotate these qualifications on the letter of certification.

2.2.1. Administer aircrew evaluations on any flight that, as scheduled, will accomplish all required items for that evaluation. Mission evaluations should be as realistic as possible with a minimum of simulated events. Do not deviate from peacetime restrictions.

2.2.1.1. Pilot Instrument/Qualification evaluations should include approaches to airfields other than home station or deployed locations, if possible.

**2.3. Currency of Flight Publications.** Evaluate all required in-flight publications, including checklists, for currency and accuracy on all flight evaluations. Required publications are specified in AFI 11-2EC-130E-H, Volume 3.

**2.4. Formal Course Evaluations.** Fly syllabus evaluations IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. All required areas must be evaluated for the type of eval being flown, IAW guidance in this volume. Grade training objectives and related areas using the performance criteria in this volume. Formal course guidelines may be modified, based on local operating considerations or examiner judgment, to complete the evaluation.

**2.5. Instructor Evaluations.** Conduct instructor evaluations IAW AFI 11-202V2, as supplemented, and **Chapter 3** of this volume. Thoroughly evaluate the examinee's instructor knowledge and ability.

**2.6. Evaluation Requirements Tables.** **Table 2.1.** through **Table 2.9.** depict grading areas for specific crew position evaluations. Unless otherwise noted, all areas apply to EC-130E ABCCC and EC-130H Compass Call (all blocks)

**Table 2.1. General Grading Areas (All Crew Positions and All Evaluations).**

	Note	Grading Areas	
1		Safety - CRITICAL	R
2		Aircrew Discipline - CRITICAL	R
3		Airmanship/Situational Awareness - CRITICAL	R
4		Crew Coordination	R
5		Flight/Mission Planning	R
6		Knowledge of Directives	R
7		Preflight	R
8		Use of Checklist	R
9		Forms/Reports/Logs	R
10		Personal/Professional Equipment/Flight Publications	R
11	1	Emergency Equipment/Procedures	R
12	2	Briefings/Debriefings	R
13	3	Communications/Operations Security	R
14-20		Reserved for future use	
<b>Notes:</b>			
1. Grade if observed. Not required if evaluated as part of the EPE.			
2. Required for all crew positions responsible for presenting briefings/debriefings.			
3. Required for mission evaluations only.			

**Table 2.2. Instructor Evaluation Grading Areas (All Crew Positions).**

	Notes	Grading Areas	
21		Mission Preparation	R
22		Instructional Ability	R
23		Instructor Knowledge	R
24		Briefings/Debriefings/Critique	R
25		Demonstration of Maneuvers/Procedures	R
26-30		Reserved for future use	

**Table 2.3. Pilot/Copilot Grading Areas.**

	Notes	Grading Areas	INSTM/QUAL	MSN
31		Pre-Takeoff		
32		Takeoff	R	R
33		Departure	R	R
34		En route Navigation	R	R
35		Comm/IFF/SIF	R	R
36		Descent	R	
37		Air Refueling/Receiver	R	
38		Defensive Systems/Tactics		R
39		Threat Avoidance		R
40		Holding/Procedure Turn	R	
41		Arrival Procedures (Instrument Flight Rules)	R	
42		Non-Precision Approach	R	
43		Circling/Side-Step Approach	R	
44	2	Precision Approach	R	
45		VFR Procedures/Patterns	R	
46	1	Tactical Recovery		
47	1	Engine-Out Approach	R	
48		100/50 Percent Flap Landing	R	R
49	1	No Flap Landing	R	
50	1	Engine-Out Landing		
51	1	Touch-and-Go Landing	R	
52		Missed Approach/Go-Around	R	
53	1	Engine-Out Go-Around	R	
54		After Landing/Engine Shutdown		
55	1	Reverse Taxi		
55 - 70		Reserved for future use		

**Notes:**

1. Aircraft commanders/instructors only.
2. Both a PAR and an ILS must be evaluated in the aircraft if equipment and facilities are available. However, if facilities or equipment are not available, the flight evaluation may be completed as long as one precision approach is flown.

**Table 2.4. Navigator Grading Areas.**

	Notes	Grading Areas	QUAL	MSN
71		Flight Plan/Charts	R	R
72		Fuel Planning	R	R
73		Departure	R	R
74		Navigation Procedures	R	R
75		Radio Navigation	R	
76		Radar Navigation	R	
77		Navigation Systems	R	
78		Deviation Check	R	
79	1	True Airspeed (TAS) Check	R	
80		Dead Reckoning (DR)/Rating Of Nav Computers	R	
81	2	Celestial Navigation	R	
82		Course and Estimated Time of Arrival (ETA) Tolerance	R	
83		Fuel Management/Range Control	R	
84		Defensive Systems/Tactics		R
85		Threat Analysis/Avoidance		R
86		Orbit Procedures		R
87		Air Refueling Procedures	R	
88		Descent/Approach/Landing	R	R
89		Comm Procedures	R	R
90		Airborne Radar Approach		
91 – 110		Reserved for future use.		

**Notes:**

1. Not required during altitude changes related to air refueling.
2. 43 ECS only.

**Table 2.5. Flight Engineer Grading Areas.**

	Notes	Grading Areas	MSN/QUAL
111		AFTO Form 781	R
112		Ground Support Equipment	R
113		Refuel/Defuel	
114		TOLD	R
115		Cockpit	R
116		Before Starting Engines/Starting Engines	R
117		Before Taxi/Taxi	R
118		Before Takeoff/Lineup	R
119		After Takeoff	R
120		En route	R
121		Descent/Before Landing	R
122		After Landing	R
123		Engine Shutdown	R
124		Before Leaving Airplane	R
125		Postflight	R
126	1	Mission Procedures	R
127		Air Refueling Systems/Procedures	R
128		Weight and Balance	R
129 - 140		Reserved for future use	R
<b>Note:</b>			
1. Not required on Qualification evaluations.			

**Table 2.6. Airborne Maintenance Technician (AMT)/Scanner Grading Areas.**

	Notes	Grading Areas	A	B	C
141	1,2,3	Pre-Takeoff	R	R	R
142	1,2,3	After Takeoff/Climb	R	R	R
143	1,2,3	Level Off/Cruise/En route	R	R	R
144	1,2,3	Aircraft Systems	R	R	R
145	1,3	Air Refueling	R	R	R
146	1,2,3	Communications	R	R	R
147	1,2	In-flight Maintenance	R	R	R
148	1,2,3	System Shutdown/Descent	R	R	R
149	1,2,3	Before Landing	R	R	R
150	1,2,3	After Landing/Engine Shutdown	R	R	R
151	1,2,3	Debriefing	R	R	R
152	2	Tactical Battle Management Subsystems	R		
153	2	Communications Distribution Group (CDG) Subsystem	R		
154	2	Airborne Maintenance Technician Console	R		
155	2	Radio Communications Subsystem	R		
156	2	Secure Voice (Crypto) Systems	R		
157	2	JTIDS	R		
158	2	SINCGARS	R		
159	2, 3	Environmental (ECU) Subsystem	R		
160	2, 3	Life Support Subsystem	R		
161	2, 3	Electrical Power Subsystem	R		
162		Broadcast Intelligence Equipment	R		
163		TTY Systems	R		
164	2	Trouble Analysis/Corrective Action		R	R
165	2,3	Mission Termination		R	R
166	2	RF Distribution System		R	R
167	2	Acquisition Subsystem		R	R
168	2	Computer Subsystem		R	R
169	2	Analysis Subsystem		R	R
170	2	Exciter Subsystem		R	R
171	2	Power Amplifier Subsystem		R	R
172	2	DF Subsystem		R	R
173	2	Integrated Workstation Subsystem		R	
174	2	High Band Systems		R	R

	Notes	Grading Areas	A	B	C
175	2	Special System Antennas			R
176	2	Tech Station Subsystem			R
177	2	Human-Machine Interface			R
178	2	Tactical Information Broadcast System			R
179		Passenger Handling			
180 - 190		Reserved for future use			
<b>Applicability:</b>		<b>Notes:</b>			
A. EC-130E (ABCCC)		1. Required for Qual Evaluations			
B. EC-130H (CC)		2. Required for Mission Evaluations			
C. EC-130H (CC Block 30)		3. Required for Scanner Evaluations			

**Table 2.7. ABCCC Airborne Communication System Operator (ACSO) Grading Areas.**

	Notes	Grading Areas	
191		Pre-Takeoff	R
192		En route Procedures	R
193		HF/Liaison Equipment	R
194		UHF, HAVE QUICK, and SATCOM Equipment	R
195		VHF Equipment	R
196		Tape Recorder System and Communications Distribution Group	R
197		Cryptologic Devices	
198		Teletype Equipment	R
199		In-flight Maintenance	R
200		Aircraft Knowledge	R
201		Descent/Landing	R
202		Post Flight	R
203		Broadcast Intelligence Equipment	R
204 - 210		Reserved for future use	

**Table 2.8. ABCCC Battle Staff Grading Areas.**

	Notes	Grading Areas	A	B	C	D	E	F
211		Pre-Takeoff	R	R	R	R	R	R
212		Systems Knowledge and Operations	R	R	R	R	R	R
213		Communications	R	R	R	R	R	R
214		Monitor Tactical Situation	R	R	R	R	R	R
215		Allocation/Use of Air Resources	R	R	R			
216		Orbit Changeover	R	R	R	R	R	R
217		Assumption/Delegation of AOC/ASOC Combat Ops Functions	R	R	R	R	R	R
218		Battle Staff Supervision	R	R				
219		Targeting Considerations	R	R		R	R	R
220		Before Landing	R	R	R	R	R	R
221		Post Flight	R	R	R	R	R	R
222		Broadcast Intelligence Equipment				R	R	
223 - 230		Reserved for future use						

**Applicability:**

- A. Director Airborne Battle Staff (DABS)
- B. Battle Staff Operations Officer (BSOO)
- C. Airborne Strike Controller (ASC)
- D. Airborne Intelligence Officer (AIO)
- E. Airborne Intelligence Technician (AIT)
- F. Airborne Close Air Support Coordinator (ACASCO)

**Table 2.9. COMPASS CALL Mission Crew Grading Areas.**

	Notes	Grading Areas	A	B	C	D	E
231		Mission Crew Planning	R	R	R	R	R
232		Communications Equipment	R	R			
233		System Setup	R	R	R	R	R
234		Mission Equipment System Knowledge/Operation	R	R	R	R	R
235		Tactical Employment	R			R	
236		Target/Threat Knowledge	R	R	R	R	R
237		Jamming Ops/Antenna Orientation/Timing	R			R	
238		Allocation/Use of Jamming/Radiate Resources	R			R	
239		Tactical Situation Monitoring	R	R		R	
240		Signal Environment Analysis		R	R		R
241		Mission Crew Supervision	R	R			
242		Communication	R	R			
243		Post Engagement	R	R	R	R	R
244		Mission Equipment System Malfunction Analysis	R	R	R	R	R
245		Post Flight	R	R	R	R	R
246		Debriefing	R	R			

**Applicability:**

- A. Mission Crew Commander
- B. Mission Crew Supervisor
- C. Acquisition Operator
- D. High Band Operator
- E. Analysis Operator

## Chapter 3

### ALL EVALUATIONS

**3.1. General.** The general and instructor grading criteria contained in this chapter apply to all crew positions and all evaluations.

**3.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform required duties safely and effectively, including the operation of appropriate aircraft systems, in accordance with applicable technical orders, instructions, and directives.

**3.3. Requirements.** Evaluate all crewmembers on areas listed in [Table 2.1.](#), and instructors on areas listed in [Table 2.2.](#)

#### **3.4. General Grading Criteria:**

##### **3.4.1. Area 1. Safety - (CRITICAL):**

3.4.1.1. Q. Was aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment. Identified and assessed risk appropriately. Properly considered consequences of decisions.

3.4.1.2. U. Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Failed to properly identify and assess risk. Failed to consider consequences of decisions. Operated the aircraft in a dangerous manner.

##### **3.4.2. Area 2. Aircrew Discipline - (CRITICAL):**

3.4.2.1. Q. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.4.2.2. U. Failed to exhibit strict flight and crew discipline. Violated or ignored rules or instructions.

##### **3.4.3. Area 3. Airmanship/Situational Awareness - (CRITICAL):**

3.4.3.1. Q. Executed the assigned mission in a timely, efficient manner. Anticipated situations which would have adversely affected the mission, and corrected them. Made appropriate decisions based on available information. Recognized a loss in situational awareness in self or others, and took appropriate action to regain.

3.4.3.2. U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that the mission or safety was compromised. Failed to recognize a loss of situational awareness in self or others.

##### **3.4.4. Area 4--Crew Coordination:**

3.4.4.1. Q. Effectively coordinated with other crewmembers during all phases of the mission. Crewmember identified, planned, and executed alternative mission activity in response to in-flight contingencies in a timely manner. Communicated in a clear and effective manner. Asked for or gave constructive feedback as necessary. Actively sought other crewmember opinions and ideas.

Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources, ensuring smooth mission execution.

3.4.4.2. Q-. Crew coordination was the minimum acceptable. Coordination was lacking with other crewmembers to the extent minor deviations or omissions caused delays, confusion, and/or crew situational awareness. Unclear communication led to repetition or misunderstanding. Slow to ask for or give constructive feedback. Crewmember was slow to identify, plan, or execute alternative mission activities in response to contingencies. Poor task prioritization and inefficient use of available resources resulted in less than optimum mission execution. Slow to recognize and request assistance when task-saturated.

3.4.4.3. U. Severe breakdown in coordination with other crewmembers precluded mission accomplishment and/or jeopardized safety. Crew coordination was lacking to the extent the mission accomplishment was severely degraded. Failed to participate in crew decisions or withheld information which would have corrected an unsafe situation. Failed to communicate effectively. Continuously interrupted others, mumbled, and/or conduct/attitude was detrimental to communication among crewmembers. Withheld information and failed to ask for/respond to constructive criticism. Failed to prioritize multiple tasks and did not use available resources at his/her disposal to manage workload.

#### **3.4.5. Area 5. Flight/Mission Planning:**

3.4.5.1. Q. Checked all factors applicable to flight such as FLIP, weather, Notice To Airman System (NOTAMS), alternate airfields, flight logs, performance data, fuel requirements, and charts. When required, extracted necessary information from air tasking order/frag. Aware of the available alternatives if unable to complete the flight/mission as planned. Read and initialed all items in the Flight Crew Information File (FCIF)/Read Files. Prepared at briefing time.

3.4.5.2. Q-. Minor errors or omissions detracted from mission effectiveness, but did not affect mission accomplishment. Limited knowledge of performance capabilities or approved operating procedures/rules.

3.4.5.3. U. Major errors or omissions would have prevented a safe or effective mission. Unsatisfactory knowledge of operating data or procedures. Did not review or initial Go/No Go items. Not prepared at briefing time.

#### **3.4.6. Area 6. Knowledge of Directives:**

3.4.6.1. Q. Prepared and completed mission in compliance with existing instructions and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.

3.4.6.2. Q-. Minor deviations to established procedures. Unsure of some directives and/or had difficulty locating some information in appropriate publications. Any instances of non-compliance did not jeopardize safety.

3.4.6.3. U. Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

#### **3.4.7. Area 7. Preflight:**

3.4.7.1. Q. Completed all systems preflight/inspections IAW tech orders, checklists, and instructions. Individual technique complied with established procedures.

3.4.7.2. Q-. Minor deviations from established systems pre-flight/inspection. Individual technique was safe, but detracted from established procedures.

3.4.7.3. U. Failed to preflight critical component or could not conduct a satisfactory preflight/inspection. Individual techniques unsafe and/or in violation of established procedures.

#### **3.4.8. Area 8. Use of Checklist:**

3.4.8.1. Q. Consistently used the correct checklist and gave the correct response at the appropriate time throughout the mission.

3.4.8.2. Q-. Checklist responses were untimely and/or crewmember required continual prompting for correct responses.

3.4.8.3. U. Used incorrect checklist or consistently omitted checklist items. Was unable to identify the correct checklist to use for a given situation. Omitted or did not complete checklist(s) at the appropriate time.

#### **3.4.9. Area 9. Forms/Reports/Logs:**

3.4.9.1. Q. All required forms and/or flight plans were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (Intel, Weather, Maintenance, etc.).

3.4.9.2. Q-. Minor errors on forms and/or flight plans did not affect conduct of the flight/mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.

3.4.9.3. U. Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

#### **3.4.10. Area 10. Personal/Professional Equipment/Flight Publications:**

3.4.10.1. Q. Had all required personal and professional equipment. Displayed thorough knowledge of the care and use of such equipment and the contents of required publications. Required equipment inspections were current. Publications were current, contained all supplements/changes and were properly posted.

3.4.10.2. Q-. Did not have all required personal/professional equipment or had limited knowledge of the use or the content of required publications. Publications contained deficiencies that would not impact flight safety or mission accomplishment.

3.4.10.3. U. Did not have required personal/professional equipment essential for the mission. Unsatisfactory knowledge of the care and use of equipment or the content of required publications. Required equipment inspections were overdue or equipment was unserviceable. Publications were out dated and/or contained deficiencies that would impact flight safety or mission accomplishment.

#### **3.4.11. Area 11. Emergency Equipment/Procedures.**

3.4.11.1. Q. Satisfactory systems/procedural knowledge. Displayed thorough knowledge of location and use of emergency equipment. Operated within prescribed limits and correctly diagnosed

problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available aids.

3.4.11.2. Q-. Marginal systems/procedural knowledge. Limited knowledge of location and use of emergency equipment. Operated within prescribed limits but was slow to analyze problems or apply proper corrective actions. Did not effectively use, omitted, or deviated in use of checklist and/or available aids.

3.4.11.3. U. Unsatisfactory systems/procedural knowledge. Displayed unsatisfactory knowledge of emergency equipment. Exceeded flight manual limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

#### **3.4.12. Area 12. Briefings/Debriefings:**

3.4.12.1. Q. Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and professionally presented in a logical sequence. Covered all pertinent items. Established objectives for the mission. Presented all training events and special interest items. Effectively used available briefing aids. Concluded briefing to allow crew transport on time. Debrief recapped key points, provided constructive feedback in a non-threatening manner, and provided appropriate corrective actions

3.4.12.2. Q-. Allowed omission of items pertinent but not critical to the mission. Events out of sequence, hard to follow, some unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Limited discussion of training events or special interest items. Dwelled on non-essential items. Not fully prepared for briefing. Debrief covered key points, but lacked detail, constructive feedback, and/or corrective actions.

3.4.12.3. U. Failed to conduct required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence; redundant throughout. Presented erroneous information that would affect safe/effective mission accomplishment. Presentation created doubts or confusion. Failed to discuss training events or special interest items. Late crew transport due to excessively long briefing. Debrief rushed, feedback provided was vague, threatening, and/or incomplete. Placed blame and/or provided inappropriate corrective actions.

#### **3.4.13. Area 13. Communications/Operations Security (Required for mission evaluations only):**

3.4.13.1. Q. Demonstrated thorough knowledge of communications/operations security procedures and courier procedures (if applicable). Had positive control of classified documents and information used throughout the mission. Properly stored, handled, and/or destroyed all classified equipment or information generated during the mission. Practiced sound COMSEC/OPSEC during all phases of the mission.

3.4.13.2. Q-. Limited knowledge of COMSEC/OPSEC procedures and/or courier procedures (if applicable). Limited knowledge of proper storage, handling, and destruction procedures would not have resulted in compromise of classified material, and did not impact mission accomplishment.

3.4.13.3. U. Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents or information would have been compromised as a result of improper control by examinee. Unfamiliarity with COMSEC/OPSEC procedures had or could have had a negative impact on mission accomplishment.

**3.4.14. Area 14 - 20. Reserved for future use.****3.5. Instructor Grading Criteria:****3.5.1. Area 21. Mission Preparation:**

3.5.1.1. Q. Thoroughly reviewed student's training folder. Ascertained student's present level of training. Assisted student in pre-mission planning and allowed student time for questions. Correctly prioritized training events. Gave student a clear idea of mission training objectives.

3.5.1.2. Q-. Did not thoroughly review student's training folder or correctly ascertain student's present level of training. Caused student to hurry pre-mission planning. Poorly prioritized training events. Training plan/scenario made poor use of time.

3.5.1.3. U. Did not review student's training folder. Did not ascertain student's present level of training. Did not assist student with pre-mission planning or did not allow time for questions. Did not prioritize training events. Failed to give student a clear idea of mission training objectives, methods, and sequence of events.

**3.5.2. Area 22. Instructional Ability:**

3.5.2.1. Q. Demonstrated excellent instructor ability. Provided appropriate guidance when necessary. Planned ahead, and instruction was accurate, effective, and timely. Identified and corrected potentially unsafe maneuvers/situations.

3.5.2.2. Q-. Problems in communication or analysis degraded effectiveness of instruction.

3.5.2.3. U. Unable to effectively communicate or provide timely feedback to the student. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe maneuvers/situations in a timely manner. Made no attempt to instruct.

**3.5.3. Area 23. Instructor Knowledge:**

3.5.3.1. Q. Demonstrated a high level of knowledge of all applicable aircraft systems, techniques, procedures, missions, and tactics to be performed. Possessed a high level of knowledge of all applicable publications and procedures, and understood how to apply both to enhance mission accomplishment. Completed appropriate training records accurately. Comments were clear and pertinent.

3.5.3.2. Q-. Minor errors/deficiencies in knowledge of above areas did not affect safety or adversely affect student progress. Minor errors or omissions in training records. Comments were incomplete or slightly unclear.

3.5.3.3. U. Lack of knowledge of publications or procedures seriously detracted from instructor effectiveness. Could not apply knowledge of above areas. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

**3.5.4. Area 24. Briefings/Debriefings/Critique:**

3.5.4.1. Q. Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Showed an excellent ability during the critique to reconstruct the flight, offer mission analysis, and provide guidance where appropri-

ate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.

3.5.4.2. Q-. Minor errors or omissions in briefings and/or critique did not affect safety or adversely affect student progress.

3.5.4.3. U. Briefings were marginal or non-existent; major errors or omissions in briefings/debriefings. Did not review student past performance. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

**3.5.5. Area 25. Demonstration of Maneuvers/Procedures:**

3.5.5.1. Q. Effectively demonstrated procedures and techniques. Provided concise, meaningful, and timely in flight commentary

3.5.5.2. Q-. Performed required maneuvers/procedures with minor deviations from prescribed parameters. In flight commentary was sometimes unclear or poorly timed, interfering with student performance. Discrepancies in the above areas did not adversely affect safety or student progress.

3.5.5.3. U. Was unable to properly perform required maneuvers/procedures. Made major procedural errors. Did not provide in flight commentary and/or in flight commentary was incorrect or unsafe.

**3.5.6. Areas 26 - 30. Reserved for future use.**

## Chapter 4

## PILOT/COPILOT EVALUATIONS

**4.1. General.** The criteria contained here and in [Chapter 3](#) apply to all pilot/copilot flight evaluations. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches.

**Table 4.1. General Criteria.**

<b>Q</b>	Altitude	+/- 200 feet
	Airspeed	+/- 5% (but not less than Vmca)
	Course	+/- 5 degrees/3 NM (whichever is greater)
	TACAN Arc	+/- 2 NM
<b>Q-</b>	Altitude	+/- 300 feet
	Airspeed	+/- 10% (but not less than Vmca)
	Course	+/- 10 degrees/5 NM (whichever is greater)
	TACAN Arc	+/- 3 NM
<b>U</b>		Exceeded Q- limits

**4.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform all pilot/copilot duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, directives and published procedures.

**4.3. Requirements:**

4.3.1. Instrument/Qualification. See [Table 2.3](#). for required evaluation areas. Instrument evaluations may not be conducted separately from qualification evaluations. Do not complete an instrument/qualification evaluation unless, as a minimum, the following are observed in flight: an instrument takeoff; one full low or high altitude instrument approach procedure (IAP); one precision approach; one non-precision approach; one landing. **NOTE:** One of the approaches must be simulated engine out (aircraft commanders and above).

4.3.1.1. Initial/Re-qualification Evaluations. C-130 basic initial/re-qualification, aircraft commander upgrade, and instructor upgrade are conducted at Little Rock AFB and update the eligibility for instrument/qualification evaluations, except as noted in paragraph [2.5](#). of this instruction.

4.3.1.2. Air Refueling/Receiver Qualification. Applies to all EC-130 pilots/copilots. For initial/re-qualification, complete air refueling certification IAW ACC-approved syllabi. Initial certification will be annotated in training records and letter of X's. Following initial/re-qualification, evaluate this area on instrument/qualification evaluations. Copilots will be evaluated while maintaining pre-contact position.

4.3.2. Mission. See [Table 2.3](#). for required evaluation areas. All mission evaluations require a COMPASS CALL or ABCCC mission profile with at least two turns in the mission orbit. Do not simulate the mission crew/Battle Staff. Instrument/qualification evaluations may be completed on the same

sortie as mission evaluations if the flight profile allows completion of all required areas for both evaluations.

**4.4. Grading Criteria.** See [Table 2.3](#) for applicability to instrument/qualification or mission evaluations.

**4.4.1. Areas 1 through 20--use criteria in Chapter 3 of this volume.**

**4.4.2. Areas 21 through 30--use criteria in Chapter 3 of this volume (if applicable).**

**4.4.3. Area 31. Pre-Takeoff:**

4.4.3.1. Q. Established and adhered to station, start engine, taxi, and take-off times to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight.

4.4.3.2. Q-. Same as above except for minor procedural deviations that did not detract from mission effectiveness.

4.4.3.3. U. Failed to accurately determine readiness of aircraft for flight. Major deviations in procedure which would preclude safe mission accomplishment. Crew errors directly contributed to a late takeoff that degraded the mission or made it ineffective.

**4.4.4. Area 32. Takeoff:**

4.4.4.1. Q. Maintained smooth, positive aircraft control throughout takeoff. Performed takeoff in accordance with flight and performance manual procedures.

4.4.4.2. Q-. Minor deviations from published procedures which did not affect safety of flight. Control was somewhat rough or erratic. Hesitant in application of procedures or corrections.

4.4.4.3. U. Takeoff was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight and/or performance manual procedures.

**4.4.5. Area 33. Departure:**

4.4.5.1. Q. Performed departure as published/directed and complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly. Demonstrated smooth, positive aircraft control.

4.4.5.2. Q-. Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.

4.4.5.3. U. Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

**4.4.6. Area 34. En Route Navigation:**

4.4.6.1. Q. Satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured nav aids were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace. Fix to fix within 3 NM (if applicable).

4.4.6.2. Q-. Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring nav aids were observed. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course. Fix to fix within 5 NM (if applicable).

4.4.6.3. U. Major errors in procedures/use of navigation equipment. Did not ensure nav aids were tuned, identified and monitored. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded Q- criteria.

#### **4.4.7. Area 35. Comm/IFF/SIF:**

4.4.7.1. Q. Complete knowledge of and compliance with correct Comm/IFF/SIF procedures. Transmissions were concise with proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with all communications security requirements, HAVE QUICK and secure voice equipment. Correctly authenticated.

4.4.7.2. Q-. Occasional deviations from procedures which required retransmissions or resetting codes. Slow in initiating and/or missed several required radio calls. Transmissions contained extraneous matter, were not in proper sequence, or used non-standard terminology. Displayed limited knowledge of communication security requirements, HAVE QUICK and secure voice equipment. Required numerous attempts to complete authentication.

4.4.7.3. U. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment. Was unable to properly authenticate.

#### **4.4.8. Area 36. Descent:**

4.4.8.1. Q. Performed descent as directed. Complied with all restrictions. Properly set altimeters and tuned, identified, and monitored all nav aids.

4.4.8.2. Q-. Performed descent as directed with minor deviations that did not compromise mission safety. Slow to comply with controller instructions, set proper altimeter setting. Delayed tuning, identifying, or monitoring proper nav aids. Slow to make corrections.

4.4.8.3. U. Performed descent with major deviations Failed to follow controller instructions. Failed to tune, identify, or monitor nav aids or set altimeters properly. Erratic corrections were observed.

#### **4.4.9. Area 37. Air Refueling/Receiver (Copilots will be evaluated while maintaining pre-contact position only)**

4.4.9.1. Q. Rendezvous effectively accomplished using proper procedures. Demonstrated effective/appropriate use of radio communications for briefed EMCON level. Expeditiously established and maintained proper position. Aircraft control was positive and smooth. Maintained the contact position for 10 minutes (at least 5 minutes continuous) with no more than one pilot-induced disconnect. For copilots, maintained the precontact position for at least two minutes.

4.4.9.2. Q-. Rendezvous delayed by improper techniques, procedures or radio communications. Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published/directed pro-

cedures with deviations or omissions that did not affect the successful completion of air refueling. Maintained the contact position for at least 10 minutes with no more than two pilot-induced disconnects.

4.4.9.3. U. Displayed lack of knowledge or familiarity with procedures to the extent that air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Spent excessive time in trail. Aircraft control in the pre-contact/refueling position was erratic or unsafe. Made deviations or omissions that affected flight safety and/or the successful completion of the air refueling. Used unacceptable procedures. Performance caused more than two pilot-induced disconnects and/or delayed mission accomplishment). For copilots, unable to safely maintain the precontact position.

#### **4.4.10. Area 38. Defensive Systems/Tactics:**

4.4.10.1. Q. Demonstrated satisfactory knowledge of defensive systems/tactics. Applied appropriate tactics to avoid the threat and minimize exposure. Made timely and appropriate inputs to crew during mission.

4.4.10.2. Q-. Minor errors in threat analysis or tactics selection. Was unfamiliar with the appropriate tactic for a given scenario. Did not make timely inputs to crew during mission.

4.4.10.3. U. Knowledge of defensive systems was unsatisfactory. Major errors in threat analysis or tactics selection would have resulted in an unsuccessful mission.

#### **4.4.11. Area 39. Threat Analysis/Avoidance:**

4.4.11.1. Q. Able to plot threats in-flight and formulate a plan of action to avoid lethal range of given threat system. Executed the proper evasive maneuver in a timely manner when given an immediate threat. Adequately analyzed and degraded all threats ensuring effective mission accomplishment. Was aware of appropriate tactics to avoid threats and exposure.

4.4.11.2. Q-. Made minor errors in plotting and avoiding the lethal range of a given threat system. Slow to execute the proper evasive maneuver. Minor errors in threat analysis or tactics selection.

4.4.11.3. U. Was unable to plot a given threat. Did not avoid lethal range of given threat system. Did not execute an effective evasive maneuver when given an immediate threat. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Was not aware of appropriate tactics for specific threats or terrain.

#### **4.4.12. Area 40. Holding/Procedure Turn:**

4.4.12.1. Q. Performed entry and holding in accordance with published procedures and directives. Tuned, identified, and monitored proper nav aids. Holding pattern limits exceeded by not more than:

4.4.12.1.1. VOR Leg timing +/- 15 seconds

4.4.12.1.2. TACAN +/- 2 NM

4.4.12.2. Q-. Performed entry and holding procedures with minor deviations. Delayed tuning, identifying, or monitoring proper nav aids. Holding pattern limit exceeded by not more than:

4.4.12.2.1. VOR Leg timing +/- 20 seconds

4.4.12.2.2. TACAN +/- 3 NM

4.4.12.3. U. Holding was not in accordance with technical orders, directives, or published procedures. Failed to tune, identify, or monitor nav aids. Exceeded Q- holding pattern limits.

#### **4.4.13. Area 41. Arrival Procedures (Instrument Flight Rules):**

##### **4.4.13.1. Subarea 41a. Instrument Approach Procedure/Penetration (Initial Approach Fix to Final Approach Fix/Descent Point):**

**NOTE:** Use area 35 criteria and the criteria below for procedure turn approaches.

4.4.13.1.1. Q. Performed the approach procedure/penetration as published/directed and IAW applicable directives. Tuned, identified, and monitored proper nav aids at the appropriate time. Complied with all restrictions. Made smooth and timely corrections.

4.4.13.1.2. Q-. Performed the approach procedure/penetration with minor deviations. Delayed tuning, identifying, and monitoring proper nav aids. Complied with all restrictions. Slow to make corrections.

4.4.13.1.3. U. Performed the approach procedure/penetration with major deviations. Failed to tune, identify, and monitor nav aids, resulting in major deviations and/or unsafe conditions. Erratic corrections. Failed to comply with restrictions.

##### **4.4.13.2. Subarea 41b. Instrument Pattern/Radar Vectors to Final:**

4.4.13.2.1. Q. Performed procedures IAW applicable directives. Smooth and timely response to controller instructions.

4.4.13.2.2. Q-. Performed procedures with minor deviations. Slow to respond to controller instructions.

4.4.13.2.3. U. Performed procedures with major deviations/erratic corrections. Failed to comply with controller instructions.

#### **4.4.14. Area 42. Non-Precision Approach:**

4.4.14.1. Q. Approach was IAW published procedures. Used appropriate descent rate to arrive at Minimum Decision Altitude (MDA) at or before Visual Descent Point (VDP). Position permitted a safe landing.

4.4.14.1.1. Airspeed	+10/-5 knots
4.4.14.1.2. Heading	+/-5 degrees (ASR)
4.4.14.1.3. Course	+/-5 degrees at MAP
4.4.14.1.4. Localizer	Less than one dot deflection
4.4.14.1.5. MDA	+100/-0 feet

4.4.14.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Initiated missed approach/go-around as directed or appropriate.

4.4.14.2.1. Airspeed	+15/-5 knots
4.4.14.2.2. Heading	+/-10 degrees (ASR)
4.4.14.2.3. Course	+/-10 degrees at MAP
4.4.14.2.4. Localizer	Within two dots deflection

4.4.14.2.5. MDA +150/-50 feet

4.4.14.3. U. Approach not IAW flight manual, directives or published procedures. Maintained steady-state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from approach and did not initiate missed approach/go-around when appropriate or directed. Exceeded Q- criteria.

#### **4.4.15. Area 43. Circling/Side-Step Approach:**

4.4.15.1. Q. Properly identified aircraft category for the approach and remained within the lateral limits for that category. Complied with controller's instructions. Attained runway alignment without excessive bank angles. Did not descend from the MDA until in a position to place the aircraft on a normal glide path or execute a normal landing.

4.4.15.1.1. Airspeed +10/-5 knots

4.4.15.1.2. Altitude +100/-0 feet

4.4.15.2. Q-. Slow to comply with controller's instructions. Attained runway alignment but occasionally required excessive bank angles or maneuvering.

4.4.15.2.1. Airspeed +15/-5 knots

4.4.15.2.2. Altitude +150/-50 feet

4.4.15.3. U. Did not properly identify aircraft category or exceeded the lateral limits of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Descended from the MDA before the aircraft was in position for a normal glide path or landing. Exceeded Q- criteria.

#### **4.4.16. Area 44. Precision Approach:**

##### **4.4.16.1. Subarea 44a. Precision Approach Radar (PAR)**

4.4.16.1.1. Q. Approach was IAW published procedures. Smooth and timely response to azimuth and glide slope or controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.

4.4.16.1.1.1. Airspeed +10/-5 knots

4.4.16.1.1.2. Heading Within 5 degrees of controller instructions.

4.4.16.1.2. Q-. Performed approach with minor deviations. Slow to make corrections or react to controller's instructions. Position permitted a safe landing. Improper glide path control. Initiated missed approach as directed or at decision height +50/-0 feet, if applicable.

4.4.16.1.2.1. Airspeed +15/-5 knots

4.4.16.1.2.2. Heading Within 10 degrees of controller's instructions.

4.4.16.1.3. U. Approach not IAW flight manual, directives or published procedures. Erratic course and glide slope corrections. Did not make corrections or react to controller's instructions. Did not comply with decision height and/or position would not have permitted a safe landing. Exceeded Q- limits.

##### **4.4.16.2. Subarea 44b. Instrument Landing System (ILS) Approach:**

4.4.16.2.1. Q. Performed procedures as published and IAW applicable directives. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position permitted a safe landing.

4.4.16.2.1.1. Airspeed +10/-5 KIAS

4.4.16.2.1.2. Glide slope/azimuth within one dot

4.4.16.2.2. Q-. Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Position would have permitted a safe landing. Initiated missed approach at decision height +50/-0 feet, if applicable.

4.4.16.2.2.1. Airspeed +15/-5 KIAS

4.4.16.2.2.2. Glide slope within one dot low/two dots high

4.4.16.2.2.3. Azimuth within two dots

4.4.16.2.3. U. Performed procedures with major deviations. Erratic course/glide slope corrections. Did not comply with decision height or position would not have permitted a safe landing. Exceeded Q- criteria.

#### **4.4.17. Area 45. VFR Procedures/Patterns:**

4.4.17.1. Q. Adhered to published restrictions/local guidance. Performed traffic pattern and turn to final/final approach IAW flight manual procedures. Aircraft control was smooth and positive. Did not over/under-shoot final approach. Constantly cleared area of intended flight.

4.4.17.1.1. Airspeed +10/-5 knots

4.4.17.1.2. Pattern Altitude +/- 100 feet

4.4.17.2. Q-. Minor deviations from published restrictions/local guidance. Performed traffic pattern and turn to final/final approach with minor deviations to procedures. Aircraft control was safe but not consistently smooth and positive. Over/under-shot final approach slightly but was able to intercept a normal glide path. Adequately cleared area of intended flight.

4.4.17.2.1. Airspeed +15/-5 knots

4.4.17.2.2. Pattern Altitude +/- 200 feet

4.4.17.3. U. Major/unsafe deviations from published restrictions/local guidance. Did not perform traffic pattern and turn to final/final approach IAW technical orders, directives or published procedures. Displayed erratic aircraft control. Over/under-shot final approach by a wide margin requiring a go-around or potentially unsafe maneuvering on final. Did not clear area of intended flight. Exceeded Q- criteria.

#### **4.4.18. Area 46. Tactical Recovery:**

4.4.18.1. Q. Followed procedures as briefed and IAW flight manual, directives, or published procedures. Displayed smooth, positive control throughout the recovery. Aircraft was in position to intercept glide path for normal landing. Gave proper consideration to threat location and adjusted pattern accordingly. Constantly cleared area of intended flight.

4.4.18.2. Q-. Performed recovery with minor deviations to published procedures. Aircraft control was not consistently positive and smooth. Over/under-shot final approach slightly but was able to intercept glide path for normal landing.

4.4.18.3. U. Recovery not performed IAW flight manual, directives or published procedures. Displayed erratic aircraft control. Over/under-shot final approach, requiring a go-around or potentially unsafe maneuvering to intercept final. Failed to consider threat location or proximity and/or maneuvering could have placed the aircraft within lethal range of given threat system. Did not clear area of intended flight.

**4.4.19. Area 47. Engine Out Approach--use approach criteria for the type of approach being flown and the following:**

4.4.19.1. Q. Performed procedures IAW the flight manual and associated directives. Individual technique complied with established procedures. Proper control inputs were used to correct asymmetric condition. Aircraft was properly trimmed. Proper consideration was given to maneuvering with regard to the "dead" engine.

4.4.19.2. Q-. Minor deviations in procedures/aircraft control allowed the aircraft to occasionally be in uncoordinated flight. Unnecessary maneuvering due to minor errors in planning or judgment.

4.4.19.3. U. Major/unsafe deviations from procedures. Individual technique unsafe or in violation of established procedures. Aircraft was not properly trimmed. Aircraft control was erratic and consistently resulted in uncoordinated flight. Maneuvering with regard to the "dead" engine was potentially unsafe.

**4.4.20. Area 48. 100/50 Percent Flap Landing.**

**4.4.21. Area 49. No Flap Landing.**

**4.4.22. Area 50. Engine-Out Landing.**

**4.4.23. Areas 48 through 50 - use the following criteria:**

**NOTE:** The following criteria is written to generally apply to all landings. Flight examiners must apply this criteria judiciously to allow for the unique characteristics of each type of landing. Where runway configuration, arresting cable placement, or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glide slope from either the decision height or from a point where visual acquisition of the runway environment is made.

4.4.23.1. Q. Performed landing as published/directed. Crossed threshold at threshold speed +/- 5 knots at proper attitude. Smooth and positive aircraft control throughout the roundout and flare. Touched down with no crab, and not more than 15 feet left or right of centerline. Complied with flight manual procedures for the use of brakes and reverse thrust. Met the following criteria:

4.4.23.1.1. Touchdown Speed +/-5 knots

4.4.23.1.2. Touchdown Point: 150' to 1000' from the actual/simulated runway threshold

4.4.23.2. Q-. Performed landing with minor deviations to procedures as published/directed. Crossed threshold at threshold speed +10/-5 knots slightly high or low but no compromise of

safety. Touched down not more than 25 feet left or right of centerline. Exceeded Q criteria but not the following:

4.4.23.2.1. Touchdown Speed +10/-5 knots

4.4.23.2.2. Touchdown Point: 0' - 150' or 1001' - 2000' from the actual/simulated runway threshold

4.4.23.3. U. Landing not performed as published/directed. Crossed threshold excessively high or low and more than +10/-5 knots. Touched down excessively crabbed and more than 25 feet left or right of centerline. Failed to comply with flight manual procedures for the use of brakes and reverse thrust. Exceeded Q- criteria.

**4.4.24. Area 51. Touch and Go Landing (touchdown through lift-off):**

4.4.24.1. Q. Performed procedures in a timely manner and IAW the flight manual and local directives. Smooth and positive control. Maintained runway centerline within 15 feet left or right throughout the touch and go.

4.4.24.2. Q-. Performed procedures with minor deviations. Aircraft control was safe but not consistently smooth and positive. Delayed accomplishment of required checklists. Consistently left or right of centerline but within 25 feet.

4.4.24.3. U. Major deviations to procedures. Displayed erratic/unsafe aircraft control. Excessively delayed and/or misapplied required checklists. Allowed aircraft to drift/remain more than 25 feet left or right of centerline.

**4.4.25. Area 52. Missed Approach/Go-around:**

4.4.25.1. Q. Executed missed approach IAW published procedures and restrictions. Initiated and performed go-around promptly. Complied with controller's instructions. Applied smooth control inputs. Attained and maintained a positive climb.

4.4.25.2. Q-. Executed missed approach with minor deviations to published procedures/directives. Was slow or hesitant to initiate go-around. Slow to respond to controller's instructions. Slightly over-controlled the aircraft.

4.4.25.3. U. Did not execute missed approach IAW technical orders, directives or published procedures. Did not comply with controller's instructions. Deviations or misapplication of procedures could have led to an unsafe condition. Exceeded Q- criteria.

**4.4.26. Area 53. Engine-out Go-Around--use area 47 criteria and the following:**

4.4.26.1. Q. Applied smooth, coordinated control inputs. Rudder and aileron inputs were in the correct direction. Maneuvering appropriate with regard to the "dead" engine. Individual technique complied with established procedures.

4.4.26.2. Q-. Rudder and aileron inputs were in correct direction but some over/under control. Individual techniques were safe, but detracted from the maneuver.

4.4.26.3. U. Rudder and/or aileron inputs were incorrect. Maneuvering with regard to the "dead" engine potentially unsafe. Failed to comply with/consider minimum control speeds. Individual technique unsafe or violated established procedures.

**4.4.27. Area 54. After Landing/Engine Shutdown:**

4.4.27.1. Q. Appropriate after-landing/engine shutdown checks and aircraft taxi procedures accomplished IAW published procedures.

4.4.27.2. Q-. Minor deviations or omissions were made to published procedures.

4.4.27.3. U. Appropriate after-landing/engine shutdown checks or aircraft taxi procedures were not IAW technical orders, directives or published procedures. Major deviations or omissions occurred which could have jeopardized safety.

**4.4.28. Area 55. Reverse Taxi:**

4.4.28.1. Q. Complied with all directives concerning reverse taxi. Adequately briefed procedures and complied with AMT directions. Aircraft control/throttle technique was smooth and positive.

4.4.28.2. Q-. Minor deviations to reverse taxi procedures. Briefing hard to follow but no compromise of safety. Slow to respond to AMT directions. Some over/under control.

4.4.28.3. U. Major deviations to procedures/directives. Failed to brief procedures and/or briefing created doubts or confusion. Failed to respond to AMT directions. Aircraft control was unsafe or could have resulted in damage to the aircraft or property, or injury to personnel.

**4.4.29. Areas 55 - 70. Reserved for future use.**

## Chapter 5

### NAVIGATOR EVALUATIONS

**5.1. General.** The criteria contained here and in **Chapter 3** apply to all navigator flight evaluations.

**5.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform all navigator duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable flight manuals, and directives.

#### **5.3. Requirements:**

5.3.1. Qualification. See **Table 2.4** for required evaluation areas. The mission must include a Category I route, or a Category II route using Category I procedures, of sufficient length to demonstrate proficiency in navigation procedures.

5.3.1.1. Simulator Evaluations. Navigators with 3 or more years experience in EC-130 aircraft may accomplish recurring qualification evaluations in the simulator (OFT, WST, or SNS); however, use simulators as a last resort to perform evaluations. Do not conduct consecutive qualification evaluations in the simulator. (EXCEPTION: Formal school NRQ [basic re-qualification] students will normally accomplish evaluations in the SNS).

5.3.1.2. Airborne Radar Approach (ARA). The ARA is a basic navigation proficiency item. ARAs must be evaluated in the aircraft. (EXCEPTION: ARAs may be accomplished in the SNS as part of the NRQ evaluation).

5.3.2. Mission. See **Table 2.4** for required areas.

#### **5.4. Grading Criteria:**

**5.4.1. Areas 1 through 20** --use criteria in **Chapter 3** of this volume.

**5.4.2. Areas 21 through 30** --use criteria in **Chapter 3** of this volume (if applicable).

#### **5.4.3. Area 71. Flight Plan/Charts:**

5.4.3.1. Q. Completed a flight plan in its entirety with time errors not exceeding 5 minutes of total time to destination, or satisfactorily demonstrated manual flight planning procedures at the discretion of the evaluator. Selected current navigation charts of a proper scale and type of the sortie profile. Charts were constructed IAW current directives. Plotting errors did not exceed 5 NM. Demonstrated proper manual flight planning procedures, if required.

5.4.3.2. Q-. Minor errors or omissions that would not have adversely affected mission accomplishment. Time errors did not exceed 10 minutes. Plotting errors did not exceed 10 NM.

5.4.3.3. U. Flight plan was not completed. Could not demonstrate manual procedures, or failed to review computer flight plan. Navigator flight plan contained major errors/omissions. Selected an improper or obsolete chart. Exceeded Q- criteria.

#### **5.4.4. Area 72. Fuel Planning:**

5.4.4.1. Q. Demonstrated satisfactory knowledge of the type and use of data contained in fuel planning instructions. "En route fuel" computation errors did not exceed 3%. Correctly computed

and performed fuel management procedures. Correctly computed an Equal Time Point (ETP), when required. Correctly constructed a range control chart (optional). Manual fuel planning procedures were demonstrated at the discretion of the evaluator.

5.4.4.2. Q-. Displayed limited knowledge of fuel planning instructions. "En route fuel" computation errors did not exceed 5%. Fuel management procedures and/or ETP computed with minor mathematical errors or omissions that would not adversely affect mission accomplishment. If constructed, the range control chart had minor errors or omissions.

5.4.4.3. U. Displayed inadequate knowledge of fuel planning instructions. Fuel computations and/or ETP were not completed or contained major errors or omissions. If constructed, range control chart had major errors and omissions. Exceeded Q- criteria.

#### **5.4.5. Area 73. Departure:**

5.4.5.1. Q. Monitored headings, airspeeds, altitudes and aircraft position throughout departure. Used a SID/departure procedure and/or appropriate scale departure area chart. Provided headings, ETAs, and other required information in a timely manner. Monitored appropriate radios and clearances to ensure crew compliance. Provided updated information when the clearance caused a change in the planned departure. Ensured terrain clearance during departure by use of all available aids and the area chart.

5.4.5.2. Q-. Monitored aircraft position, but slow to provide headings, ETAs, or other required information. Performance did not degrade mission accomplishment or compromise flight safety.

5.4.5.3. U. Did not monitor departure headings, airspeeds or altitudes. Unaware of aircraft position and unable to provide updated information when required. Did not use a SID and/or an appropriate scale departure area chart. Allowed major deviations that degraded mission accomplishment or compromised safety. Did not ensure terrain clearance during the approach. No area chart available.

#### **5.4.6. Area 74. Navigation Procedures:**

5.4.6.1. Q. Certain of exact aircraft position. Remained within 3 NM of course centerline (Exceptions: Threat avoidance, weather deviation, ATC assigned heading, time control, etc.). Thorough knowledge of en route time status in relation to objective area. Complied with all altitude restrictions. Airspeed control contributed to reliable DR. Adhered to all airspace restrictions.

5.4.6.2. Q-. Uncertain of exact aircraft position due to marginal navigational procedures. Flew 3 to 5 NM from course without the above exceptions. Better awareness of required timing events or en route time status could have avoided excessive, unplanned maneuvering or prevented degraded DR.

5.4.6.3. U. Exceeded 5 NM during en route navigation without the above exceptions. Was unable to maintain position awareness throughout most of the route. Unable to accurately assess required timing or unaware of mission time status, jeopardizing mission accomplishment. Violated airspace restrictions. Poor airspeed control resulted in numerous or extreme airspeed adjustment. Descended below minimum altitude restrictions.

#### **5.4.7. Area 75. Radio Navigation:**

5.4.7.1. Q. Accurately tuned, identified, and interpreted readings of TACANs, VORs or NDBs. Consistently selected stations that afforded the best LOPs. Position accuracy within 4 NM.

5.4.7.2. Q-. Better use of radio aids could have enhanced navigation. Displayed weakness in fixing or plotting procedures. Position accuracy did not exceed 8 NM.

5.4.7.3. U. Unable to accurately tune and identify radio aids. Did not understand VOR/TACAN/NDB bearing procedures or was unable to obtain position by means of radio aids. Position error greater than 8 NM.

#### **5.4.8. Area 76. Radar Navigation:**

5.4.8.1. Q. Demonstrated thorough knowledge and understanding of radar equipment. Used correct procedures for radar operation and weather avoidance procedures. Radar position error did not exceed 5 NM.

5.4.8.2. Q-. Demonstrated adequate knowledge of equipment, but occasionally used improper operating procedures. Had difficulty identifying radar returns. Radar position error did not exceed 10 NM.

5.4.8.3. U. Displayed unsatisfactory knowledge of radar equipment. Used improper operating procedures that were potentially harmful to system components. Failed to correctly interpret scope returns. Displayed unsatisfactory knowledge of weather avoidance procedures. Radar position error greater than 10 NM.

#### **5.4.9. Area 77. Navigation Systems:**

5.4.9.1. NOTE: All references to navigation systems refer to actual systems onboard unit aircraft (i.e., INS, SCNS, or Global Positioning System (GPS)).

5.4.9.2. Q. Had a thorough knowledge of onboard navigation system operating procedures. Effectively used navigation systems to direct the aircraft and update system as required.

5.4.9.3. Q-. Had only a basic knowledge of onboard navigation systems. Made minor errors in operation/interpretation of navigation system data. More selective updating could have increased system effectiveness.

5.4.9.4. U. Displayed inadequate knowledge of onboard navigation system procedures. Improper operation procedures could have resulted in damage to equipment or affected mission accomplishment. Failed to update or correctly interpret navigation system data.

#### **5.4.10. Area 78. Deviation Check:**

5.4.10.1. Q. Correctly computed compass deviation within 2 degrees of actual.

5.4.10.2. Q-. Minor errors in readings or computations. Computations were within 3 degrees of actual.

5.4.10.3. U. Did not accomplish deviation check or exceeded Q- criteria.

#### **5.4.11. Area 79. TAS Check:**

5.4.11.1. Q. TAS check accomplished on time and error did not exceed 5 knots.

5.4.11.2. Q-. Minor errors in readings or computations. Error did not exceed 10 knots. Completed TAS check late.

5.4.11.3. U. Did not accomplish TAS check or error exceeded 10 knots.

#### **5.4.12. Area 80. Dead Reckoning (DR)/Rating of Navigational Computers:**

5.4.12.1. Q. Made effective use of DR/Rate of navigational computers during aircraft positioning. Computed and plotted positions within 5 NM.

5.4.12.2. Q-. Occasionally did not identify the navigational computer providing the most reliable information or used improper DR procedures resulting in erroneous ETAs or headings. Computed or plotted position error did not exceed 10 NM.

5.4.12.3. U. Was unable to use DR/Rate navigational computers effectively. Computed or plotted position error exceeded 10 NM.

**5.4.13. Area 81. Celestial Navigation:**

5.4.13.1. Q. Correctly obtained, evaluated and implemented celestial data. Accomplished computations and demonstrated sextant use without significant errors or omissions. Observed and plotted celestial LOPs and positions within 10 NM.

5.4.13.2. Q-. Excessive time devoted to celestial computations. Possessed adequate knowledge of celestial procedures and use of the sextant. Plotted celestial LOPs and positions within 15 NM.

5.4.13.3. U. Inadequate knowledge of celestial procedures and use of the sextant. Computation or plotting errors resulted in celestial LOPs or position exceeding 15 NM.

**5.4.14. Area 82. Course and ETA Tolerance:**

5.4.14.1. Q. Remained within 10 NM of course centerline, or within tolerances specified for Required Navigation Performance (RNP) airspace (if applicable), whichever is less. ETAs/RETAs were within 2 minutes of actual times of arrival (ATAs). Accurately determined course deviation for weather.

5.4.14.2. Q-. Remained within 15 NM of course centerline, or within tolerances specified for RNP airspace (if applicable), whichever is less. ETAs/RETAs were within 3 minutes of ATAs.

5.4.14.3. U. Exceeded Q- criteria and/or evaluator had to alter aircraft heading to remain within course tolerance, clear special use airspace, or correctly deviate around weather.

**5.4.15. Area 83. Fuel Management/Range Control:**

5.4.15.1. Q. Maintained fuel management/range control IAW directives. Kept pilot advised of fuel status.

5.4.15.2. Q-. Adequate fuel management/range control with minor computation errors noted. Did not adequately update the pilot on fuel status.

5.4.15.3. U. Failed to demonstrate an understanding of fuel management/range control procedures. Fuel computations not accomplished or contained significant errors. Failed to inform pilot of fuel status.

**5.4.16. Area 84. Defensive Systems/Tactics:**

5.4.16.1. Q. Had thorough knowledge of necessary defensive systems/tactics applicable to the mission.

5.4.16.2. Q-. Limited knowledge of defensive systems/tactics applicable to the mission.

5.4.16.3. U. Had unsatisfactory knowledge of defensive systems/tactics applicable to the mission.

**5.4.17. Area 85. Threat Analysis/Avoidance:**

5.4.17.1. Q. Able to plot threats in flight, and formulate a plan of action to avoid lethal range of given threat system. Executed the proper evasive maneuver when given an immediate threat. Adequately analyzed and degraded all threats ensuring effective mission accomplishment. Was aware of appropriate tactics to avoid threats and exposure.

5.4.17.2. Q-. Made minor errors in plotting and avoiding the lethal range of a given threat system. Minor errors in threat analysis or tactics selection.

5.4.17.3. U. Was unable to plot a given threat. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Did not avoid lethal range of given threat system. Did not execute an effective evasive maneuver when given an immediate threat. Was not aware of appropriate tactics for specific threats or terrain.

#### **5.4.18. Area 86. Orbit Procedures:**

5.4.18.1. Q. Thorough knowledge of orbit procedures. Arrived at planned orbit area within 5 minutes of coordinated mission timing. Accurately flew orbit pattern and accomplished computations without significant errors or omissions. Properly coordinated mission location with MCC/DABS. Properly calculated bingo fuel to planned recovery/abort base.

5.4.18.2. Q-. Adequate knowledge of orbit procedures. Minor deviations from published procedures. Arrived at planned orbit area within 10 minutes of coordinated mission timing. Excessive time devoted to performing computations. Minor coordination errors or omissions with the MCC/DABS. Made minor miscalculation of bingo fuel to the planned recovery/abort base.

5.4.18.3. U. Unsatisfactory knowledge of orbit procedures. Arrived at planned orbit area in excess of 10 minutes of coordinated mission timing. Displayed lack of coordination with MCC/DABS. Unable to perform orbit pattern; jeopardized mission accomplishment. Selected an inappropriate abort base or failed to calculate a bingo fuel to safely arrive at an abort base with required fuel reserves. Failed to position the aircraft within planned orbit area.

#### **5.4.19. Area 87. Air Refueling Procedures:**

5.4.19.1. Q. Effectively accomplished rendezvous and air refueling procedures. Planned optimum use of all available rendezvous aids. Thorough and complete knowledge of in flight air refueling procedures. Arrived at the coordinated air refueling point within 5 minutes of planned control time. Properly calculated bingo fuel to the planned abort base.

5.4.19.2. Q-. Overlooked use of some rendezvous aids, resulting in a delayed or inefficient rendezvous. Knowledge was sufficient to accomplish rendezvous and air refueling. Arrived at the coordinated air refueling point within 10 minutes of planned control time. Made minor miscalculations of bingo fuel to the planned abort base.

5.4.19.3. U. Displayed lack of knowledge or familiarity with the checklist, equipment, and procedures. Limited use of rendezvous aids adversely affected the rendezvous. Arrived at the coordinated air refueling point in excess of 10 minutes from planned control time. Selected an inappropriate abort base or failed to calculate a bingo fuel to safely arrive at an abort base with required fuel reserves. Failed to position the aircraft within the boundaries of the designated air refueling track.

#### **5.4.20. Area 88. Descent/Approach/Landing:**

5.4.20.1. Q. Monitored aircraft position, approach instructions and primary approach navigation aids. Furnished headings, ETAs and other information to the pilot as required. Thoroughly understood approach and missed approach procedures. Ensured terrain clearance during approach by use of all available aids and area chart.

5.4.20.2. Q-. Monitored aircraft position but did not fully understand approach instructions/procedures. Slow to provide headings, ETAs or other appropriate information.

5.4.20.3. U. Failed to monitor aircraft position. Did not ensure terrain clearance during the approach. No area chart available.

**5.4.21. Area 89. Comm Procedures:**

5.4.21.1. Q. Complete knowledge of and compliance with communications procedures. Radio communications (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct actions by the crew to update appropriate agencies of the tactical situation.

5.4.21.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, threat warning, or mission accomplishment. Extraneous comments over primary and secondary radios presented minor distractions.

5.4.21.3. U. Unsatisfactory knowledge of or failure to comply with communications procedures. Radio communications over primary/secondary radios were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning, or mission accomplishment.

**5.4.22. Area 90. Airborne Radar Approach (ARA):**

**5.4.22.1. Q.** Complied with all published procedures. Successfully directed the aircraft to ARA minimums so that a safe landing could be made. Used proper terminology; instructions were clear and concise during the entire approach.

**5.4.22.2. Q-.** Briefing was incomplete or deviated from established procedures. Required excessive course corrections on final approach, but directed the aircraft to a point where a safe landing could be made.

**5.4.22.3. U.** Had unsatisfactory knowledge of ARA procedures. Unable to direct the aircraft to a point from which a safe landing could be made.

**5.4.23. Areas 91 - 110.** Reserved for future use.

## Chapter 6

### FLIGHT ENGINEER EVALUATIONS

**6.1. General.** The criteria contained in this chapter and [Chapter 3](#) applies to all flight engineer flight evaluations.

**6.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform all flight engineer duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, instructions, and directives.

#### **6.3. Requirements:**

6.3.1. Mission/Qualification Evaluations. See [Table 2.5](#) for required evaluation areas. Accomplish recurring mission/qualification evaluations on any flight profile except Functional Check Flights. If the mission evaluation is conducted independently of the qualification evaluation, a mission EPE must be conducted and annotated in the ground phase section of the mission AF Form 8. To the maximum extent possible, recurring mission/qualification evaluations will be scheduled on actual mission profiles.

6.3.1.1. Initial mission/qualification evaluations will include an actual air refueling.

#### **6.4. Grading Criteria:**

**6.4.1. Areas 1 through 20** --use criteria in [Chapter 3](#) of this volume.

**6.4.2. Areas 21 through 30** --use criteria in [Chapter 3](#) of this volume (if applicable).

#### **6.4.3. Area 111. AFTO Form 781:**

6.4.3.1. Q. Identified and reported discrepancies in a clear, concise, accurate, and timely manner IAW T.O. 00-20-5, *Aircraft, Drone, Aircrew Training Devices, Engines, Air Launched Missile Inspections, Flight Reports, and Supporting Maintenance Documents*; and other applicable directives.

6.4.3.2. Q-. Some information reported incorrectly or incompletely due to errors, omissions, or deviations. Limited knowledge of proper discrepancy reporting IAW T.O. 00-20-5.

6.4.3.3. U. Did not identify or report discrepancies; omitted or incorrectly reported significant information due to errors, omissions, or deviations.

#### **6.4.4. Area 112. Ground Support Equipment:**

6.4.4.1. Q. Accomplished or demonstrated a satisfactory knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with no errors, omissions, or deviations.

6.4.4.2. Q-. Accomplished or demonstrated a limited knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with minor errors, omissions, or deviations that did not jeopardize safety.

6.4.4.3. U. Failed to accomplish or demonstrate adequate knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment that did or could have jeopardized safety.

#### 6.4.5. Area 113. Refuel/Defuel:

6.4.5.1. Q. Demonstrated a satisfactory knowledge of or accomplished refuel/defuel operations with no errors, omissions, or deviations from established procedures. Maintained fuel balance limits and adhered to existing published safety precautions. Demonstrated a working knowledge of the aircraft the refueling/defueling system and a satisfactory knowledge of concurrent refueling procedures and appropriate safety precautions IAW T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*.

6.4.5.2. Q-. Demonstrated a limited knowledge of or accomplished refuel/defuel operations with minor errors, omissions, or deviations that did not jeopardize safety. Limited knowledge of the aircraft refueling/defueling system and components.

6.4.5.3. U. Demonstrated inadequate knowledge of or failed to accomplish refuel/defuel operations, made errors, omissions, or deviations that would have jeopardized safety. Demonstrated inadequate knowledge of concurrent refueling operations and appropriate safety precautions.

#### 6.4.6. Area 114. TOLD:

**NOTE:** If TOLD error is a result of an incorrect gross weight and not due to incorrect computations of performance data, document under Area 88 (Weight and Balance).

6.4.6.1. Q. Correctly computed the TOLD data using applicable performance data and corrections for existing field conditions. Transcribed Mini TOLD data correctly. Was fully knowledgeable of takeoff and landing performance data.

##### 6.4.6.1.1. TOLD criteria:

- |                                       |                 |
|---------------------------------------|-----------------|
| 6.4.6.1.1.1. Required Airspeeds       | +/-2 knots.     |
| 6.4.6.1.1.2. Required Distances       | +/- 200 feet.   |
| 6.4.6.1.1.3. Predicted Takeoff Torque | +/- 200 in/lbs. |

6.4.6.2. Q-. Minor errors in the use of applicable performance charts, computing the performance data, or correcting for existing field conditions resulting in data exceeding Q criteria. Incorrectly transcribed Mini TOLD data. Had some knowledge of takeoff and landing performance data. Would not have compromised safety of flight.

##### 6.4.6.2.1. TOLD criteria:

- |                                       |                 |
|---------------------------------------|-----------------|
| 6.4.6.2.1.1. Required Airspeeds       | +/- 4 knots.    |
| 6.4.6.2.1.2. Required Distances       | +/- 400 feet.   |
| 6.4.6.2.1.3. Predicted Takeoff Torque | +/- 400 in/lbs. |

6.4.6.3. U. Failed to compute TOLD data, omitted necessary corrections for existing field conditions, or errors in computing performance data resulted in airspeeds and/or distances exceeding Q-criteria. Limited knowledge of takeoff and landing performance data. Did or could have compromised safety of flight.

**6.4.7. Area 115. Cockpit.**

**6.4.8. Area 116. Before Starting Engines/Starting Engines.**

**6.4.9. Area 117. Before Taxi/Taxi.**

**6.4.10. Area 118. Before Takeoff/Lineup.**

**6.4.11. Area 119. After Takeoff.**

**6.4.12. Area 120. En route.**

**6.4.13. Area 121. Descent/Before Landing.**

**6.4.14. Area 122. After Landing.**

**6.4.15. Area 123. Engine Shutdown.**

**6.4.16. Area 124. Before Leaving Airplane.**

**6.4.17. Areas 115 through 124 - use the following criteria:**

6.4.17.1. Q. Accomplished required checklists without errors, omissions, or deviations. Backed up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances). Satisfactorily monitored engine/system indicators. Fully knowledgeable of performance charts and procedures required to obtain and record in-flight performance data. Fuel system usage and configuration was IAW flight manual and applicable directives. Recognized and corrected minor omissions or deviations. Recognized, reported, and properly documented out of limit conditions or malfunctions.

6.4.17.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations. Backed up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances) with some deviations. Monitored engine/system indicators with some deviations. Limited knowledge of performance charts and procedures required to obtain and/or record in-flight performance data. Limited knowledge of fuel system usage and configuration caused deviations from flight manual and applicable directives. Slow to recognize, report, and/or document out of limit conditions or malfunctions.

6.4.17.3. U. Failed to accomplish required checklists or made numerous errors, omissions, or deviations. Failed to back up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances). Failed to monitor engine/system indicators. Inadequate knowledge of performance charts and/or procedures required to obtain data for two or three engines operating. Had inadequate knowledge of fuel system usage and configuration. Allowed limitations to be exceeded, which, without correction, would cause damage to equipment.

**6.4.18. Area 125. Postflight:**

6.4.18.1. Q. Accomplished required checklists without errors, omissions, or deviations. Insured aircraft properly configured for parking. [i.e. nose gear pin, ground wires (if applicable), intakes, door locks]

6.4.18.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations. Minor errors insuring aircraft properly configured for parking.

6.4.18.3. U. Failed to accomplish required checklists. Did not insure aircraft was properly configured for parking.

**6.4.19. Area 126. Mission Procedures:**

**NOTE:** Flight Engineers will be verbally evaluated on mission knowledge. Actual mission profiles will be flown to the maximum extent possible. Applicable mission requirements will be published in the local unit supplement to AFI 11-202V2.

6.4.19.1. Q. Was fully knowledgeable of unit mission procedures. Was knowledgeable of mission events. Demonstrated adequate situational awareness.

6.4.19.2. Q-. Had limited knowledge of unit mission procedures. Demonstrated limited knowledge of mission events. Limited situational awareness.

6.4.19.3. U. Inadequate knowledge of unit mission procedures. Had inadequate knowledge of mission events. Had inadequate situational awareness.

**6.4.20. Area 127. Air Refueling System/Procedures:**

6.4.20.1. Q. Was fully knowledgeable of air refueling operations and procedures. Performed all pre-refueling, refueling, and post-refueling checks in accordance with applicable checklist and directives. Satisfactorily managed/monitored fuel systems and on load/off load distribution in accordance with procedures and techniques outlined in the flight manual, checklist and other directives. Correctly identified and located system components, explained and related their functions, and specified the limitations. Stated correct system status and its effect on related systems. Recognized malfunctions and applied proper corrective action(s).

6.4.20.2. Q-. Limited knowledge of air refueling operations and procedures. Performed pre-refueling, refueling, and post-refueling checks with some minor deviations/omissions that did not affect successful accomplishment of air refueling. Limited management/monitoring of fuel systems and on load/off load distribution in accordance with procedures and techniques outlined in the flight manual, checklist and other directives. Limited knowledge of identification and location of system components, their functions and limitations. Stated correct system status, but could not determine its effect on related systems. Delay in recognizing malfunctions and/or applying proper corrective action(s).

6.4.20.3. U. Inadequate knowledge of air refueling operations and procedures. Deviations/omissions could have affected successful accomplishment of the air refueling mission. Inadequate knowledge of fuel system management or exceeded wing fuel balance limitations. Could not identify, locate, or relate systems functions and limitations. Could not determine status of system or its effect on related system. Failed to recognize malfunctions and/or apply corrective action(s).

**6.4.21. Area 128. Weight and Balance:**

6.4.21.1. Q. Had satisfactory knowledge of aircraft limitations and weight and balance directives. Completed DD Form 365-4, Weight and Balance Clearance Form F - Transport legibly and accurately with only minor errors.

- |  |                  |
|--|------------------|
| 6.4.21.1.1. Takeoff or landing gross weights | +/- 500 lbs.     |
| 6.4.21.1.2. Percent of MAC                   | +/- 0.5 percent. |
| 6.4.21.1.3. Aircraft gross takeoff limits    | Not exceeded.    |
| 6.4.21.1.4. Center of gravity limitations    | Not exceeded.    |

6.4.21.2. Q-. Limited knowledge of aircraft limitations and weight and balance directives. Completed DD Form 365-4 legibly.

- |  |                         |
|--|-------------------------|
| 6.4.21.2.1. Takeoff or landing gross weights | +/- 501 to 1,000 lbs.   |
| 6.4.21.2.2. Percent of MAC                   | +/- 0.6 to 1.0 percent. |
| 6.4.21.2.3. Aircraft gross takeoff limits    | Not exceeded.           |
| 6.4.21.2.4. Center of gravity limitations    | Not exceeded.           |

6.4.21.3. U. Had inadequate knowledge of aircraft limitations and weight and balance directives. Failed to complete DD Form 365-4 accurately.

- |  |                  |
|--|------------------|
| 6.4.21.3.1. Takeoff or landing gross weights | +/- 1,000 lbs.   |
| 6.4.21.3.2. Percent of MAC                   | +/- 1.0 percent. |
| 6.4.21.3.3. Aircraft gross takeoff limits    | Exceeded.        |
| 6.4.21.3.4. Center of gravity limits         | Exceeded.        |

**6.4.22. Areas 129 - 140** -- Reserved for future use.

## Chapter 7

### AIRBORNE MAINTENANCE TECHNICIAN (AMT)/SCANNER EVALUATIONS

**7.1. General.** The criteria in this chapter and **Chapter 3** apply to all AMT/Scanner flight evaluations. For crewmembers qualified to perform only scanner duties, administer a Scanner evaluation using the areas identified in this chapter.

**7.2. Objective.** The examinee must satisfactorily demonstrate the ability to safely and effectively perform the AMT/Scanner duties within his/her assigned area of responsibility, including the operation of appropriate aircraft systems. These duties must be performed in accordance with applicable manuals, instructions, and directives.

#### **7.3. Requirements:**

7.3.1. Mission/Qualification Evaluations. See **Table 2.6.** for required areas (as applicable).

#### **7.4. Grading Criteria:**

**7.4.1. Areas 1 through 20** --use criteria in **Chapter 3** of this volume.

**7.4.2. Areas 21 through 30** --use criteria in **Chapter 3** of this volume (if applicable).

**NOTE:** Areas 141 through 151 apply to ABCCC and Compass Call (all Blocks).

#### **7.4.3. Area 141. Pre-Takeoff:**

**NOTE:** Includes all activity from Before Starting Engines to Takeoff.

7.4.3.1. Q. Accomplished procedures in accordance with approved checklists and applicable directives. Correct positioning to monitor engine area during start. Correct ground marshaling signals. Recognized and correctly responded to malfunctions in a safe and timely manner. Properly prepared aircraft and equipment prior to takeoff. Effectively monitored and assisted the pilot by clearing outside the aircraft for obstacles/ground traffic during taxi.

7.4.3.2. Q-. Accomplished procedures with minor errors, omissions, or deviations. Slow to recognize or respond to malfunctions. Minor errors when positioning to monitor engine start or giving required ground marshaling signals. Minor errors in preparing aircraft and equipment prior to takeoff. Provided limited or inadequate monitoring outside the aircraft for clearing of obstacles/ground traffic during taxi.

7.4.3.3. U. Accomplished procedures with major errors, omissions, or deviations. Major errors when positioning to monitor engine area during start sequence. Failed to ensure engine/GTC (gas turbine compressor) was clear of personnel or equipment before starting. Failed to recognize or respond to malfunctions. Major errors when providing ground marshaling signals, jeopardizing safety. Major errors or omissions in preparing aircraft and equipment prior to takeoff. Failed to provide any monitoring or assistance to the pilot during taxi operations, which jeopardized safety.

#### **7.4.4. Area 142. After Takeoff/Climb:**

7.4.4.1. Q. Conducted procedures in accordance with applicable checklist items and procedures. Conducted a thorough inspection of cargo compartment and ensured that passengers complied

with instructions. Performed all required checks. Successfully booted/restarted capsule TBMS (Tactical Battle Management Subsystem) and JTIDS (Joint Tactical Information Distribution System) and verified operational condition in a timely manner, as applicable.

7.4.4.2. Q-. Conducted procedures with minor errors or omissions which did not affect safety of flight. Conducted a limited inspection of cargo compartment. Performed required checks with omissions or deviations, which did not affect safety of flight. Slow to boot/restart capsule TBMS and JTIDS, as applicable. Slow to recognize or unsure of operational condition of mission equipment.

7.4.4.3. U. Failed to accomplish procedures or made major errors, omissions, or deviations, which affected or could have affected safety of flight. Displayed inadequate knowledge of or was unable to boot/restart the capsule TBMS or JTIDS, as applicable, due to other than major equipment failure. Failed to inspect cargo compartment or ensure passenger compliance with instructions.

#### **7.4.5. Area 143. Level Off/Cruise/En route:**

7.4.5.1. Q. Performed all required checks thoroughly with no deviations. Monitored operation of aircraft/capsule/mission systems on a frequent basis. Corrective maintenance actions were implemented in a timely manner as capabilities permit.

7.4.5.2. Q-. Performed required checks with minor errors, omissions or deviations, which did not affect safety of flight or mission accomplishment. Conducted limited/infrequent monitoring of aircraft/capsule/mission systems.

7.4.5.3. U. Failed to perform required checks or made major errors, omissions, or deviations, which affected safety of flight or mission accomplishment. Failed to provide adequate monitoring of aircraft/capsule/mission systems.

#### **7.4.6. Area 144. Aircraft Systems:**

**NOTE:** Evaluate the following areas: Engines/GTC/ATM (air turbine motor), hydraulic systems, ramp and door, landing gear, flaps, electrical systems, bleed air/air conditioning, and aircraft defensive systems (as applicable). These areas may be divided into sub-areas by local supplement for trending purposes.

7.4.6.1. Q. Demonstrated or determined proper system operation. Correctly identified and located applicable system components. Correctly determined status of system. Knowledgeable of or could identify associated warning/cautions/notes for applicable systems.

7.4.6.2. Q-. Minor deviations in systems operation, which did not affect mission accomplishment. Made omissions or deviations in identification or location of system components. Was unsure of system status. Limited knowledge of required duties or applicable systems warning/cautions/notes.

7.4.6.3. U. Improperly operated systems. Could not identify/locate system components. Could not determine status of system. Had insufficient knowledge of required duties, or applicable systems warning/cautions/notes. Major errors, omissions, or deviations, which adversely affected mission accomplishment.

#### **7.4.7. Area 145. Air Refueling:**

7.4.7.1. Q. Adequate knowledge of air refueling system components and locations. Accomplished all air refueling procedures without error, including leak checks during contact, in accordance with

approved checklist and directives. Properly configured the aircraft and capsule/mission system (if applicable) prior to completion of the Preparation For Contact checklist. Accomplished a post air refueling capsule/mission system configuration in accordance with checklist and directives (if applicable).

7.4.7.2. Q-. Limited knowledge of air refueling system components and locations. Accomplished air refueling procedures with minor errors, omissions, or deviations. Performed limited checks during contact. Performed aircraft and capsule/mission system configuration with minor errors or omissions that did not affect successful mission accomplishment.

7.4.7.3. U. Inadequate knowledge of air refueling system components and/or locations. Accomplished air refueling procedures with major errors, omissions, or deviations critical to safety of flight. Failed to properly configure aircraft and capsule/mission system (if applicable) before completion of Preparation For Contact checklist. Failed to perform required checks during contact. Accomplished post air refueling capsule/mission system configuration with major errors, omissions, or deviations causing critical loss of data or unsuccessful completion of the mission.

#### **7.4.8. Area 146. Communications:**

7.4.8.1. Q. Monitored/correctly set up interphone. Monitored/employed radios as necessary. Exercised proper interphone/radio procedures, using correct terminology. Knowledge/operation of communications systems was thorough. Responded to all challenges/instructions, and maintained an excellent listening watch of all appropriate communications systems. Used correct COMSEC (Communications Security) procedures. Employed encryption/authentication systems correctly.

7.4.8.2. Q-. Occasionally interrupted other transmissions. Limited knowledge/operation of communications systems. Occasionally failed to respond to interphone/radio calls or used non-standard terminology. Limited knowledge of COMSEC procedures. Had procedural errors in use of encryption/authentication systems.

7.4.8.3. U. Failed to respond to interphone interrogations. Made excessive transmissions that denied interphone or radio access to others with more essential information. Unsatisfactory knowledge about, and operation of, communications systems. Rarely monitored radios or failed to employ them effectively. Caused confusion, which jeopardized mission accomplishment or caused excessive delays. Improper use of encryption/authentication systems resulted in actual or possible security compromise. Knowledge of COMSEC procedures was inadequate.

#### **7.4.9. Area 147. In flight Maintenance:**

7.4.9.1. Q. Analyzed equipment malfunctions and applied proper corrective action or system reconfigurations in a timely manner.

7.4.9.2. Q-. Limited ability to analyze equipment malfunctions. Slow to apply corrective action or reconfigurations.

7.4.9.3. U. Unable to analyze equipment malfunctions. Applied improper/failed to apply corrective action, which adversely affected mission accomplishment.

#### **7.4.10. Area 148. System Shutdown/Descent:**

7.4.10.1. Q. Ensured applicable capsule/mission system equipment was shutdown properly. Performed all required duties. Inspected cargo/mission compartment for security.

7.4.10.2. Q-. Accomplished applicable procedures and duties with minor errors, omissions, or deviations that did not affect safety of flight or jeopardize mission accomplishment. Performed a limited inspection of cargo/mission compartment for security.

7.4.10.3. U. Major errors, omissions, or deviations during shutdown of applicable capsule/mission system equipment and other required duties adversely affecting mission accomplishment. Failed to accomplish a satisfactory inspection of the cargo/mission compartment for security.

**7.4.11. Area 149. Before Landing:**

7.4.11.1. Q. Inspected cargo compartment. Accomplished procedures in accordance with approved checklist and directives. Visually inspected applicable aircraft systems. Confirmed applicable equipment was shutdown.

7.4.11.2. Q-. Performed required duties with minor errors, omissions or deviations which did not affect safety of flight.

7.4.11.3. U. Failed to inspect cargo compartment. Failed to perform required checks or made major errors, omissions, or deviations. Failed to properly secure loose equipment/cargo. Failed to visually inspect applicable aircraft systems.

**7.4.12. Area 150. After Landing/Engine Shutdown:**

7.4.12.1. Q. Completed all applicable checklist items and post flight duties in a safe and timely manner. Shut off all equipment and stowed gear properly. When required, classified materials were properly controlled.

7.4.12.2. Q-. Minor omissions or deviations, which did not cause equipment damage. Examinee did not have continuous control of applicable classified material but did not, or could not have compromised security.

7.4.12.3. U. Major omissions or deviations while completing applicable checklist items and duties. Equipment stowage or shutdown, which would result in damage to equipment was improper. Displayed an unsafe practice, which could cause damage to aircraft or injury to personnel. Failed to stow equipment. Failed to accomplish debriefing requirements. Classified materials were improperly controlled.

**7.4.13. Area 151. Debriefing:**

7.4.13.1. Q. Attended required mission debriefings. Contributed effectively to briefing content when required. Briefing was thorough and in accordance with current directives and procedures.

7.4.13.2. Q-. Was late or inattentive during mission debriefing. Allowed items pertinent, but not critical, to be omitted. Debriefing was accomplished with minor errors, omissions, or deviations.

7.4.13.3. U. Failed to attend required mission debriefings. Allowed critical items to be omitted or did not correct erroneous information. Debriefing was accomplished with major errors, omissions, or deviations.

**NOTE:** Areas 152 through 163 apply to ABCCC only.

**7.4.14. Area 152. Tactical Battle Management Subsystem (TBMS).**

**7.4.15. Area 153. Communications Distribution Group (CDG) Subsystem.**

**7.4.16. Area 154. Airborne Maintenance Technician Console (AMTC).**

**7.4.17. Area 155. Radio Communications Subsystem.**

**7.4.18. Area 156. Secure Voice (Crypto) Systems.**

**7.4.19. Area 157. Joint Tactical Information Distribution System (JTIDS).**

**7.4.20. Area 158. Single Channel Ground and Air Radio System (SINCGARS).**

**7.4.21. Area 159. Environmental Control Unit (ECU) Subsystem.**

**7.4.22. Area 160. Life Support Subsystem.**

**7.4.23. Area 161. Electrical Power Subsystem.**

**7.4.24. Area 162. Broadcast Intelligence Equipment (BIE).**

**7.4.25. Area 163. TTY Systems.**

**7.4.26. Areas 152 through 163 - use the following criteria:**

7.4.26.1. Q. Had adequate knowledge of system for proper operation. Adequate knowledge of required duties. Correctly identified and located applicable system components. Correctly determined status of system and power distribution.

7.4.26.2. Q-. Limited knowledge of system. Minor deviations in system operation that caused some delay but did not jeopardize overall mission accomplishment. Minor omissions or deviations in identification or location of system components. Was unsure of system status or power distribution. Limited knowledge of required duties.

7.4.26.3. U. Operation or knowledge of operating systems was inadequate. Could not identify/locate system components. Could not determine status of system or power distribution. Insufficient knowledge of required duties. Major errors, omissions, or deviations.

**NOTE:** Areas 164 through 178 apply to Compass Call only (Block 20/30, unless otherwise indicated).

**7.4.27. Area 164. Trouble Analysis/Corrective Action.**

7.4.27.1. Q. Had adequate knowledge of system analysis and troubleshooting techniques in accordance with manuals, directives, and locally approved established procedures. Logical techniques and procedures when using the computer terminal, operator keyboard, Built-in-Test (BIT), and available test equipment to confirm and evaluate Primary Mission Equipment (PME) malfunctions. Effective action in isolating, and applying corrective action to, the PME malfunctions. Utilized and properly applied available resources to maintain an operational system. Kept mission crew informed of operational limitations, and advised on possible work-arounds.

7.4.27.2. Q-. Limited knowledge of system analysis and logical troubleshooting techniques. Limited knowledge of procedures and techniques when using the computer terminal, operator keyboard, BIT, and available test equipment to confirm, diagnose and isolate PME malfunctions. Uncertain as to what corrective action was required. Unfamiliar with what resources were available to maintain an operational system. Kept mission crew informed, but supplied inaccurate information.

7.4.27.3. U. Knowledge of system analysis and troubleshooting techniques was inadequate. Failed to use the computer terminal, operator keyboard, BIT, and available test equipment to confirm, diagnose, and isolate PME malfunctions. Unable to apply corrective action to the system

malfunctions. Did not know what resources were available to maintain an operational system. Did not inform mission crew of system limitations or possible work-arounds.

**7.4.28. Area 165. Mission Termination:**

7.4.28.1. Q. Accomplished mission termination procedures in accordance with applicable checklists and directives. Demonstrated knowledge of procedures required to properly shutdown the mission systems. Proper procedures in terminating archive tape and creating required data tape(s), if applicable. Accomplished procedures for clobber (erasure) of disk, and verified the routine was completed. Attended required mission debriefings. Provided accurate and concise information. Ensured all applicable mission materials were given to the debriefers, when required. Debriefing was accomplished in accordance with current directives and procedures. Returned professional equipment to appropriate storage areas in accordance with current directives and procedures.

7.4.28.2. Q-. Accomplished mission termination procedures with minor errors, omissions, or deviations. Limited knowledge of procedures required to shut down the mission systems causing some delay. Limited knowledge of procedures required to terminate the archive tape or creating required data tape (s), if applicable. Limited knowledge of procedures to clobber (erasure) the disk and verify this process. Inattentive during mission debriefings. Provided limited but accurate information. Was unsure of proper procedures when returning mission materials to debriefers. Debriefing was accomplished with minor, errors, omissions, or deviations. Unfamiliar with procedures when returning professional equipment to appropriate storage areas.

7.4.28.3. U. Accomplished mission termination procedures with major errors, omissions, or deviations. Failed to conduct a safe or satisfactory shutdown of the mission systems. Failed to perform termination of archive tape or create required data tape(s) correctly, causing loss of critical data, if applicable. Failed to apply the clobber (erasure) routine to the disk or did not verify a complete disk erasure. Failed to attend required mission debriefings. Failed to provide accurate information. Failed to turn in all required mission materials to debriefers. Debriefing was accomplished with major errors, omissions, or deviations. Failed to return professional equipment to appropriate storage areas or in accordance with current directives and procedures.

**7.4.29. Area 166. RF Distribution Subsystem.**

**7.4.30. Area 167. Acquisition Subsystem.**

**7.4.31. Area 168. Computer Subsystem.**

**7.4.32. Area 169. Analysis Subsystem.**

**7.4.33. Area 170. Exciter Subsystem.**

**7.4.34. Area 171. Power Amplifier Subsystem.**

**7.4.35. Area 172. DF Subsystem.**

**7.4.36. Area 173. Integrated Workstation Subsystem.**

**7.4.37. Area 174. High Band Systems.**

**7.4.38. Area 175. Special System Antennas. (Compass Call Block 30 Only)**

**7.4.39. Area 176. Tech Station Subsystem. (Compass Call Block 30 Only)**

**7.4.40. Area 177. Data Processing System (DPS) (Compass Call Block 30 Only)**

**7.4.41. Area 178. Tactical Information Broadcast System (TIBS). (Compass Call Block 30 Only)**

**7.4.42. Areas 166 through 178 - use the following criteria.**

7.4.42.1. Q. Adequate operational knowledge of the applicable system. Demonstrated proper procedure to call up, use, and exit the help file, when needed. Performed call up of appropriate pages applicable to mission accomplishment and was familiar with the contents and use of these pages. Understood operator keyboard functions. Explained LRU interfacing and functions of operation for the applicable subsystem. Properly monitored system performance.

7.4.42.2. Q-. Limited operational knowledge of the applicable subsystem. Accomplished procedures to call up, and exit the help file, when needed, with minor errors or omissions that did not adversely affect mission accomplishment. Unsure or hesitant when calling up appropriate pages or demonstrated a limited knowledge of the use and contents of these pages. Unfamiliar with operator keyboard functions. Limited knowledge of LRU interfacing and functional operation of each LRU within the applicable subsystem. Slow to monitor system performance during operation.

7.4.42.3. U. Unsatisfactory operational knowledge of the applicable subsystem. Unable to call up, use, and exit the help file, when needed, with major errors or omissions, causing critical loss of mission data, or adversely affecting mission accomplishment. Failed to call up appropriate pages and/or unfamiliar with the use and contents of these pages. Did not know keyboard functions. Did not know LRU interfacing or the functional operation of each LRU within the applicable subsystem. Failed to monitor system performance during operation.

**7.4.43. Area 179. Passenger Handling:**

**NOTE:** Area 179 applies to ABCCC and Compass Call.

7.4.43.1. Q. Correctly briefed and performed passenger handling procedures.

7.4.43.2. Q-. Difficulty briefing and/or performing passenger handling procedures.

7.4.43.3. U. Failed to brief and/or did not perform proper passenger handling procedures.

**7.4.44. Areas 180 - 190. Reserved for future use.**

## Chapter 8

### ABCCC BATTLE STAFF EVALUATIONS

**8.1. General.** The criteria contained here and in [Chapter 3](#) apply to all ABCCC Battle Staff flight evaluations.

**8.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform all mission crew duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, instructions and directives.

#### **8.3. Requirements:**

8.3.1. Mission/Qualification Evaluations. See [Table 2.7.](#) or [Table 2.8.](#) (as applicable) for required areas. The evaluation will be administered during an assigned Battle Staff mission and will include real and/or simulated forces (not applicable to Airborne Communication System Operator (ACSO)).

8.3.2. Mission Simulator Evaluations. Battle Staff simulator evaluations may be conducted in a mission simulator or by simulation on board the aircraft. Simulation may be used to administer any portion of a flight evaluation not requiring a specific live scenario. SEFE judgment will be the determining factor in the effective use of simulation. Initial ACSO's will be evaluated on Capsule Trainers IAW current ACC syllabi.

#### **8.4. Grading Criteria (Airborne Communication System Operator Evaluations):**

**8.4.1. Areas 1 through 20** --use criteria in [Chapter 3](#) of this volume.

**8.4.2. Areas 21 through 30** --use criteria in [Chapter 3](#) of this volume (if applicable).

##### **8.4.3. Area 191. Pre-Takeoff:**

8.4.3.1. Q. Correctly accomplished before starting engines, before taxi, and before takeoff procedures. Complied with aircraft commander's/director's instructions.

8.4.3.2. Q-. Limited accomplishment of required procedures. Unsure of aircraft commander's/director's instructions or made minor deviations from these instructions.

8.4.3.3. U. Failed to follow established procedures. Failed to comply with aircraft commander's/director's instructions.

##### **8.4.4. Area 192. En route Procedures:**

8.4.4.1. Q. Thoroughly accomplished in flight communication operation procedures. ATC clearances were received and relayed to the pilot correctly and timely (when required). Monitored required circuits.

8.4.4.2. Q-. Limited knowledge of in flight communication operational procedures. Hesitant or unsure of ATC clearance(s). Maintained a communication log with minor deviations.

8.4.4.3. U. Deviations from established procedures and directives adversely affected mission accomplishment. Failed to receive/relay ATC clearance(s). Maintained communications log with major errors and deviations or failed to maintain communications log. Failed to monitor required circuits.

**8.4.5. Area 193. HF/Liaison Equipment.****8.4.6. Area 194. UHF/Have Quick, and SATCOM Equipment.****8.4.7. Area 195. VHF Equipment.****8.4.8. Area 196. Tape Recorder Systems and Communications Distribution Group.****8.4.9. Area 197. Cryptological Devices.****8.4.10. Areas 193 through 197 - use the following criteria.**

8.4.10.1. Q. Thorough knowledge of components, functions, and limitations. Demonstrated proper system management and operation. Correctly determined system status.

8.4.10.2. Q-. Limited knowledge of systems, components, function and limitations. Minor deviations in system management or operation. Adequately determined the status of each system.

8.4.10.3. U. Inadequate knowledge of system components, functions, and limitations. Management or operation of systems was improper. Could not determine the status of each system.

**8.4.11. Area 198. Teletype Equipment:**

8.4.11.1. Q. Knowledge of message screening, handling and format was thorough. Knowledge of modem set-up and operations was thorough.

8.4.11.2. Q-. Had limited knowledge of message screening, handling and format. Messages were processed with delay but without adversely affecting the mission. Limited knowledge of modem set-up and operations.

8.4.11.3. U. Knowledge of message screening, handling, preparation and format was unsatisfactory. Inadequate message processing delayed transmission or delivery, adversely affecting mission. Knowledge of modem set-up and operations was unsatisfactory.

**8.4.12. Area 199. In flight Maintenance:**

8.4.12.1. Q. Able to complete analyze communication equipment malfunctions. Able to apply proper corrective action.

8.4.12.2. Q-. Limited analysis of communication equipment malfunctions. Hesitant or slow to apply corrective action.

8.4.12.3. U. Failed to analyze or incorrectly analyzed malfunctions. Applied improper corrective action.

**8.4.13. Area 200. Aircraft Knowledge:**

8.4.13.1. Q. Knowledge of the aircraft, operation of systems related to communication equipment, and normal and emergency procedures for applicable related systems was thorough.

8.4.13.2. Q-. Had limited knowledge of the aircraft and operation of systems related to communication equipment, normal and emergency procedures for applicable systems.

8.4.13.3. U. Had inadequate knowledge of aircraft and operation of systems related to communication equipment, normal and emergency procedures for applicable related systems.

**8.4.14. Area 201. Descent/Landing:**

8.4.14.1. Q. Had thorough knowledge of all required procedures. Complied with aircraft commander's/director's instructions.

8.4.14.2. Q-. Had limited knowledge of procedures. Unsure of aircraft commander's/director's instructions, or made minor deviations from those instructions.

8.4.14.3. U. Failed to follow established procedures. Major deviations or omissions. Failed to comply with aircraft commander's/director's instructions.

**8.4.15. Area 202. Post Flight:**

8.4.15.1. Q. Had thorough knowledge and performance of required procedures. Correctly determined condition and status of equipment. Thoroughly debriefed maintenance personnel as required.

8.4.15.2. Q-. Had limited knowledge of required procedures. Was unsure of condition or status of the equipment. Maintenance debriefing was not concise or thorough.

8.4.15.3. U. Knowledge of required procedures was unsatisfactory. Major deviations in procedures. Could not determine condition or status of equipment. Maintenance debriefing was inadequate.

**8.4.16. Area 203. Broadcast Intelligence Equipment (BIE):**

8.4.16.1. Q. Accomplished/supervised all required checks thoroughly and effectively. Displayed thorough knowledge of BIE system components, operation, and limitations. Fully determined status of required systems. Recognized and analyzed malfunction indications and applied proper corrective action. Skillfully and effectively used the BIE during all portions of the mission when applicable.

8.4.16.2. Q-. Accomplished/supervised required checks with minor errors, omissions, or deviations in completing checks. Displayed limited knowledge of system components, operation, and limitations. Slow to recognize or analyze malfunction indications resulting in unnecessary delays. Made errors while using the BIE or did not use the BIE to his/her advantage.

8.4.16.3. U. Failed to accomplish or supervise required checks or made major errors, omissions, or deviations in completing checks. Demonstrated unsatisfactory knowledge of system components, operation, or limitations. Failed to recognize or properly analyze malfunction indications or failed to apply proper corrective action. Lack of knowledge/improper use of the BIE that adversely affected mission accomplishment.

**8.4.17. Areas 204 - 210.** Reserved for future use.

**8.5. Grading Criteria (Director Airborne Battle Staff (DABS), Battle Staff Operations Officer (BSOO), Airborne Strike Controller (ASC), Airborne Close Air Support Coordinator (ACASCO), Airborne Intelligence Officer (AIO), Airborne Intelligence Technician (AIT)):**

**8.5.1. Areas 1 through 20** --use criteria in **Chapter 3** of this volume.

**8.5.2. Areas 21 through 30** --use criteria in **Chapter 3** of this volume (if applicable).

**8.5.3. Area 211. Pre-Takeoff:**

8.5.3.1. Q. Correctly accomplished before starting engines, before taxi, and before takeoff procedures. Complied with Aircraft Commander/DABS instructions.

8.5.3.2. Q-. Performed a limited accomplishment of required procedures. Unsure of Aircraft Commander/DABS instructions or made minor deviations from these instructions.

8.5.3.3. U. Failed to follow established procedures. Failed to comply with Aircraft Commander/DABS instructions.

#### **8.5.4. Area 212. Systems Knowledge and Operations:**

8.5.4.1. Q. Accomplished/supervised all required checks thoroughly and effectively. Displayed thorough knowledge of system components, operation, and limitations. Fully determined status of required systems. Recognized and analyzed malfunction indications and applied proper corrective action. Skillfully and effectively used the TBMS during all portions of the mission.

8.5.4.2. Q-. Accomplished/supervised all required checks with minor errors, omissions or deviations. Displayed limited knowledge of system components, operation, and limitations. Slow to recognize or analyze malfunction indications resulting in unnecessary delays. Made errors while using the TBMS or did not use the TBMS to his/her advantage.

8.5.4.3. U. Failed to accomplish/supervise required checks or made major errors, omissions, or deviations in completing checks. Demonstrated unsatisfactory knowledge of system components, operation, or limitations. Failed to recognize or properly analyze malfunction indications or failed to apply proper corrective action. Lack of knowledge/improper use of the TBMS that adversely affected mission accomplishment.

#### **8.5.5. Area 213. Communications:**

8.5.5.1. Q. Monitored/employed radios and intercoms as necessary. Demonstrated proper chattermark/radio procedures using brevity and correct terminology. Demonstrated thorough knowledge and operation of CCS. Responded to all challenges/instructions. Employed encryption/authentication systems correctly. Passed/relayed appropriate data to other agencies on ABCCC monitored/controlled nets. Recognized radio malfunctions and took appropriate action in a timely manner.

8.5.5.2. Q-. Occasionally failed to respond to interphone or radio calls, used non-standard terminology and improper chattermark procedures. Occasionally interrupted other transmissions. Demonstrated limited knowledge about, or operation of CCS. Demonstrated procedural errors in use of encryption/authentication systems. Made lengthy transmissions and improperly practiced brevity. Slow in transmitting data to other agencies. Slow to recognize radio malfunctions/problems and take appropriate action.

8.5.5.3. U. Failed to respond to essential interphone calls. Made excessive and lengthy transmissions that denied interphone or radio access to others with more essential information. Demonstrated unsatisfactory knowledge about or operation of CCS. Rarely monitored radios or failed to employ them effectively. Improper use of encryption/authentication systems resulted in possible security compromise. Failed to pass appropriate data to other agencies. Unable to recognize radio malfunctions/problems and failed to take appropriate action.

#### **8.5.6. Area 214. Monitor Tactical Situation:**

##### **8.5.6.1. DABS, BSOO, ASC, and ACASCO Criteria:**

8.5.6.1.1. Q. Correlated operations and intelligence inputs to remain abreast of the tactical situation. Maintained and used working logs for employment of air resources. Ensured that the TBMS was up-to-date and accurate. Applied the Rules of Engagement (ROE) to tactical oper-

ations in a satisfactory manner. Monitored the weather status to maintain a complete picture of the working area and immediately informed the BSOO on weather conditions that could cause changes to fraged air resources.

8.5.6.1.2. Q-. Lack of supervision in the coordination/use of intelligence or operations inputs resulted in some difficulty to remain abreast of the tactical situation. Generally up-to-date on the disposition of air resources, but allowed non-mission essential errors in the TBMS. Demonstrated limited knowledge of the ROE in non-critical areas and some difficulty in its application to tactical operations. Monitored weather status; however, did not always recognize its effect on employment of air resources. Did not always keep the next higher level of command informed of current/forecast weather conditions.

8.5.6.1.3. U. Failed to remain sufficiently abreast of the tactical situation. Failed to maintain/monitor working logs sufficiently to cross-check or correct the TBMS or did not make a concerned effort to ensure its accuracy. Did not demonstrate an acceptable ability to apply the ROE to tactical operations. Did not remain up-to-date with weather status of working area or consistently failed to keep the next higher level of command informed on current/forecast weather conditions which would affect the employment of fraged air resources.

#### **8.5.6.2. AIO, AIT Criteria:**

8.5.6.2.1. Q. Correlated intelligence and operations inputs to remain abreast of the tactical situation. Extracted relevant information from datalink sources, enhancing crew situational awareness. Ensured that intelligence in the TBMS was current and accurately plotted. Correctly analyzed all incoming information and disseminated appropriate data to other crewmembers and outside agencies, based on mission priorities. Provided effective support and/or direction to electronic warfare (EW) assets relying on ABCCC for threat warning, targeting updates, and related services.

8.5.6.2.2. Q-. Unable to correlate all operations and intelligence inputs required to remain abreast of the tactical situation. Situational awareness was degraded, resulting in minor errors or delays in the analysis and dissemination of critical information. Made minor errors in extracting or correlating information from datalink sources, directly decreasing crew awareness of significant events/potential threats. Intelligence data entered into the TBMS contained minor mistakes in plotting/posting, causing confusion and/or decreased situational awareness. Minor delays in providing threat warning, targeting updates, or other information to EW assets working with/directed by ABCCC.

8.5.6.2.3. U. Failed to remain sufficiently abreast of tactical situation. Ignored critical events or threat systems that directly impacted mission effectiveness. Unable to correlate/extract information from datalink sources, causing major degradation in mission effectiveness and/or crew situational awareness. Made critical errors/omissions in plotting/posting of intelligence data in the TBMS, directly degrading mission effectiveness. Critical data not passed in a timely manner to other crewmembers and/or other agencies. Failed to pass required information to associated EW platforms, resulting in lost opportunities for threat suppression and/or endangerment of valuable resources.

#### **8.5.7. Area 215. Allocation/Use of Air Resources:**

##### **8.5.7.1. ASC Criteria:**

8.5.7.1.1. Q. Committed air resources in accordance with priorities. Was thoroughly familiar with the performance/capability of the aircraft being controlled and the ordnance/target compatibility. Passed complete target/threat briefings to all aircraft. Kept all aircraft informed as to the proximity of possible traffic and hazards to flying safety. Was alert for possible signs of downed aircraft and thoroughly familiar with Search and Rescue (SAR) procedures.

8.5.7.1.2. Q-. Committed air resources in accordance with priorities, but demonstrated a lack of planning or flexibility in adapting to a changing tactical situation. Familiar with aircraft performance/capabilities and ordnance/target compatibility, but demonstrated incomplete knowledge in some non-critical areas. Passed incomplete target/threat briefings to aircraft. Demonstrated incomplete knowledge of SAR procedures.

8.5.7.1.3. U. Failed to commit air resources in accordance with priorities, or unable to adapt to a changing tactical situation. Was unfamiliar with aircraft performance/ capabilities or ordnance/target compatibility to the degree that the mission was degraded. Failed to pass complete target/threat briefings to aircraft resulting in mission failure/ aircraft safety. Failed to pass traffic advisory warnings that were needed to ensure good flying safety. Was not adequately familiar with SAR procedures.

#### **8.5.7.2. DABS, BSOO Criteria:**

8.5.7.2.1. Q. Properly correlated higher command guidance and the tactical situation to determine priority listing and allocation/reallocation of air resources. Assigned or ensured optimum assignment of aircraft and targets to maximize aircraft/target compatibility.

8.5.7.2.2. Q-. Placed inappropriate emphasis on either higher command guidance or the tactical situation. Did not always coordinate changes to the fragged allocation of air resources with the next higher level of command. Target ordnance assignments were acceptable but less than optimum.

8.5.7.2.3. U. Failed to satisfactorily align priorities for allocation of air resources with existing directives or tactical situation. Made frequent changes to fragged allocation of air resources without properly coordinating with the next higher level of command. Did not control assignment of air resources closely enough to prevent excessive delays, flight reassignment, or recycling through tankers. Allowed strike flights to return to base (RTB) with ordnance through untimely management. Target ordnance assignments were inappropriate.

#### **8.5.8. Area 216. Orbit Changeover:**

8.5.8.1. Q. Inbriefs were completed quickly and efficiently, and all pertinent information was plotted, posted, and relayed to the Battle Staff. Hard copy debrief was accurate and complete to the maximum extent possible. Verbal debrief was provided at the appropriate time and contained all necessary information. Questions from oncoming ABCCC crew were answered quickly and accurately.

8.5.8.2. Q-. Inbriefs were lengthy and delayed assumption of orbit unnecessarily, or were too brief/shallow failing to provide all needed information for orbit assumption. Hard copy debrief contained minor errors/omissions that were not corrected on verbal debrief. Verbal debrief was excessively long/short, or redundant from hard copy report. Answers to questions from oncoming ABCCC crew handled slowly, delaying orbit turnover.

8.5.8.3. U. Inbriefs were not completed, and Battle Staff/flight deck crew did not receive critical information, directly degrading mission effectiveness. Hard copy debrief contained major/mission critical errors that were not corrected on verbal debrief. Verbal debrief was excessively long (delaying orbit changeover), or failed to provide critical information for oncoming crew, impacting their ability to effectively prosecute the next ABCCC mission.

#### **8.5.9. Area 217. Assumption/Delegation of AOC/ASOC Combat Ops Functions:**

##### **8.5.9.1. DABS, BSOO, ASC, and ACASCO Criteria:**

8.5.9.1.1. Q. Completed a timely and effective assumption or delegation of AOC or ASOC/limited Combat Ops roles/responsibilities.

8.5.9.1.2. Q-. Caused minor delays. Disorganized or incomplete transfer of responsibility or information that did not significantly degrade the mission.

8.5.9.1.3. U. Excessively delayed or failed to transfer responsibilities or information that degraded mission accomplishment.

##### **8.5.9.2. AIO and AIT Criteria:**

8.5.9.2.1. Q. Effectively performed functions and tasks for AOC extension/airborne ASOC/limited Combat Intel roles.

8.5.9.2.2. Q-. While performing in the AOC extension/airborne ASOC/limited Combat Intel roles, made minor errors and/or omissions that did not significantly degrade the mission.

8.5.9.2.3. U. Did not effectively perform required duties in the AOC extension/airborne ASOC/limited Combat Intel roles.

#### **8.5.10. Area 218. Battle Staff Supervision:**

8.5.10.1. Q. Provided effective supervision of Battle Staff positions and communications with on-station aircraft and other agencies. Properly analyzed/prioritized all incoming/outgoing message traffic. Assigned suspense's to ensure timely accomplishment of Battle Staff functions and message compliance; and accomplished follow-on action to ensure compliance. Monitored coordination between the various Battle Staff control functions to ensure efficient allocation and control of air assets.

8.5.10.2. Q-. Provided limited supervision of Battle Staff positions. Experienced minor internal difficulties in establishing communication with on-station aircraft and other agencies. Slow to analyze or place an appropriate priority on incoming/outgoing message traffic but did not keep a complete master file. Did not assign a suspense to some actions to ensure compliance. Allowed incomplete coordination of some Battle Staff functions.

8.5.10.3. U. Provided little or no supervision for Battle Staff positions. Communications with on-station aircraft and other agencies were not properly established. Failed to analyze/prioritize incoming/outgoing message traffic. Did not assign a suspense to messages or desired/required actions. Battle Staff personnel were allowed to operate unilaterally in the control or allocation of air resources.

#### **8.5.11. Area 219. Targeting Considerations:**

8.5.11.1. Q. Familiar with targeting guidance/considerations passed by higher echelons (Air Component Commander, Ground Component Commander, Joint Task Force Commander, etc.). Cor-

rectly advised DABS on target priorities for allocation of lethal and non-lethal resources in a timely manner. Prioritized and coordinated IAR's or fleeting target nominations and approvals in an effective, timely manner, allowing target assets to be struck before being brought to bear against friendly forces. Correctly posted approved IAR's or fleeting targets to the Mission Board.

8.5.11.2. Q-. Failed to properly prioritize IAR's/fleeting targets for servicing, although a complete list of significant targets with target descriptions was available. Occasionally slow in coordination of target approvals, or advising DABS on target priorities for allocation of lethal and non-lethal assets. Delays in providing AOC with target nominations made/approved by DABS during ABCCC assumption of combat operations responsibilities. Made minor mistakes in posting IAR's/fleeting targets to the Mission Board.

8.5.11.3. U. Unfamiliar with targeting guidance/priorities passed from higher headquarters. Failed to nominate viable IAR's/fleeting target for servicing, using lethal/non-lethal means. Unclear on level of authority required for approval of fleeting targets, or changes in approval authority passed during the mission. Allowed assets from potential fleeting target to strike friendly forces, resulting in significant degradation of friendly capabilities. Made major mistakes in posting IAR's/fleeting targets to the Mission Board, resulting in targeting of the wrong location, or incorrect target elements.

#### **8.5.12. Area 220. Before Landing:**

8.5.12.1. Q. Satisfactorily accomplished or supervised required actions.

8.5.12.2. Q-. Accomplished or supervised required actions with minor deviations or errors.

8.5.12.3. U. Failed to complete or supervise required actions.

#### **8.5.13. Area 221. Post Flight:**

8.5.13.1. Q. Thoroughly accomplished post flight duties. Shutdown all equipment and stowed gear properly. All debriefing requirements were completed. Classified materials and waste were properly controlled and disposed of.

8.5.13.2. Q-. Made minor deviations in shutdown/stowage of equipment that would not cause equipment damage. Debriefing requirements were incomplete.

8.5.13.3. U. Improperly shutdown/stowed equipment in a way that could have resulted in damage. Classified material/waste were improperly controlled/disposed. Failed to accomplish debriefing requirements.

#### **8.5.14. Area 222. Broadcast Intelligence Equipment (BIE):**

8.5.14.1. Q. Accomplished/supervised all required checks thoroughly and effectively. Displayed through knowledge of BIE system components, operation, and limitations. Fully determined status of required systems. Recognized and analyzed malfunction indications and applied proper corrective action. Skillfully and effectively used the BIE during all portions of the mission when applicable.

8.5.14.2. Q-. Accomplished/supervised required checks with minor errors, omissions, or deviations in competing checks. Displayed limited knowledge of system components, operation, and limitations. Slow to recognize or analyze malfunction indications resulting in unnecessary delays. Made errors while using the BIE or did not use the BIE to his/her advantage.

8.5.14.3. U. Failed to accomplish/supervise required checks or made major errors, omissions, or deviations in completing checks. Demonstrated unsatisfactory knowledge of system components, operation, or limitations. Failed to recognize or properly analyze malfunction indications or failed to apply proper corrective action. Lack of knowledge/improper use of the BIE that adversely affected mission accomplishment.

**8.5.15. Areas 223 - 230.** Reserved for future use.

## Chapter 9

### COMPASS CALL MISSION CREW

**9.1. General.** The criteria contained in this chapter and **Chapter 3** applies to all COMPASS CALL Mission Crew flight evaluations.

**9.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform all mission crew duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, instructions, and directives.

#### **9.3. Requirements:**

9.3.1. Mission/Qualification Evaluations. See **Table 2.9** for required evaluation areas.

9.3.2. Mission Simulator Evaluations. Mission crewmember simulator evaluations may be conducted in a mission simulator or by simulation on board the aircraft. Simulation may be used to administer any portion of a flight evaluation not requiring a specific live scenario. Evaluator judgment will be the determining factor in the effective use of simulation.

#### **9.4. Grading Criteria:**

**9.4.1. Areas 1 through 20** --use criteria in **Chapter 3** of this volume.

**9.4.2. Areas 21 through 30** --use criteria in **Chapter 3** of this volume (if applicable).

#### **9.4.3. Area 231. Mission Crew Planning**

##### **9.4.3.1. Mission Crew Commander Criteria:**

9.4.3.1.1. Q. Adequately supervised the mission crew in analyzing the combat situation. Extracted all applicable information from the Air Tasking Order (ATO) and intelligence sources. Developed a comprehensive plan to execute electronic countermeasures in support of the ATO.

9.4.3.1.2. Q-. Supervised the mission crew in analyzing the combat situation, but with minor errors or omissions that did not degrade mission accomplishment. Minor errors in developing a plan to execute electronic countermeasures in support of the ATO.

9.4.3.1.3. U. Errors or omissions in supervising the mission crew in analyzing the combat situation that adversely affected mission accomplishment. Developed an ineffective plan to execute electronic countermeasures in support of the ATO.

##### **9.4.3.2. Mission Crew Supervisor, Acquisition Operator, Analysis Operator Criteria:**

9.4.3.2.1. Q. Checked all factors applicable to the mission. Complied with MCC/MCS directives. Demonstrated sufficient target knowledge to complete mission planning in an effective manner. Complied with local directives governing procedures. Demonstrated knowledge of available alternatives.

9.4.3.2.2. Q-. Checked all information required to complete mission planning, but with minor errors or omissions that did not degrade mission accomplishment. Target knowledge was

incomplete or inaccurate, but sufficient to complete mission planning. Minor deviations from local directives or MCC/MCS instructions.

9.4.3.2.3. U. Errors or omissions in mission planning that could have jeopardized safety or adversely effected mission accomplishment. Target knowledge was insufficient to complete mission planning. Deviations in procedures resulted in incomplete/inaccurate planning.

#### **9.4.3.3. High Band Operator Criteria:**

9.4.3.3.1. Q. Coordinated weapon systems and intelligence inputs applicable to HB operations with the mission crew. Deconflicted weapon systems as required. Reviewed tasking documents, intelligence reports, and ROE. Planned an effective jam strategy.

9.4.3.3.2. Q-. Omitted some non-critical detail while coordinating weapon systems or intelligence inputs applicable to the High Band (HB) operations with mission crew. Made minor errors in deconflicting weapon systems. Did not fully review tasking documents, intelligence reports, and ROE applicable to HB operations. Made minor errors in developing a jam strategy, but did not compromise mission accomplishment.

9.4.3.3.3. U. Failed to adequately coordinate weapon systems or intelligence inputs applicable to the HB operations with the mission crew. Did not deconflict weapon systems as required. Failure to review tasking documents, intelligence reports, and ROE had major impact on HB operations and/or mission accomplishment. Planned an ineffective jam strategy.

#### **9.4.4. Area 232. Communications Equipment:**

9.4.4.1. Q. Knowledge of equipment and its operation was thorough. Performed system loading in accordance with published procedures. Checked and verified equipment for proper system operation.

9.4.4.2. Q-. Knowledge of equipment and its operation was limited. Minor errors or occasional deviations in correct loading or check/verification procedures. Unnecessary delays loading, checking, or verifying equipment for proper operation.

9.4.4.3. U. Knowledge of equipment and its operation was inadequate. Major errors or used incorrect procedures that prevented loading and use of the equipment. Failed to load, check, or verify equipment for proper operation.

#### **9.4.5. Area 233. System Setup:**

9.4.5.1. Q. Complete knowledge of system operating parameters and mission data entries. Entered/checked appropriate parameters and data required for successful mission accomplishment.

9.4.5.2. Q-. Limited knowledge of systems operating parameters and mission data entries. Minor errors or omissions when entering/checking parameters and data but did not deter mission accomplishment.

9.4.5.3. U. Displayed inadequate knowledge of system operating parameters and mission data entries. Major errors or omissions when entering/checking parameters and data that prevented successful mission accomplishment.

#### **9.4.6. Area 234. Mission Equipment System Knowledge/Operation:**

**9.4.6.1. Mission Crew Commander, Mission Crew Supervisor, Acquisition Operator, Analysis Operator Criteria:**

9.4.6.1.1. Q. Manipulated system to obtain the desired results. Thorough knowledge of system components, operation, and limitations to accomplish all tasks defined in local directives or as assigned by the MCC/MCS. Recognized malfunction indications and took appropriate corrective action.

9.4.6.1.2. Q-. Minor errors in manipulating the system to obtain the desired results. Could not identify all major system components. Assigned tasks were completed in a consistently slow or hesitant manner that degraded mission effectiveness. Slow to recognize malfunction indications. Did not take proper corrective action.

9.4.6.1.3. U. Failed to manipulate the system to obtain desired results. Displayed inadequate knowledge of system components, operation, and limitations. Could not complete assigned tasks due to unsatisfactory knowledge of system operation. Task accomplishments consistently slow to the point that completion of mission objectives was impossible.

**9.4.6.2. High Band Operator Criteria:**

9.4.6.2.1. Q. Demonstrated satisfactory knowledge of HB systems, capabilities and limitations. Operated the systems performing required search, map, locate, and jam functions accurately and in a timely manner. Immediately recognized, analyzed, and applied the proper corrective action to system malfunctions.

9.4.6.2.2. Q-. Demonstrated limited knowledge of HB systems, capabilities or limitations. Minor difficulty operating the systems performing required search, map, locate, and jam functions accurately and in a timely manner. Slow to recognize, analyze, or apply the proper corrective action to system malfunctions.

9.4.6.2.3. U. Demonstrated unsatisfactory knowledge of HB systems, capabilities or limitations. Failed to recognize, analyze, or apply the proper corrective action to system malfunctions.

**9.4.7. Area 235. Tactical Employment:****9.4.7.1. Mission Crew Commander Criteria:**

9.4.7.1.1. Q. Employed weapons system in accordance with published procedures. Made adjustments for limitations imposed by threats, terrain, or equipment failure/degraded operations and tasking.

9.4.7.1.2. Q-. Minor errors or deviations from published procedures while employing weapons system but did not prevent accomplishment of the mission. Demonstrated limited knowledge of adjustments for limitations imposed by threats, terrain, or equipment failure/degraded operations.

9.4.7.1.3. U. Major errors or deviations from published procedures that prevented accomplishment of the mission. Demonstrated inadequate knowledge of adjustments for limitations imposed by threats, terrain, or equipment failure/degraded operations.

**9.4.7.2. High Band Operator Criteria:**

9.4.7.2.1. Q. Employed HB weapons system in accordance with published procedures. Correlated intelligence and operations inputs to stay abreast of the tactical situation. Correctly applied the ROE to tactical operations in a timely manner.

9.4.7.2.2. Q-. Minor errors or deviations from published procedures while employing HB weapons system but did not prevent mission accomplishment. Did not correctly correlate intelligence or operations inputs to remain abreast of the tactical situation. Demonstrated an incomplete knowledge and application of the ROEs

9.4.7.2.3. U. Major errors or deviations from published procedures that prevented mission accomplishment. Failed to remain sufficiently abreast of the tactical situation that impaired effective mission accomplishment. Failed to apply the ROEs correctly to critical situations.

#### **9.4.8. Area 236. Target/Threat Knowledge:**

##### **9.4.8.1. Mission Crew Commander, Mission Crew Supervisor, Acquisition Operator, Analysis Operator Criteria:**

9.4.8.1.1. Q. Had sufficient knowledge of the applicable theater of operations and order of battle. Accurately described the operations, components and limitations of targeted weapon systems.

9.4.8.1.2. Q-. Limited knowledge of the theater of operations and order of battle which impaired mission accomplishment. Minor errors in describing the operations, components and limitations of targeted weapon systems.

9.4.8.1.3. U. Knowledge of the theater of operations and order-of-battle was inadequate and prevented mission accomplishment. Could not describe the echelon structure, operations, components or limitations of targeted weapon systems.

##### **9.4.8.2. High Band Operator Criteria:**

9.4.8.2.1. Q. Knowledge of the target environment was thorough. Correctly identified the components, operations, and limitations of target weapon systems. Correctly explained how the HB system affects the target and/or limitations of the system.

9.4.8.2.2. Q-. Knowledge of the target environment was limited. Minor errors in identifying the components, operations, and limitations of target weapon systems. Minor errors in explaining how HB system affects the target and/or the limitations of the system.

9.4.8.2.3. U. Lacked knowledge of the target environment. Could not identify the components, operations, and limitations of target weapon systems. Could not explain how the HB system affects the target and/or the limitations of the system.

#### **9.4.9. Area 237. Jamming Operations/Antenna Orientation/Timing:**

9.4.9.1. Q. Initiated jamming within one minute of preplanned or scheduled window. If tactical situation dictated a change in the jam window, adjustments were made as required. Conducted jamming look-throughs to ensure situational awareness was maintained throughout the entire jam window. Ensured antennas were oriented toward the target environment prior to jam initiation.

9.4.9.2. Q-. Delayed jamming of a preplanned window for more than one minute but less than two minutes. Jam window adjustments were made but not optimal for the tactical situation. Conducted

limited jamming look-throughs resulting in degraded situational awareness. Antennas were not always oriented toward the target environment prior to initiation of jamming.

9.4.9.3. U. Failed to initiate jamming within two minutes of a preplanned or scheduled window. Failed to make adjustments in the jam window when the tactical situation dictated a change. Failed to conduct jamming look-throughs resulting in a complete loss of situational awareness. Antennas were not oriented toward the target environment.

#### **9.4.10. Area 238. Allocation/Use of Jamming/Radiate Resources:**

##### **9.4.10.1. Mission Crew Commander Criteria:**

9.4.10.1.1. Q. Had thorough knowledge of and monitored appropriate jam management displays for evaluation of system effectiveness. Thorough knowledge of jamming resources. Allocation of jamming resources was optimal and appropriate for jamming operations. Set activation was accomplished so that appropriate targets were jammed when required.

9.4.10.1.2. Q-. Limited knowledge/monitoring of appropriate jam management displays. Limited knowledge of jamming resources. Allocation of jamming resources was not optimal but did not deter from appropriate jamming operations. Set activation was unnecessarily delayed.

9.4.10.1.3. U. Inadequate knowledge of/failed to monitor jam management displays. Inadequate knowledge of jamming resources. Allocation of jamming resources was inadequate and prevented mission accomplishment. Failed to activate sets at required times such that required targets were not jammed.

##### **9.4.10.2. High Band Operator Criteria:**

9.4.10.2.1. Q. Adequately managed Locate/Jam resources and selected the correct jam strategy according to activity in the Area of Responsibility (AOR) to ensure successful mission accomplishment. Locate/Jam operations were coordinated with the MCC and executed as planned.

9.4.10.2.2. Q-. Managed Locate/Jam resources and selected the correct jam strategy according to activity in the AOR with minor errors that did not compromise successful mission accomplishment. Locate/Jam operations were not fully coordinated with the MCC and/or not executed as planned.

9.4.10.2.3. U. Failed to adequately manage Locate/Jam resources or select the correct jam strategy according to activity in the AOR to the extent that successful mission accomplishment was or could have been compromised. Locate/Jam operations were not coordinated with the MCC and/or not executed as planned.

#### **9.4.11. Area 239. Tactical Situation Monitoring:**

9.4.11.1. Q. Correlated intelligence and operations inputs to stay abreast of the tactical situation. Analyzed incoming information and disseminated appropriate data in a timely manner.

9.4.11.2. Q-. Did not completely correlate operations and intelligence inputs to remain abreast of the tactical situation. Disseminated critical information but caused some delays.

9.4.11.3. U. Failed to remain sufficiently abreast of the tactical situation that impaired effective mission accomplishment. Failed to pass critical data to operators in need of the information.

#### **9.4.12. Area 240. Signal Environment Analysis:**

**9.4.12.1. Mission Crew Supervisor Criteria:**

9.4.12.1.1. Q. Completed echelon construction actions as reflected in mission planning documents. Accurately and efficiently placed targeted signals in proper echelon(s) based on tasking priorities and ROE's. Monitored status of target echelons/signals and coordinated effective use of resources. Accurately analyzed signals of interest when required.

9.4.12.1.2. Q-. Echelon construction did not accurately reflect mission planning documents, but deviation(s) did not significantly degrade mission accomplishment. The echeloning of targeted signals was occasionally inaccurate or slow. Did not consistently monitor signal and/or echelon status, resulting in inefficient resource allocation. Required signal analysis was occasionally inaccurate but did not jeopardize mission accomplishment.

9.4.12.1.3. U. Failed to construct echelon system or deviated significantly to the point that mission could not be accomplished as planned. Failed to echelon or analyze signals, which jeopardized mission accomplishment.

**9.4.12.2. Acquisition Operator Criteria:**

9.4.12.2.1. Q. Correlated intelligence and operational inputs to stay abreast of the tactical situation. Signal search and processing techniques were effective and in support of jam strategy and mission tasking. Signal analysis and disposition were accurate and timely. Knowledgeable of and applied all ROE to tactical operation. Made timely and accurate inputs to MCS/MCC to help maintain crew situational awareness.

9.4.12.2.2. Q-. Minor errors in correlating intelligence or operational inputs to stay abreast of the tactical situation. Signal search and processing techniques had minor errors or were not always in support of jam strategy or mission tasking. Signal analysis and disposition were slow or occasionally inaccurate. Limited knowledge of or minor errors in applying ROEs to the tactical operation. Inputs to MCS or MCC were slow or detracted from crew situational awareness.

9.4.12.2.3. U. Failed to correlate intelligence and operational inputs to stay abreast of the tactical situation. Signal search and processing techniques were ineffective or not in support of jam strategy or mission tasking. Signal analysis and disposition were inaccurate or excessively slow. Not knowledgeable of or did not apply all ROEs to tactical operation of the system. Failed to make timely and accurate inputs to MCS or MCC to help maintain crew situational awareness.

**9.4.12.3. Analysis Operator Criteria:**

9.4.12.3.1. Q. Employed effective signal search procedures. Accurately identified target signals. Adjusted operations/dispositioned signal IAW existing directives, MCC/MCS guidance and the tactical situation. Correctly applied ROE to mission operations.

9.4.12.3.2. Q-. Occasionally demonstrated ineffective signal search procedures. Signal analysis was occasionally inaccurate or slow and impaired mission accomplishment. Minor errors in signal disposition or adjusting operations IAW existing directives, MCC/MCS guidance and the tactical situation. ROEs incorrectly applied.

9.4.12.3.3. U. Signal search procedures consistently ineffective. Signal analysis consistently inaccurate or excessively slow and prevented mission accomplishment. Failed to disposition signals IAW existing directives, MCC/MCS guidance or the tactical situation.

#### **9.4.13. Area 241. Mission Crew Supervision:**

##### **9.4.13.1. Mission Crew Commander Criteria:**

9.4.13.1.1. Q. Ensured proper coordination existed between the various mission crew functions to produce smooth and efficient mission accomplishment.

9.4.13.1.2. Q-. Some mission crew functions were not properly coordinated resulting in a minor impact on mission accomplishment.

9.4.13.1.3. U. Supervision of mission crew personnel was insufficient or nonexistent. Lack of crew coordination prevented mission accomplishment.

##### **9.4.13.2. Mission Crew Supervisor Criteria:**

9.4.13.2.1. Q. Planned, directed and supervised mission crewmember actions effectively. Adjusted crew tasking and search efforts based on mission phases/tasking during the mission. Checked completed actions as necessary. Maintained good situational awareness.

9.4.13.2.2. Q-. Planning, direction or supervision of mission crewmembers was accomplished with errors or omissions which detracted from overall mission accomplishment. Situational awareness was occasionally lacking but did not significantly affect mission accomplishment. Did not effectively adjust tasking during mission when required.

9.4.13.2.3. U. Supervision of crewmembers not accomplished, or conducted in a manner which detracted significantly from mission accomplishment. Lack of situational awareness had a significant negative impact on, or prevented, successful mission accomplishment. Failed to adjust critical crew tasking when required.

#### **9.4.14. Area 242. Communications:**

9.4.14.1. Q. Thorough knowledge of and compliance with correct communications procedures. Monitored/employed radios as necessary. Transmissions were concise and utilized proper terminology. Monitored all appropriate communications systems per mission tasking. Used approved COMSEC procedures and employed encryption and authentication correctly. Displayed satisfactory knowledge and use of interphone system.

9.4.14.2. Q-. Occasional deviations from correct procedures that required retransmissions. Occasionally interrupted other transmissions. Used extraneous or non-standard terminology. Demonstrated procedural errors employing encryption and authentication. Displayed limited knowledge of COMSEC procedures. Minor deviations in configuration/use of interphone system.

9.4.14.3. U. Rarely monitored radios or failed to employ them effectively. Responsible for confusion, which jeopardized effective mission accomplishment or caused excessive delays. Major procedural errors employing encryption and authentication. Displayed inadequate knowledge of COMSEC procedures. Major deviations in configuration/use of interphone system.

#### **9.4.15. Area 243. Post Engagement:**

9.4.15.1. Q. Thoroughly accomplished or supervised required checks after termination of engagement. Correctly identified and initiated proper action to correct maintenance problems. Ensured

mission equipment was shut down and all loose equipment secured before landing. Provided required inputs to mission summary.

9.4.15.2. Q-. Accomplished or supervised required actions after termination of engagement with minor errors or deviations which did not jeopardize safety. Identified maintenance problems, but was unaware of correct reporting procedures. Did not completely consolidate mission summary inputs.

9.4.15.3. U. Failed to successfully accomplish or supervise required actions after termination of engagement which could have jeopardized safety. Failed to identify or initiate corrective action for maintenance problems. Failed to shut down equipment or secure loose items before landing.

#### **9.4.16. Area 244. Mission Equipment System Malfunction Analysis:**

##### **9.4.16.1. Mission Crew Commander Criteria:**

9.4.16.1.1. Q. Sufficient knowledge of work-arounds or recovery procedures for system malfunctions. Conducted cross-checks for correct system operation. Immediately recognized and analyzed malfunction indications and applied or directed the crew/AMT to apply corrective action or recovery procedures as needed.

9.4.16.1.2. Q-. Limited knowledge of work-arounds or recovery procedures for system malfunctions. Conducted limited cross-checks for correct system operation. Slow to recognize or analyze malfunction indications. Slow to apply corrective action.

9.4.16.1.3. U. Displayed inadequate knowledge of work-arounds or recovery procedures for system malfunctions. Conducted inadequate cross-checks for correct system operation. Failed to recognize or properly analyze malfunction indications or failed to apply corrective action.

##### **9.4.16.2. Mission Crew Supervisor, Acquisition Operator, Analysis Operator Criteria:**

9.4.16.2.1. Q. Sufficient knowledge of system malfunctions. Conducted cross-checks for correct system operation. Immediately recognized and analyzed malfunction indications and coordinated with MCC/AMT to apply corrective action as needed.

9.4.16.2.2. Q-. Limited knowledge of system malfunctions. Conducted limited cross-checks for correct system operation. Slow to recognize or analyze malfunction indications. Slow to coordinate with MCC/AMT.

9.4.16.2.3. U. Displayed inadequate knowledge of system malfunctions. Conducted inadequate cross-checks for correct system operation. Failed to recognize or properly analyze malfunction indications.

#### **9.4.17. Area 245. Post Flight:**

9.4.17.1. Q. Thoroughly accomplished post flight duties. Shut down all equipment and stowed gear properly.

9.4.17.2. Q-. Minor deviations or omissions, which would not cause equipment damage.

9.4.17.3. U. Improperly stowed or turned off equipment which could have resulted in damage to the equipment.

#### **9.4.18. Area 246. Debriefing:**

9.4.18.1. Q. When required, debriefed maintenance, intelligence, and both the mission and flight crews. Debriefing content and sequence were in accordance with current directives. Covered all pertinent items. Debriefing was conducted in a professional manner.

9.4.18.2. Q-. Minor errors, omissions, or deviations in debriefing. Content and sequence deviated slightly from current directives; some pertinent items not covered.

9.4.18.3. U. When required, failed to debrief maintenance, intelligence, mission, or flight crew. Major errors, omissions, or deviations to debriefing guide. Briefing delivery was unsatisfactory.

**9.4.19. Forms Adopted.** AF Form 8, *Certificate of Aircrew Qualification*; DD Form 365-4, *Weight and Balance Clearance Form F - Transport*; AF Form 847, *Recommendation for Change of Publication*.

CHARLES F. WALD, Lt General, USAF  
DCS/Air & Space Operations

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFDD 1-2, *Air Force Glossary*

AFI 10-1101, *Operations Security*

AFI 11-2EC-130E/H, Volume 1, *EC-130E/H--Aircrew Training*

AFI 11-2EC-130E/H, Volume 3, *EC-130E/H--Operations Procedures*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFI 11-202V3, *General Flight Rules*

AFI 11-215, *Flight Manuals Program (FMP)*

AFI 11-218, Volumes 1 & 2, *Aircraft Operation and Movement on the Ground*

AFI 11-235, *Forward Area Refueling Point (FARP) Operations*

AFI 11-290, *Cockpit/Crew Resource Management*

AFI 11-301, *Aircrew Life Support (ALS) Program*

AFI 11-401, *Flight Management*

AFI 11-403, *Aerospace Physiological Training Program*

AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*

AFI 21-101, *Maintenance Management of Aircraft*

AFI 31-209, *The Air Force Resource Protection Program*

AFI 31-501, *Personnel Security Program Management*

AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*

AFI 33-360V1, *Publications Management Program*

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFJMAN 11-226, *United States Standard for Terminal Instrument Procedures (TERPS)*

AFMAN 11-217, Volumes 1 & 2, *Instrument Flight Procedures*

AFPAM 11-216 (formerly AFM 51-40, *Air Navigation*)

AFPD 11-2, *Aircraft Rules and Procedures*

AFTTP 3-1V16, *Tactical Employment--EC-130H (U) (Secret)*

AFI 91-204, *Safety Investigations and Reports*

T.O. 00-20-5, *Aircraft, Drone, Aircrew Training Devices, Engines, Air Launched Missile Inspections, Flight Reports, and Supporting Maintenance Documents*

*Abbreviations and Acronyms*

**ACC**—Air Combat Command

**ACASCO**—Airborne Close Air Support Coordinator

**ACSMQR**—Airborne Communication System Mission Qualification Rescue

**ACSO**—Airborne Communication System Operator

**AFI**—Air Force Instruction

**AIT**—Airborne Intelligence Officer

**AIT**—Airborne Intelligence Technician

**AMT**—Airborne Maintenance Technician

**AOC**—Air Operations Center

**ARCP**—Air Refueling Control Point

**ASC**—Airborne Strike Controller

**ASOC**—Air Support Operations Center

**ASR**—Airport Surveillance Radar

**ATA**—Actual Time of Arrival

**ATD**—Aircrew Training Device

**ATM**—Air Turbine Motor

**ATO**—Air Tasking Order

**BIS**—Broadcast Intelligence System

**BIT**—Built-In-Test

**BSOO**—Battle Staff Operations Officer

**CC**—Commander

**CCS**—Crewmember Communication Selector

**CDG**—Communication Distribution Group

**CEOI**—Communication Electronic Operating Instructions

**COMSEC**—Communications Security

**CP**—Copilot

**CRM**—Crew Resource Management

**DABS**—Director of Airborne Battle Staff

**DEG**—Degree

**DF**—Direction Finding

**DH**—Decision Height

**DR**—Dead Reckoning  
**DOTV**—Director Of Operations Training Standardization Evaluation  
**ECU**—Environmental Control Unit  
**ELT**—Emergency Locator Transmitter  
**EMCON**—Emission Option Communications. See T.O. 1-1C-1-29 for specific definitions.  
**EP**—Emergency Procedures  
**EPE**—Emergency Procedures Evaluation  
**ETP**—Equal Time Point  
**ETA**—Estimated Time Of Arrival  
**FCIF**—Flight Crew Information File  
**FE**—Flight Engineer  
**FTU**—Formal Training Unit  
**GPS**—Global Positioning System  
**GTC**—Gas Turbine Compressor  
**HB**—High Band  
**HHQ**—Higher Headquarters  
**HQ**—Headquarters  
**IAP**—Instrument Approach Procedure  
**IAR**—Immediate Air Request  
**IAW**—In Accordance With  
**ICAO**—International Civil Aviation Organization  
**IFF**—Identification, Friend Or Foe  
**ILS**—Instrument Landing System  
**INS**—Inertial Navigation System  
**IP**—Instructor Pilot  
**IRC**—Instrument Refresher Course  
**JTIDS**—Joint Tactical Information Distribution System  
**KIAS**—Knots Indicated Airspeed  
**LRU**—Line Replaceable Unit  
**MAJCOM**—Major Command  
**MCC**—Mission Crew Commander  
**MCS**—Mission Crew Supervisor

**MDA**—Minimum Descent Altitude

**MDS**—Mission Design Series

**MSN**—Mission

**N**—Navigator

**N/A**—Not Available

**NAF**—Numbered Air Force

**NM**—Nautical Mile

**N/N**—No-Notice

**NOTAM**—Notice To Airman

**OG**—Operations Group

**OGV**—Operations Group Standardization/Evaluation

**OPR**—Office Of Primary Responsibility

**ORM**—Operational Risk Management

**P**—Pilot

**PAR**—Precision Approach Radar

**PME**—Primary Mission Equipment

**QUAL**—Qualification

**Q**—Qualified

**R**—Required

**RNP**—Required Navigation Performance

**ROE**—Rules of Engagement

**RTB**—Return To Base

**SAR**—Search and Rescue

**SCNS**—Self-Contained Navigation System

**SIM**—Simulator

**SINCGARS**—Single Channel Ground/Air Radio System

**SQ**—Squadron

**STAN/EVAL**—Standardization/Evaluation

**TA**—Terrain Avoidance

**TAS**—True Airspeed

**TBMS**—Tactical Battle Management Subsystems

**TOLD**—Take-Off And Landing Data

**U**—Unqualified

**VDP**—Visual Descent Point

**VFR**—Visual Flight Rules

**VMCA**—Velocity for Minimum Control Authority

**VOR**—Very High Frequency Omni-directional Range Station

**WST**—Weapons System Trainer

### *Terms*

**Deviation**—Performing an action not in sequence with current procedures, directives, or instructions. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

**Major Error**—Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

**Minor Error**—Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error did not detract from mission accomplishment, adversely affect use of equipment, or violate safety.