

**BY ORDER OF THE  
SECRETARY OF THE AIR FORCE**



**AIR FORCE MANUAL 11-2B-2  
VOLUME 2**

**4 FEBRUARY 2019**

***Flying Operations***

***B-2 AIRCREW EVALUATION  
CRITERIA***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This volume implements AFD 11-2, *Aircraft Operations*; AFD 11-4, *Aviation Service*; and references AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. It applies to all United States Air Force (USAF) and Air National Guard (ANG) B-2 units. This manual does not apply to Air Force Reserve (AFR) units. Major Commands (MAJCOMs)/Direct Reporting Units (DRUs)/ Field Operating Agencies (FOAs) are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to Headquarters (HQ) United States Air Force (USAF)/A3XI, through HQ Air Force Global Strike Command (AFGSC)/A3TV, for approval prior to publication in accordance with (IAW) AFD 11-2. Copies of approved and published MAJCOM/DRU/FOA-level supplements will be provided to HQ USAF/A3XI, HQ AFGSC/A3TV, the user organizations and National Guard Bureau's offices of primary responsibility by the issuing organizations. Field units will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for review. **Note:** The reference to Direct Reporting Unit and Field Operating Agency in this paragraph refer only to those organizations that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360, *Publications and Forms Management*.

This manual requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code Section 8013, Secretary of the Air Force and Executive Order 13478, Amendment to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers. Forms affected by the PA have an appropriate PA statement.

System of records notice F011 AF XO A, Aviation Resource Management System (ARMS) (December 26, 2002, 67 FR 78777) applies. Paperwork Reduction Act of 1974 as amended in 1996 affects this manual. Ensure all records created, as a result of processes prescribed in this publication, are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System. Recommendations for improvements to this volume will be submitted on AF Form 847, *Recommendation for Change of Publication*, through channels, to the parent MAJCOM Standardization/Evaluation (Stan/Eval). Parent MAJCOM Stan/Eval will forward approved recommendations to lead command OPR (HQ AFGSC/A3T 245 Davis Ave, Barksdale AFB LA 71110). HQ USAF/A3XI is the approval authority for interim changes to this manual. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See [Para 1.2](#) and AFI33-360, [Table 1.1](#), for a description of the authorities associated with the Tier numbers. AFGSC/A3 is the waiver approving authority for T-2 requirements in this publication. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority.

## SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. This change includes compliance tier annotations indicating a compliance requirement and/or waiver authority level assessed by HAF/A3O criteria. [Table 2.1](#) has been updated to separate instrument (INSTM) and qualification (QUAL) requirements. [2.3.1.4](#) Air refueling requirements updated. [2.6](#) Dual Seat Qualification removed. [1.7](#) Instructor (INSTR) evaluation verbiage rewritten for clarity.

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## Chapter 1

### GENERAL INFORMATION

**1.1. General.** All evaluations will be conducted IAW the provisions of AFI 11-202V2 and this manual. (T-1).

**1.2. Waivers.** All requirements within this Air Force Manual (AFMAN) are tiered in accordance with AFI 33-360 to indicate the waiver authority.

**1.3. Procedures.**

1.3.1. Flight examiners (FE) will use the evaluation criteria in this volume to conduct all flight, Aircrew Training Device (ATD), and Emergency Procedures Evaluations (EPE). (T-2) To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria. (T-2)

1.3.2. When available, authorized recording devices should be used to reconstruct and evaluate the mission. When used, these recordings will be managed as official electronic records IAW AFMAN 33-363 and disposed of IAW AFRIMS.

1.3.3. Unless specified, the examinee or FE may fly in any flight position/seat which will best enable the FE to conduct a thorough evaluation.

1.3.4. Prior to flight, the FE will brief the examinee on the purpose of the evaluation and how it will be conducted. (T-2) The examinee will accomplish required flight planning in accordance with the examinee's flight position during the evaluation. (T-2) Higher Headquarters FEs (and unit FEs as determined locally) may assist in mission planning/briefing as tasked and will be furnished a copy of necessary mission data and mission materials. (T-2)

1.3.5. Initial (INIT) qualification evaluations that do not complete required items may use events from a previous syllabus directed progress check (pre-check) in accordance with the B-2A Initial Qualification Training syllabus. The reason why required area(s) was/were not evaluated in-flight on the evaluation will be documented in the Comments portion of the AF Form 8, *Certificate of Aircrew Qualification*. (T-2)

1.3.6. FEs, during any phase of the evaluation, may require the examinee to demonstrate/instruct and/or present verbal explanation of performance computations, system operation, or procedures and techniques. FEs will exercise sound judgment to ensure oral questions are comprehensive and pertinent to the crewmember's duties and responsibilities and will not interfere with normal mission accomplishment.

1.3.7. The FE will thoroughly debrief all aspects of the evaluation to the examinee. (T-2) This debrief will include the examinee's overall rating, specific deviations, area grades assigned (if other than qualified) and any required additional training. (T-2)

1.3.8. If an actual emergency occurs, only the initial reaction will be evaluated. (T-3) Evaluator discretion is used to determine when to terminate an evaluation.

**1.4. Grading Instructions.** Standards and performance parameters are contained in AFI 11-202V2 and this manual.

1.4.1. The FE will base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. (T-2). The FE will not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. (T-2). The FE will consider cumulative deviations when determining the overall grade. (T-2)

1.4.2. When grading criteria requires a specific airspeed/angle of attack (AOA) be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed/AOA for that area, the desired airspeed/AOA will be briefed by the examinee. (T-2)

1.4.3. The FE will compare examinee performance for each area accomplished during the evaluation with the standards provided in this volume and assign an appropriate grade for the area. (T-2). Derive the overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW this manual.

1.4.3.1. FEs will use the grading criteria in this volume to determine individual area grades. (T-2) FE judgment should be exercised when the wording of areas is subjective and when specific situations are not covered.

1.4.3.2. If the examinee receives an unqualified area grade in any of the critical areas identified by this volume, an overall qualification level of “Q-3” will be assigned. (T-2)

1.4.3.3. FE judgment is the determining factor in arriving at the overall grade.

1.4.3.4. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches:

**Table 1.1. General Criteria.**

Q	Altitude	+/- 200 feet
	Airspeed	+/- 5%
	Course	+/- 5 degrees/3 NM (whichever is greater)
	Tactical Air Navigation (TACAN) Arc	+/- 2 NM
Q-	Altitude	+/- 300 feet
	Airspeed	+/- 10%
	Course	+/- 10 degrees/5 NM (whichever is greater)
	TACAN Arc	+/- 3 NM
U		Exceeded Q- limits

**1.5. EPE Evaluation.** The Weapons System Trainer (WST) will be used to conduct the requisite EPE. (T-3) **Note:** For evaluations conducted in the WST, tolerances from **Table 1.1** for both Q and Q- criteria are increased by a factor of 50%. If the WST is temporarily unavailable, the EPE may be given via an alternate method (i.e., verbally) if approved by the Operations Group Commander (OG/CC). Document the reason and the alternate method utilized to accomplish the EPE in the Comments portion of the AF Form 8. (T-2) This evaluation will include areas commensurate with the examinee's mission status (Combat Mission Ready [CMR] or Basic Mission Capable [BMC]). (T-2).

1.5.1. The following items are required on all emergency procedure evaluations (T-2):

1.5.1.1. Aircraft General Knowledge.

1.5.1.2. Crew Coordination.

1.5.2. All INSTM and/or QUAL EPEs will include the following additional items (T-2):

1.5.2.1. Emergency Procedures. All Boldface will be evaluated. Evaluate a minimum of two emergency procedures in each of the following flight phases:

1.5.2.1.1. Preflight/Ground Operations.

1.5.2.1.2. Takeoff.

1.5.2.1.3. Enroute/Cruise.

1.5.2.1.4. Recovery/Landing.

1.5.2.2. AFMAN 11-217, *Instrument Flight Procedures*.

1.5.2.3. Unusual Attitude Recoveries.

1.5.2.4. Alternate/divert airfields. Evaluate a minimum of one approach at other than home base.

1.5.3. All Mission (MSN) EPEs will include the following items (tailor MSN evaluation scenarios to unit tasking/mission). (T-2) Optional for Basic Aircraft Qualification (BAQ) aircrew EPEs.

1.5.3.1. Emergency Procedures. Evaluate a minimum of two emergency procedures in the tactical phase of flight. The ability to achieve reasonable mission objectives with a degraded weapons system will be evaluated.

1.5.3.2. Electronic attack (EA)/Electronic Protection (EP)/All Aspect Missile Defense (AAMD).

1.5.3.3. Evasive action/Threat Reaction.

1.5.3.4. Weapons Employment. A minimum of one bomb run (or guided weapons release) will be evaluated in a contested environment. Additionally, at least three of the following procedures (appropriate for conventional or nuclear EPE) will be evaluated:

1.5.3.4.1. Target Create.

1.5.3.4.2. Target File Change (i.e. coordinate(s), mission, option or function, etc.).

1.5.3.4.3. Desired Mean Point Impact (DMPI)/Target Disk Read.

1.5.3.4.4. Abort (Bomb Run, Guided Weapons Release or Unguided Bomb Release).

1.5.3.4.5. Minimum Interval Dual Bay Release.

1.5.3.4.6. L0 Recovery.

1.5.3.4.7. Command Disable – Crew Compartment.

1.5.3.4.8. Guided Weapons Collateral Damage Estimate (CDE).

1.5.3.4.9. Hung Weapon.

1.5.3.4.10. Unlock Consent Malfunctions.

1.5.3.4.11. Weapon Bay Door Fault.

1.5.3.4.12. Weapon(s) Jettison.

1.5.4. Examinees receiving an overall unqualified grade will be placed in supervised status until recommended additional training is completed and/or a reevaluation is successfully accomplished. (T-2).

1.5.4.1. Examinees receiving an overall unqualified grade because of an unsatisfactory Boldface/Corrective Action Plan (CAP) accomplishment will not be permitted to fly until a successful reevaluation is accomplished. (T-2)

1.5.4.2. For EPEs in which the examinee is qualified, but requires additional training, the FE determines whether the additional training will be accomplished before the next flight.

1.5.4.3. Additional training and reevaluations will be accomplished IAW AFI 11-202V2. (T-2)

1.5.5. In the event the flight evaluation is a nuclear mission the EPE should be conventional and vice versa.

1.5.6. The following grading criteria is used to grade individual items on EPEs:

1.5.6.1. Q. Performance is correct. Quickly recognizes and corrects errors.

1.5.6.2. Q-. Performance is safe, but indicates limited proficiency. Makes errors of omission or understanding directives/instruction.

1.5.6.3. U. Performance is unsafe or indicates lack of knowledge or ability.

## **1.6. Examinations.**

1.6.1. Emergency Procedures Exam (Closed Book):

1.6.1.1. General Knowledge. This exam will consist of at least 20 questions and includes information applicable to the individual crew position and unit mission. (T-2.)

1.6.1.2. Boldface. Written recitation must contain all critical items in the proper sequence. Verbatim responses are not required; however, answers must clearly state the intended course of action. (T-2).

1.6.2. Qualification Exam (Open Book). This exam will consist of a minimum of 50 questions derived from all flight manuals and governing command directives. (T-2)

## **1.7. Instructor Evaluations:**

1.7.1. An individual on an initial INSTR or requalification (RQ) INSTR evaluation receiving either a grade of Q- with additional training or U in the Instructor Performance area (AREA 28) will receive an overall INSTR evaluation grade of "Q3." (T-2) If the instructor evaluation is being executed concurrently with any periodic evaluation, the periodic evaluation may be graded "Q1," "Q2," or "Q3" as determined by the FE.

1.7.2. A qualified instructor receiving an area grade of Q- with additional training, or U in any grading area during a periodic evaluation will not perform instructor duties in that area until

additional training is complete. (T-2) The FE will check the “Restrictions” block and annotate the restriction on the back of the AF Form 8. (T-2)



## Chapter 2

### EVALUATION REQUIREMENTS

#### 2.1. General.

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2 and this manual. (T-2)

2.1.2. Required areas for flight evaluations are shown in **Table 2.1**. All areas annotated with an “R” are required and must be accomplished. (T-3) When it is impossible to evaluate a required area in-flight, it may be evaluated by an alternate method (i.e. Weapons System Trainer (WST) or verbal examination) if approved by the OG/CC. FEs will document areas not evaluated in flight, the alternate methods used and justification in the Additional Comments portion of the AF Form 8. (T-2) BMC aircrew will only be evaluated on those missions routinely performed and in those areas they are qualified to perform unsupervised. (T-2) For efficiency, strive to complete all evaluation requirements on one flight.

2.1.3. Performance and Planning Data. Examinee will be graded on the performance data actually used for takeoff. (T-2)

2.1.4. Preplanned Mission Data. If any portion of mission data is “canned” by appropriate staff agencies for crew use, that portion of the data will not be graded under “mission planning”. (T-2) In the event that any mission data was derived by use of a command computer product, the crewmember will be responsible for the mission parameters initially inputted into the computer by the crewmember. (T-2) The pilot in command (Aircraft Commander/Instructor Pilot (AC/IP), or FE for pilot evaluations) is ultimately responsible to ensure data used in the aircraft is accurate and affords effective mission accomplishment.

2.1.5. Publications Check. Examiner will check the following publications: T.O. 1B-2A-1, 1B-2A-1CL-1, 1B-2A-34-2-1CL-1, 1B-2A-25-2CL-1, and Local In-flight Guide (T-2):

2.1.5.1. Any additional publications issued to aircrews and specified in the unit supplement to AFI11-202V2.

2.1.6. Cockpit/Crew Resource Management (CRM). In accordance with AFI 11-290, *Cockpit/Crew Resource Management Program*, CRM skills will be evaluated during all evaluations. (T-2). CRM skills are integral to all phases of flight and are embedded within specific grading criteria.

2.1.7. Normally, the INSTM, QUAL, and MSN evaluations will be combined as a single evaluation. (T-2). Evaluations flown in this manner must fulfill all current INSTM, QUAL and MSN evaluation requirements, including ground phase requisites. (T-2) For combined INSTM/QUAL/MSN evaluations, one EPE may be accomplished that encompasses all EPE requirements. Additional simulator time may be required to complete these items.

**2.2. Instrument and Qualification Evaluations.** A sortie flown under instrument flight rules (to the maximum extent practical) best fulfills the objective of the INSTM/QUAL evaluation.

2.2.1. Minimum ground phase requisites are (T-2):

2.2.1.1. Instrument examination (not required for QUAL only).

2.2.1.2. Closed and open book qualification examinations.

2.2.1.3. EPE.

2.2.1.4. Boldface Exam.

2.2.2. Air work/Advanced Handling/Tactical Maneuvering. (WST Only) This area will be used for evaluating specific flight characteristics demonstration maneuvers. (T-2) The pilot and mission commander must each demonstrate the ability to safely accomplish the required maneuvers in accordance with the procedures and limitations outlined in the flight manual and governing directives. (T-2)

2.2.3. Emergency Traffic Patterns:

2.2.3.1. A simulated engine loss exercise must be given during level flight with sufficient time provided to allow completion of the emergency procedures checklist prior to final approach. (T-2). Simulated engine out go-arounds may be accomplished in the WST.

2.2.3.2. The following emergency procedures are required:

2.2.3.2.1. Simulated single engine out approach/go (WST only).

2.2.3.2.2. Simulated two engines out approach/go (WST only).

2.2.4. Touch-and-Go is required for all INIT and RQ evaluations. (T-2)

**2.3. Mission (MSN) Evaluation.** MSN evaluation will be flown IAW current tactics, unit tasking and theater Area of Responsibility scenarios and will incorporate all appropriate evaluation requirements from **Table 2.1**. (T-2) MSN evaluations will reflect real-world threats and threat avoidance to the greatest extent possible, weather and flight conditions permitting. (T-3) These evaluations will demonstrate the individual's ability to accomplish any unit combat tasking to include special missions. (T-3) The crewmember will demonstrate defensive/evasive action bombing and Emission Control (EMCON) to the maximum extent possible. (T-3) On missions when Special Mission Instructions (SPINS) are not available or used, use command guidance from appropriate regulations. (T-3) MSN evaluations should be flown using established tactics, techniques, and procedures, and in accordance with published unit standards. Evaluations during exercises or exercise deployments are encouraged. Evaluations during contingency/combat deployments should only be given as a last resort in order to maintain mission qualification status. Mission qualification training (MQT) MSN evaluations may be conducted in the WST. **Note:** BMC aircrew will only be evaluated on those missions routinely performed. (T-2) Examinees will only be evaluated on those areas for which they are qualified. (T-2)

2.3.1. Air Refueling. The air refueling evaluation will include air refueling communication, rendezvous (point parallel or enroute), aircraft control, descent, contact, fuel management and transfer, visual signals (may be done orally if necessary), post refueling, and breakaway. Air refueling practice emergency separation procedures must be initiated with the receiver in the refueling envelope. (T-3)

2.3.1.1. Ten minutes of contact time (INIT QUAL checks 15 minutes) must be completed within 30 minutes after initial pre-contact position. (T-3)

2.3.1.2. Schedule air refueling on all MSN evaluations. (T-3) For all experienced aircrew periodic evaluations, if scheduled air refueling activity is lost (i.e. operational constraints prevented accomplishing air refueling in-flight), air refueling may be completed via an alternate method at squadron commander discretion provided it was evaluated in flight to

a Q1 level during the previous evaluation. Document occurrence in the Additional Comments portion of the AF Form 8. (T-2) Actual air refueling must be accomplished in flight for all INIT and RQ evaluations; however, it may be completed during a progress check, if allowed by the specific syllabus, in accordance with [paragraph 1.3.5](#) of this manual. (T-2)

2.3.2. Weapons Employment. As a minimum, a single nuclear bomb run or single conventional weapon release/bomb run must be accomplished. (T-3)

2.3.2.1. The intent is to schedule and demonstrate procedures and techniques for multiple weapon types. However, the evaluation may be completed when any type bomb run/weapon release is accomplished. Each bomb run/weapon release must result in a simulated/actual release of a weapon. (T-3) Alternate methods of bombing may be used as equipment malfunctions dictate and will satisfy the requirements of the evaluation. Accomplish bomb run/weapon release using delivery tactics as specified in Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1.

2.3.2.2. Heading tolerances will be from mission directives (e.g., SPINS) or governing directives whichever is more restrictive. (T-3) Heading must be evaluated at release of the first weapon by comparing the planned heading versus actual and Horizontal Situation Indicator (HSI) heading to ensure prescribed tolerances are met. (T-3) Both lower and upper (if applicable) altitude parameters for conventional weapons must be met. (T-3) Airspeed will be graded through the release of all weapons. (T-3)

**2.4. Instructor Evaluation.** Instructor evaluations will be conducted IAW AFI 11-202V2 and this manual. (T-1).

2.4.1. Periodic aircrew evaluations (i.e. INSTM, QUAL and MSN) will include instructor portions during the evaluations for qualified instructors. (T-2).

2.4.2. Instructor Demonstrations. All special maneuvers, such as boom limits demonstration, will be evaluated in flight on INIT and RQ INSTR evaluations. (T-2).

2.4.3. Flight Training Unit (FTU) and Weapons Instructor Course (WIC) MSN Evaluations. USAF Weapon School (USAFWS) and FTU Instructor Pilot MSN evaluation profiles will normally be IAW the formal course syllabus for any MSN, which the IP is qualified to instruct. The only required items for an FTU or WIC IP mission check are those items required by the syllabus, for the specific sortie being flown. (T-2).

**2.5. Difference Requirements (If Applicable).** Individuals qualifying in a different area, tactic, weapon, or weapon system must complete the training required by governing directives and receive a Difference Certificate. (T-3) If appropriate, prior to receipt of a Difference Certification, the individual must complete emergency procedures and qualification examinations covering the new items and demonstrate proficiency to a qualified instructor pilot. (T-3) A weapon preflight may be required for any changes in unit tasking. If an in-flight evaluation is required, a new AF Form 8 will be completed. (T-2). If an in-flight evaluation is not required, certify individual's new qualification level on unit Letter of X's, and individual's training folder, as appropriate. (T-3)

Table 2.1. Pilot Evaluations (T-2).

AREA	NOTES	AREA TITLE	INST	QUAL	MSN
<b>GENERAL</b>					
1		FLIGHT PUBLICATIONS	R	R	R
2		MISSION PLANNING		R	R
3		BRIEFING (if applicable)		R	R
4		PRE-TAKEOFF		R	R
5		TAKEOFF	R	R	
6		DEPARTURE	R	R	
7		LEVEL OFF	R	R	
8		CRUISE/NAVIGATION	R	R	
9		FORMATION			
10		IN-FLIGHT CHECKS		R	R
11		EQUIPMENT OPERATION		R	R
12		COMM/ Identification, Friend or Foe (IFF)/SIF	R		R
13	WST ONLY	AIRWORK/ADVANCED HANDLING/ TACTICAL MANEUVERING		R	R
14		CREW COORDINATION/CRM	R	R	R
15	4,2	AIR REFUELING		R	
16		DESCENT	R	R	
17	1	GO-AROUND		R	
18	1	EMERGENCY TRAFFIC PATTERNS		R	
19	4	Visual Flight Rules (VFR) PATTERN/APPROACH		R	
20	4	TOUCH AND GO LANDING		R	
21		LANDING	R	R	
22		AFTER LANDING		R	
23		DEBRIEF/CRITIQUE		R	R
24		KNOWLEDGE	R	R	R
25	*	AIRMANSHIP	R	R	R
26	*	SAFETY	R	R	R
27	*	AIRCREW DISCIPLINE	R	R	R
28		INSTRUCTOR PERFORMANCE	R	R	R
29-30		NOT USED			
<b>INSTRUMENT</b>					
31	1	HOLDING	R		
32	1	INSTRUMENT PENETRATION/ENROUTE DESCENT			
33		NOT USED			
34	1,3	PRECISION APPROACH	R		
35	1	NON-PRECISION APPROACH	R		

36	1	MISSED APPROACH/CLIMBOUT	R		
37	1	CIRCLING/SIDE-STEP APPROACH			
38	1	INSTRUMENT CROSS-CHECK	R		
39-40		NOT USED			
AREA	NOTES	AREA TITLE	INST	QUAL	MSN
<b>TACTICAL EMPLOYMENT</b>					
41		TACTICAL PLAN			R
42	WST ONLY	TACTICAL EMPLOYMENT			R
43		GCI / AWACS / COMPOSITE FORCE INTEGRATION			R
44		RADIO TRANSMISSION / INTERPHONE USAGE AND DISCIPLINE			R
45		INGRESS			R
46-47		NOT USED			
48	4	SIM/ACTUAL WEAPONS EMPLOYMENT		R	R
49		RANGE/ESS PROCEDURES			
50		EGRESS			R
51		TRAINING RULES / ROE			R
52-60		NOT USED			
<p>*Denotes Critical Area</p> <p><b>Notes:</b></p> <p>1. May be accomplished in the WST. Loss of engines/systems should not be simulated during actual emergency procedures. Pilots may take credit for this event if in flight loss of engine(s)/engine thrust occur and approaches are flown to a full stop.</p> <p>2. If scheduled AR cannot be completed inflight, experienced Aircraft Commanders or Instructor Pilots not accomplishing an INIT or RQ evaluation, may complete air refueling via an alternate method at SQ/CC discretion IAW <b>paragraph 2.3.1.2.</b></p> <p>3. If a Precision Approach Radar (PAR) or an Instrument Landing System (ILS) is not available then Simulated Instrument Landing System (SILS) may be substituted.</p> <p>4. Areas 15, 19, 20 and 48 required for INIT QUAL and RQ QUAL Evaluations. (T-2)</p>					

## Chapter 3

### EVALUATION CRITERIA

#### 3.1. General Grading Standards.

3.1.1. The grading criteria in this chapter is divided into three sections: General, Instrument, and Tactical Employment. All events performed on the evaluation will be graded using the applicable grading criteria. (T-2)

3.1.2. Where major areas are divided into subareas, only one grade will be assigned to the applicable major area. (T-2) Discrepancies on the back of the AF Form 8 will be annotated by subarea. (T-2)

#### 3.2. General.

##### 3.2.1. Area 1--Flight Publications:

3.2.1.1. Q. Assigned flight publications were current and contained only minor annotation or filing discrepancies.

3.2.1.2. Q-. Assigned flight publications contained deviations, omissions and /or errors. However, they contained the information necessary for effective mission accomplishment of all phases of the mission and did not compromise safety of flight.

3.2.1.3. U. Contained major deviations, omissions and/or errors. Required information was not available. **Note:** The mission commander is responsible for compliance with the compartment requirement of AFI 11-215, *USAF Flight Manuals Program*, and command supplements, and will be graded appropriately if non-compliant. (T-2)

##### 3.2.2. Area 2--Mission Planning:

3.2.2.1. Q. Developed a sound plan to accomplish the mission. Accurately and efficiently accomplished mission preparation. Checked all factors applicable to flight in accordance with applicable directives. Aware of alternatives available, if flight could not be completed as planned. Read and initialed for all items in the Flight Crew Information File (FCIF)/Read Files.

3.2.2.2. Q-. Same as above, except minor deviations, omissions, and/or errors that did not detract from mission effectiveness. Knowledge of performance capabilities or approved operating procedures/ rules was marginal in some areas.

3.2.2.3. U. Major deviations, omissions, and/or errors that would preclude safe or effective mission accomplishment. Displayed faulty knowledge of operating data or procedures. Did not sign off FCIF prior to flight.

##### 3.2.3. Area 3--Briefing:

###### 3.2.3.1. Organization:

3.2.3.1.1. Q. Well organized and presented in a logical sequence. Concluded briefing in time to allow for formation briefing (if applicable).

3.2.3.1.2. Q-. Events out of sequence, hard to follow, some redundancy.

3.2.3.1.3. U. Disorganized. Illogical sequence during presentation caused confusion. Did not allow time for formation briefing (if applicable).

3.2.3.2. Presentation:

3.2.3.2.1. Q. Presented briefing in a professional manner, well organized and in a logical sequence. Flight/crew members clearly understood mission requirements.

3.2.3.2.2. Q-. Dwelled on non-essential mission items.

3.2.3.2.3. U. Presentation created doubts or confusion.

3.2.3.3. Mission Objectives:

3.2.3.3.1. Q. Established objectives for the mission. Presented all training events and effectively addressed methods for accomplishing the mission.

3.2.3.3.2. Q-. Objectives undefined and poorly quantified. Omitted minor training events. Limited discussion of techniques.

3.2.3.3.3. U. Did not establish objectives for the mission. Omitted major training events or did not discuss techniques.

3.2.3.4. Flight/Crew Member Consideration:

3.2.3.4.1. Q. Considered the abilities of all flight/crew members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.2.3.4.2. Q-. Did not consider all flight/crew members' abilities. Did not identify possible problem areas.

3.2.3.4.3. U. Ignored flight/crew members' abilities and past problem areas.

3.2.4. Area 4--Pre-Takeoff: This area includes all activity up to crossing the hold line.

3.2.4.1. Q. Established and adhered to station, start engine, taxi times to assure thorough preflight, check of personal equipment, crew briefing, etc. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives. Deviations occurred as a result of moving to another piece of equipment while awaiting timeout.

3.2.4.2. Q-. Minor deviations, omissions, and/or errors occurred which did not detract from mission effectiveness or performance and/or knowledge was the minimum acceptable and indicated a definite need for assigned study and/or additional training.

3.2.4.3. U. Omitted major item(s) of the appropriate checklist. Major deviations in procedure, which would preclude safe mission accomplishment. Failed to determine accurately the readiness of aircraft for flight. Crew errors directly contributed to a late takeoff, which degraded the mission or made it non-effective.

3.2.5. Area 5--Takeoff. This area includes all activity from initiation of takeoff checklist up to and including establishing climb configuration and airspeed.

3.2.5.1. Q. Accomplished prescribed procedures and checklists in accordance with the flight manual and governing directives. Smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures. Airspeeds were within tech order tolerances.

3.2.5.2. Q-. Minor flight manual procedural or technique deviations. Some under or over control at liftoff.

3.2.5.3. U. Lift-off potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

3.2.6. Area 6--Departure: This area includes the portion of flight after establishing climb configuration and airspeed up to, but not including, level-off.

3.2.6.1. Q. Performed departure as published/directed and complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.6.2. Q-. Minor deviations in airspeed and navigation occurred during completion of departure. Minor omissions, deviations, and/or errors in procedures detracted from overall mission efficiency.

3.2.6.3. U. Failed to comply with published/directed departure instructions. Major omissions, deviations, and/or errors in procedures.

3.2.7. Area 7--Level-off. This area does not include level-offs during instrument departures, penetrations, enroute descents and traffic patterns.

3.2.7.1. Q. Leveled off smoothly. Promptly established proper cruise airspeed.

3.2.7.2. Q-. Level-off was erratic. Slow in establishing proper cruise airspeed.

3.2.7.3. U. Level-off was extremely erratic. Excessive delay or failed to establish proper cruise airspeed. Failed to reset altimeter, as required.

3.2.8. Area 8--Cruise/Navigation: This area includes all high altitude flight.

3.2.8.1. Q. Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace (i.e., Military Operating Area (MOA), restricted area, etc.). Made all control times, to include weapon release times, within published or briefed tolerances. At no time allowed the aircraft to deviate more than ten nautical miles from planned course.

3.2.8.2. Q-. Minor errors in procedures or use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Performance demonstrated a lack of knowledge or ability that could have affected mission accomplishment.

3.2.8.3. U. Major errors in procedures or use of navigation equipment. 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 parameters for Q-.

3.2.9. Area 9--Formation:

3.2.9.1. Flight Lead:



3.2.9.1.1. Q. Established and maintained appropriate formations utilizing published and briefed procedures. Positive control of flight/element during mission. Planned ahead and made timely decisions.

3.2.9.1.2. Q-. Limited flight management. Not unsafe, but made it difficult for wingman to maintain position. Did not always plan ahead and/or was hesitant in making decisions. Delayed mission accomplishment or degraded training. Minor deviations in procedure.

3.2.9.1.3. U. Did not establish appropriate formations. Little consideration for wingman. Major deviations in procedures. Indecisive. Placed wingman in unsafe position or circumstance. Did not accomplish the mission or failed to correct in-flight discrepancies. Failed to ensure wingman maintained proper position.

3.2.9.2. Wingman:

3.2.9.2.1. Q. Was able to maintain position with only momentary deviations. Maintained safe separation and complied with procedures. Smooth, timely join-up. Made smooth and immediate position corrections.

3.2.9.2.2. Q-. Position varied considerably. Some procedural deviations. Over-controlled. Slow to join-up.

3.2.9.2.3. U. Unable to maintain proper formation position. Unsafe join-up or procedures. Abrupt position corrections. Did not maintain safe separation.

3.2.10. Area 10--In-flight Checks:

3.2.10.1. Q. Performed all in-flight checks as required.

3.2.10.2. Q-. Minor deviations, errors or omissions during checks. Performance and/or knowledge was the minimum acceptable and indicated a definite need for assigned study and/or additional training.

3.2.10.3. U. Did not perform in-flight checks or monitor systems to the degree that an unsafe situation could have developed if allowed to continue uncorrected.

3.2.11. Area 11--Equipment Operation. This area includes the individual's systems knowledge and proper equipment operating procedures. Evaluate fuel management, aircraft and/or systems operation in this area. It does not include emergency/abnormal procedures.

3.2.11.1. Q. Operated equipment according to procedures and checklists contained in the flight manuals and governing directives. Accurately and efficiently analyzed equipment malfunctions with consistent reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.

3.2.11.2. Q-. Operated equipment with minor deviations, omissions, and/or errors from procedures required by the flight manual or governing directives. Equipment malfunctions were consistently ignored, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. Deviations, omissions, and/or errors in malfunction analysis, prescribed procedures, or faulty techniques caused a degradation of equipment performance. The level of performance or knowledge consistently resulted in marginal reliability. Did not damage equipment.

3.2.11.3. U. Equipment damage may have resulted due to circumstances within operator's control. Unable to recognize a major equipment malfunction. Unable to obtain acceptable results due to poor operational techniques or procedures.

3.2.12. Area 12--Communications/IFF/SIF. This area includes interphone, Air Force Satellite Communications System (AFSATCOM)/ Military Strategic and Tactical Relay (MILSTAR), Ultra High Frequency (UHF)/ Very High Frequency (VHF) and High Frequency (HF) radio, authentication, IFF, command and control, and other pertinent requirements. This area is not used for grading Air Traffic Control (ATC) clearances, ATC communication, or air refueling interplane communications.

3.2.12.1. Q. Complete knowledge of and compliance with correct communication/IFF/SIF procedures. Transmissions concise with proper terminology. Complied with and acknowledged all required instructions.

3.2.12.2. Q-. Occasional deviations from correct procedures that required retransmissions or resetting codes. Slow in initiating required actions. Transmissions contained extraneous matter, were not in proper sequence, or nonstandard terminology used.

3.2.12.3. U. Incorrect procedures or poor performance precluded mission accomplishment or jeopardized safety. Failed to submit a required report.

3.2.13. Area 13--Airwork/Advanced Handling/Tactical Maneuvering:

3.2.13.1. Q. Aircraft control during maneuvers was positive and smooth. Maneuvers performed IAW directives and appropriate to the tactical situation/environment. Adhered to established procedures.

3.2.13.2. Q-. Aircraft control during maneuvers not always smooth and positive, but adequate. Minor procedural deviations or lack of full consideration for tactical situation.

3.2.13.3. U. Aircraft control erratic. Aircraft handling caused unsatisfactory accomplishment of maneuvers. Failed to consider the tactical situation. Temporary loss of aircraft control.

3.2.14. Area 14--Crew Coordination/CRM:

3.2.14.1. Q. Effectively coordinated with other crewmembers/flight members during all phases of the mission. Effectively used CRM techniques.

3.2.14.2. Q-. CRM/Coordination was lacking with other crewmembers/flight members to the extent minor deviations or omissions caused delays, confusion, degraded the successful delivery of weapons, and/or crew situational awareness. Crew communications were confusing and/or not well understood. CRM was the minimum acceptable.

3.2.14.3. U. Breakdown in coordination with other crewmembers/flight members precluded mission accomplishment or jeopardized safety. CRM was lacking to the extent the mission accomplishment was severely degraded. Created confusion or delays which could have endangered the aircraft or prevented reliable weapon delivery.

3.2.15. Area 15--Air Refueling:

3.2.15.1. Air Refueling Rendezvous:

- 3.2.15.1.1. Q. Rendezvous accomplished using proper procedures. Effective use of radio communications.
- 3.2.15.1.2. Q-. Rendezvous delayed by improper techniques, procedures, or radio communications.
- 3.2.15.1.3. U. Spent excessive time in trail, excessive rendezvous delay or safety of flight jeopardized. Made an actual or attempted rendezvous with the wrong aircraft or the individual was unable to find the correct tanker in multi-aircraft refueling.
- 3.2.15.2. Air Refueling Procedures:
- 3.2.15.2.1. Q. Used proper procedures. Initiated appropriate rate of closure to affect an expeditious rejoin from the precontact to the contact position. Aircraft control was smooth and positive during tanker rendezvous and refueling. Refueled with no more than three (two for recurring checks) pilot-induced disconnects.
- 3.2.15.2.2. Q-. Used proper procedures. Initiated excessively slow or stagnated closure from the precontact to the contact position. Rough aircraft control during rendezvous and refueling. Refueling with no more than four (three for recurring checks) pilot-induced disconnects.
- 3.2.15.2.3. U. Used unacceptable procedures. Excessive time to affect closure from the precontact to the contact position delayed mission accomplishment. Unable to maintain contact position. Caused more than four (three for recurring checks) pilot-induced disconnects. Unable to accomplish air refueling safely.
- 3.2.16. Area 16--Descent. This area includes all activity from departing cruise altitude for entry into low level operations, initial penetration, or enroute descent to completion of descent at final approach fix or level off at planned instrument flight rules (IFR) altitude.
- 3.2.16.1. Q. Performed descent as directed, complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.
- 3.2.16.2. Q-. Performed descent as directed with minor deviations. Accomplished procedures and checklists required by the flight manual and governing directives with minor omissions, deviations, or errors.
- 3.2.16.3. U. Performed descent with major deviations. Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge/performance of the flight manual or governing directives.
- 3.2.17. Area 17--Go-Around:
- 3.2.17.1. Q. Initiated and performed go-around promptly in accordance with manual and operational procedures and directives. Airspeed tolerances are +/-10 Knots Indicated Air Speed (KIAS).
- 3.2.17.2. Q-. Slow to initiate go-around or procedural steps. Airspeed tolerances are +/- 15 KIAS.

3.2.17.3. U. Did not self-initiate go-around when appropriate or directed. Techniques unsafe or applied incorrect procedures. Erratic aircraft control. Large deviations in runway alignment.

3.2.18. Area 18--Emergency Traffic Patterns:

3.2.18.1. Q. Performed emergency procedures IAW applicable directives. Able to prioritize actions to recover the aircraft safely. Maintained aircraft control within appropriate standards. Airspeed tolerances are +10/-5 KIAS.

3.2.18.2. Q-. Performed emergency procedures with minor deviations, omissions, and/or errors from applicable directives, did not jeopardize the safe recovery of the aircraft. Airspeed tolerances are +15/-10 KIAS.

3.2.18.3. U. Performed emergency procedures with major deviations, omissions, and/or errors. Unable to recover the aircraft safely.

3.2.19. Area 19--VFR Pattern/Approach:

3.2.19.1. Q. Performed patterns/approaches IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment. Maintained proper or briefed airspeed. Airspeed tolerances are +10/-5 knots.

3.2.19.2. Q-. Performed patterns/approaches with minor deviations to procedures outlined in the flight manual, operational procedures and local directives. Aircraft control was not consistently smooth, but safe. Variations in runway alignment. Slow to correct to proper or briefed airspeed. Airspeed tolerances are +15/-10 knots.

3.2.19.3. U. Approaches not performed IAW procedures outlined in the flight manual, operations procedures, and local directives. Erratic aircraft control. Large deviations in runway alignment.

3.2.20. Area 20--Touch and Go Landing:

3.2.20.1. Q. Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment.

3.2.20.2. Q-. Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough; however, runway alignment was accomplished.

3.2.20.3. U. Landing not performed IAW procedures outlined in the flight manual, operational procedures and local directives. Failed to ensure the aircraft was in a safe landing configuration.

3.2.21. Area 21--Landing. Includes all activity from Minimum Descent Altitude (MDA) or Decision Height (DH) through landing/go-around. Touch-and-go procedures are graded under this area. This area includes initiation of appropriate landing checklist.

3.2.21.1. Q. Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment.

3.2.21.2. Q-. Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough; however, runway alignment was accomplished.

3.2.21.3. U. Landing not performed IAW procedures outlined in the flight manual, operational procedures and local directives. Failed to ensure the aircraft was in a safe landing configuration.

3.2.22. Area 22--After Landing. This area includes use of checklists, taxiing, parking, shutdown and completion of forms and reports. All mission data will be available for grading. (T-2).

3.2.22.1. Q. Appropriate after-landing checks and aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. Completed all required forms accurately.

3.2.22.2. Q-. Same as qualified except some deviations or omissions noted in performance of after-landing check and/or aircraft taxi procedures. Safety was not jeopardized. Required forms completed with minor deviations, omissions, and/or errors.

3.2.22.3. U. Major deviations, omissions, and/or errors were made in performance of after-landing check or aircraft taxi procedures, which could have jeopardized safety. Data recorded inaccurately or omitted.

3.2.23. Area 23--Debrief/Critique. Convened by the pilot in command (aircraft commander for AC checks, instructor for IP checks; FE for pilot checks) as soon as practical after flight. The mission will be reviewed and areas of crew coordination discussed in order to establish methods and/or actions required to improve crew coordination. (T-2).

3.2.23.1. Q. Flight was critiqued in an orderly manner. All portions of the mission were reviewed with reference to the mission objectives with only minor omissions. Incorrect procedures were discussed and appropriate action taken to prevent recurrence.

3.2.23.2. Q-. Flight was critiqued in a haphazard manner. Little or no reference to the mission objectives. Critique of incorrect procedures or analysis was incomplete or incorrect. Critique indicated a definite need for study and/or additional training.

3.2.23.3. U. Critique was omitted.

3.2.24. Area 24--Knowledge:

3.2.24.1. Emergency Procedures:

3.2.24.1.1. Q. Correct, immediate response to Boldface and non-Boldface emergency situations. Effectively used checklist/flight manual.

3.2.24.1.2. Q-. Response to certain areas of non-Boldface emergencies or follow-on steps to Boldface procedures was slow/confused. Used the checklist/flight manual when appropriate, but slow to locate required data.

3.2.24.1.3. U. Incorrect response to Boldface emergency situations. Unable to analyze problems or take corrective action. Did not use checklist/flight manual, or lacked acceptable familiarity with its arrangement or contents.

3.2.24.2. Flight Rules/Procedures:

3.2.24.2.1. Q. Thorough knowledge of flight rules and procedures. Thorough knowledge of local area procedures.

3.2.24.2.2. Q-. Deficiencies in depth of knowledge. Limited knowledge of local area procedures.

3.2.24.2.3. U. Inadequate knowledge of flight rules and procedures. Inadequate knowledge of local area procedures.

3.2.25. Area 25--Airmanship (Critical):

3.2.25.1. Q. Executed the mission in a timely, efficient manner. Demonstrated a keen sense of situational awareness. Conducted the flight with a sense of understanding and comprehension.

3.2.25.2. U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment or situational awareness to the extent that safety could have been compromised. Resources were not always effectively used to the extent that specific mission objectives were not achieved.

3.2.26. Area 26--Safety (Critical):

3.2.26.1. Q. Aware of and complied with all safety factors required for safe operation of the aircraft and mission accomplishment.

3.2.26.2. U. Was not aware of or did not comply with all safety factors required for safe operations or conduct of the mission. Failed to accomplish Boldface procedures correctly. Operated the aircraft or equipment in a dangerous manner.

3.2.27. Area 27--Aircrew Discipline (Critical):

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

3.2.27.2. U. Failed to exhibit flight or crew discipline. Violated or ignored rules or regulations.

3.2.28. Area 28--Instructor Performance:

3.2.28.1. Briefing/Debrief:

3.2.28.1.1. Q. Presented a comprehensive instructional briefing/critique, which encompassed all mission events. Made good use of training aids. Analysis of events/maneuvers were sound. Clearly defined objectives.

3.2.28.1.2. Q-. Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.

3.2.28.1.3. U. Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Did not use training aids/reference material effectively. Failed to define mission objectives.

3.2.28.2. Demonstration of Maneuvers/Equipment Operation:

3.2.28.2.1. Q. Performed required maneuvers or procedures within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated sound instructor proficiency.

3.2.28.2.2. Q-. Performed required maneuvers or procedures with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.2.28.2.3. U. Was unable to perform required maneuvers or procedures properly. Made major procedural errors. Did not provide in-flight commentary.

3.2.28.3. Instructor Knowledge:

3.2.28.3.1. Q. Demonstrated in-depth knowledge of procedures, requirements, aircraft systems/performance characteristics, mission, weapons employment, and tactics.

3.2.28.3.2. Q-. Deficiencies noted in the depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission, weapons employment, or tactics.

3.2.28.3.3. U. Unfamiliar with procedures, requirements, aircraft systems/performance characteristics, mission, weapons employment, or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

3.2.28.4. Training Forms Preparation:

3.2.28.4.1. Q. Completed appropriate training records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

3.2.28.4.2. Q-. Minor errors or omissions in training/evaluation records. Comments were incomplete or slightly unclear.

3.2.28.4.3. U. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.2.28.5. Ability to Instruct:

3.2.28.5.1. Q. Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction/evaluation was accurate, effective, and timely. Was completely aware of aircraft/mission situation at all times.

3.2.28.5.2. Q-. Problems in communication or analysis degraded effectiveness of instruction/evaluation.

3.2.28.5.3. U. Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not remain aware of aircraft/mission situation at all times.

3.2.29. Area--29 through 30: NOT USED.

**3.3. Instrument.**

3.3.1. Area 31--Holding:

3.3.1.1. Q. Entry and holding procedures IAW applicable directives. Holding pattern limit exceeded by not more than:

3.3.1.1.1. Leg Timing +/-15 seconds.

3.3.1.1.2. TACAN +/-2 NM.

3.3.1.2. Q-. Holding pattern limit exceeded by not more than:

3.3.1.2.1. Leg Timing +/-20 seconds.

3.3.1.2.2. TACAN +/-3 NM.

3.3.1.3. U. Holding was not IAW published procedures and directives. Exceeded criteria for "Q-" or holding pattern limits.

3.3.2. Area 32--Instrument Penetration/Enroute Descent:

3.3.2.1. Q. Performed the penetration/enroute descent and approach as published/directed and IAW applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

3.3.2.2. Q-. Performed the penetration/enroute descent and approach with minor deviations. Complied with all restrictions. Slow to make corrections.

3.3.2.3. U. Performed the penetration/enroute descent and approach with major deviations. Erratic corrections.

3.3.3. Area 33: NOT USED.

3.3.4. Area 34--Precision Approach:

3.3.4.1. Q. Performed procedures as directed and IAW applicable flight manual. Smooth and timely corrections to azimuth and glideslope and/or controller's instructions. Initiated appropriate action at decision height. Position would have permitted a safe landing.

3.3.4.1.1. Airspeed +10/-5 kts.

3.3.4.1.2. Heading within 5 degrees of controller's instructions (PAR).

3.3.4.1.3. Glide Slope/Azimuth within one dot (ILS/SILS).

3.3.4.2. Q-. Performed procedures with minor deviations. Slow to respond to controller's instructions, make corrections or initiate procedures. Position would have permitted a safe landing. Slow to correct to proper/briefed airspeed or glide path. Initiated appropriate action at Decision Height +/- 50 feet.

3.3.4.2.1. Airspeed +15/-10 kts.

3.3.4.2.2. Heading within 10 degrees of controller's instructions (PAR).

3.3.4.2.3. Glide Slope within one dot low/two dots high (ILS/SILS).

3.3.4.2.4. Azimuth within two dots (ILS/SILS).

3.3.4.3. U. Performed procedures with major deviations. Erratic corrections. Exceeded Q- limits. Did not respond to controller's instructions. Did not initiate appropriate action at decision height and/or position would not have permitted a safe landing.



### 3.3.5. Area 35—Non-Precision Approach:

3.3.5.1. Q. Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at Minimum Descent Altitude (MDA) at or before the Visual Descent Point (VDP) or Missed Approach Point (MAP). Position would have permitted a safe landing. Maintained proper/briefed airspeed.

3.3.5.1.1. Airspeed +10/-5 knots

3.3.5.1.2. Heading  $\pm 5$  degrees (Airport Surveillance Radar (ASR))

3.3.5.1.3. Course  $\pm 5$  degrees at MAP

3.3.5.1.4. Localizer less than one dot deflection

3.3.5.1.5. Minimum Descent Altitude +100/-0 feet

3.3.5.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Position would have permitted a safe landing.

3.3.5.2.1. Airspeed +15/-10 knots

3.3.5.2.2. Heading  $\pm 10$  degrees (ASR)

3.3.5.2.3. Course  $\pm 10$  degrees at MAP

3.3.5.2.4. Localizer within two dots deflection

3.3.5.2.5. Minimum Descent Altitude +150/-50 feet

3.3.5.3. U. Did not comply with published/directed procedures or restrictions. Exceeded Q- limits. Maintained steady state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from the approach. **NOTE:** The -50 foot tolerance applies only to momentary excursions.

### 3.3.6. Area 36--Missed Approach/Climbout:

3.3.6.1. Q. Executed missed-approach/climb-out as published/directed. Completed all procedures IAW applicable flight manual.

3.3.6.2. Q-. Executed missed approach/climb-out with minor deviations. Slow to comply with published procedures, controller's instructions, or flight manual procedures.

3.3.6.3. U. Executed missed-approach/climb-out with major deviations, or did not comply with applicable directives.

### 3.3.7. Area 37--Circling/Side-Step Approach:

3.3.7.1. Q. Performed circling/side-step approach in accordance with procedures outlined in the flight manual and directives. Aircraft control was positive and smooth. Proper runway alignment. Airspeed tolerances are +10/-5 KIAS.

3.3.7.2. Q-. Performed circling/side-step approach with minor deviations to procedures outlined in the flight manual and directives. Aircraft control was not consistently smooth, but safe. Variations in runway alignment, but go-around not required. Airspeed tolerances are +15/-10 KIAS.

3.3.7.3. U. Circling/side-step approach not performed in accordance with procedures outlined in the flight manual and directives. Erratic aircraft control. Large deviations in runway alignment requiring go-around.

3.3.8. Area 38—Instrument Cross-Check:

3.3.8.1. Q. Effective instrument crosscheck during actual or simulated IMC conditions IAW applicable flight manuals and directives. Complied with all restrictions. Made smooth and timely corrections. Meets "Q" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.3.8.2. Q-. Slow instrument crosscheck during actual or simulated IMC conditions with minor deviations. Complied with all restrictions, however made abrupt corrections as a result of slow instrument crosscheck. Meets "Q-" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.3.8.3. U. Failed to perform adequate instrument crosscheck during actual or simulated IMC conditions causing major deviations. Erratic corrections as a result of poor instrument crosscheck.

3.3.9. Area 39 through 40: NOT USED.

**3.4. Tactical Employment.**

3.4.1. Area 41--Tactical Plan:

3.4.1.1. Q. Well-developed plan that included consideration of mission objectives, the threat, and capabilities of all flight members. Addressed contingencies in development of plan.

3.4.1.2. Q-. Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

3.4.1.3. U. Major errors in the plan precluded accomplishment of the stated objective.

3.4.2. Area 42--Tactical Execution: (WST Only).

3.4.2.1. Q. Applied tactics consistent with the threat, current directives, and good judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Threat reactions were timely and correct. Equipment settings during the threat area penetration were in accordance with Single Integrated Operational Plan (SIOP)/UNIT procedures.

3.4.2.2. Q-. Applied tactics with only minor deviations, omissions, and/or errors which degraded the reliable release of weapons or mission effectiveness but did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness and timely threat reactions were poor.

3.4.2.3. U. Unable to accomplish the mission due to major errors or omissions during execution of the tactical plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

3.4.3. Area 43--GCI/AWACS/Composite Force (CF) Integration:

3.4.3.1. Q. Effectively planned for and used GCI/AWACS/CF to enhance mission and achieve objectives. No confusion between GCI/AWACS/CF and bombers.

3.4.3.2. Q-. Minor confusion between GCI/AWACS/CF and bombers. Less than optimum use of GCI/AWACS/CF, which did not affect the bomber's offensive advantage.

3.4.3.3. U. Inadequate or incorrect use of GCI/AWACS/CF resulted in loss of offensive potential.

3.4.4. Area 44--Radio Transmission/Interphone-Usage and Discipline:

3.4.4.1. Q. Communications (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct maneuvers or describe the tactical situation.

3.4.4.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, mutual support or mission accomplishment. Extraneous comments over radios/interphone presented minor distractions.

3.4.4.3. U. Communications over radios/interphone were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness, or mission accomplishment.

3.4.5. Area 45--Ingress: This area includes routing into the threat area.

3.4.5.1. Q. Aware of all known/simulated threats and defenses. Employed effective use of terrain masking and/or route and altitude selection.

3.4.5.2. Q-. Ignored some of the known/simulated threats and defenses. Improper use of terrain masking and/or route and altitude selection resulted in unnecessary exposure.

3.4.5.3. U. Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective terrain masking and/or route or altitude threat deconfliction.

3.4.6. Area 46: NOT USED.

3.4.7. Area 47: NOT USED.

3.4.8. Area 48--Weapons Employment:

3.4.8.1. Q. Procedures and checklists required to effectively pre-arm all weapons, or prepare all weapons for release, were accomplished with only minor deviations or omissions, which did not preclude an effective release. Malfunctions were correctly analyzed and weapons were placed in the proper configuration for release. Weapon delivery must be accomplished within specified release parameters for the type of weapon being released or mission directives (if more restrictive). (T-2). Release would have resulted in a hit IAW the reliability criteria of AFI 11-2B-2V1, B-2--Aircrew Training.

3.4.8.2. Q-. Procedures and checklists required to effectively pre-arm all weapons for release, were accomplished with omissions, deviations, or errors which indicated a definite need for study and/ or additional training. Knowledge of weapon pre-arming or associated malfunctions was the minimum acceptable. Minor omissions, errors or deletions did not prevent a successful weapons release, but did demonstrate a lack of ability/understanding that warrants supervision and/or additional training. Release would

have resulted in a hit IAW the reliability criteria of AFI 11-2B-2V1, B-2--Aircrew Training.

3.4.8.3. U. If any of the following occur:

3.4.8.3.1. Weapon was not released in the proper configuration.

3.4.8.3.2. Failure to recognize an obvious malfunction, which adversely affected bombing capability.

3.4.8.3.3. Aborted, downgraded, or changed the bomb run without a valid reason.

3.4.8.3.4. Was unable to accomplish successfully an alternate type bomb run as a result of erroneous or incomplete in-flight planning.

3.4.8.3.5. Any error or combination of errors (equipment, procedures, techniques) which caused a release to result in a miss IAW the reliability criteria of AFI 11-2B-2V1, B-2--Aircrew Training.

3.4.8.3.6. Failure to meet weapons release parameters or to insure safe escape/safe separation.

3.4.8.3.7. Attempted to, or released weapons in contradiction with mission directives or SPINS.

3.4.9. Area 49--Range/Electronic Scoring System (ESS) Procedures:

3.4.9.1. Q. Used proper procedures for entering and exiting the range/ESS. Range/ESS operations followed established procedures.

3.4.9.2. Q-. Minor deviations from established procedures for range/ESS entry, exit, or operations.

3.4.9.3. U. Major deviations from established procedures for range/ESS entry, exit, or operations.

3.4.10. Area 50--Egress: This area includes routing from the threat area.

3.4.10.1. Q. Effectively used evasive maneuvers, terrain masking and/or altitude selection to complete an expeditious egress from the target area. Formation join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.4.10.2. Q-. Egress contributed to unnecessary exposure to threats and delayed formation join-up and departure from target area.

3.4.10.3. U. Egress caused excessive exposure to threats. Formation join-up was not accomplished or resulted in excessive exposure to threats.

3.4.11. Area 51--Training Rules/ROE:

3.4.11.1. Q. Adhered to and knowledgeable of all training rules/ROEs.

3.4.11.2. Q-. Minor deviations, omissions, and/or errors. Made timely and positive corrections. Did not jeopardize safety of flight.

3.4.11.3. U. Significant deviations indicating a lack of knowledge of training rules/ROEs.

3.4.12. Area 52 through 60: NOT USED.

**3.5. Information Collection, Records, and Forms.**

3.5.1. Information Collections. No information collections are created by this publication.

3.5.2. Records. The program records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363 and disposed of in accordance with the AF RDS located on the AF Portal at the AFRIMS link located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>.

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Deputy Chief of Staff, Operations

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

AFPD 11-2, *Aircrew Operations*, 19 Jan 2012

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 13 Sept 2010

AFI 11-2B-2V1, *B-2--Aircrew Training*, 9 June 2010

AFI 11-215, *USAF Flight Manuals Program (FMP)*, 22 Dec 2008

AFI 11-290, *Cockpit/Crew Resource Management Program*, 15 Oct 2012

AFPD 11-4, *Aviation Service*, 1 Sep 04

AFI 33-360, *Publications and Forms Management*, 1 Dec 2015

AFMAN 33-363, *Management of Records*, 01 Mar 2008

AF RDS on the AF Portal at the AFRIMS link, <https://www.my.af.mil/gcss-af61a/afirms/afirms/>

AFTTP 3-1V23 (S-US ONLY), (U) *Tactical Employment--B-2*

***Adopted Forms***

AF Form 4031, *CRM Skills Criteria Training/ Evaluation Form*, 1 Mar 1998

AF Form 8, *Certificate of Aircrew Qualification*, 8 Dec 2006

AF Form 847, *Recommendation for Change of Publication*, 22 Sep 2009

***Abbreviations and Acronyms***

**AC**—Aircraft Commander

**AAMD**—All Aspect Missile Defense

**AF**—Air Force

**AFGSC**—Air Force Global Strike Command

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFPD**—Air Force Policy Directive

**AFR**—Air Force Reserve

**AFSATCOM**—Air Force Satellite Communications System

**AFTTP**—Air Force Tactics, Techniques, and Procedures

**AOA**—Angle of Attack

**ANG**—Air National Guard

**ATC**—Air Traffic Control

**ATD**—Aircraft Training Device  
**BAQ**—Basic Aircraft Qualification  
**BMC**—Basic Mission Capable  
**CAP**—Corrective Action Plan  
**CMR**—Combat Mission Ready  
**CRM**—Cockpit/Crew Resource Management  
**DH**—Decision Height  
**DRU**—Direct Reporting Unit  
**EA**—Electronic Attack  
**EMCON**—Emission Control  
**EPE**—Emergency Procedures Evaluation  
**ESS**—Electronic Scoring System  
**FE**—Flight Examiner  
**FOA**—Field Operating Agency  
**FTU**—Flight Training Unit  
**HF**—High Frequency  
**HQ**—Headquarters  
**HSI**—Horizontal Situation Indicator  
**IAW**—In Accordance With  
**IFF**—Identification, Friend or Foe  
**IFR**—Instrument Flight Rules  
**ILS**—Instrument Landing System  
**INIT**—Initial  
**INSTM**—Instrument  
**INSTR**—Instructor  
**KIAS**—Knots Indicated Air Speed  
**MAJCOM**—Major Command  
**MAP**—Missed Approach Point  
**MC**—Mission Commander  
**MDA**—Minimum Descent Altitude  
**MDS**—Mission Design Series  
**MILSTAR**—Military Strategic and Tactical Relay (satellite)

**MOA**—Military Operating Area

**MSN**—Mission

**MQT**—Mission Qualification Training

**PAR**—Precision Approach Radar

**QUAL**—Qualification

**RDS**—Records Disposition Schedule

**RQ**—Requalification

**SILS**—Simulated Instrument Landing System

**SIOP**—Single Integrated Operational Plan

**SPINS**—Special Instructions

**TACAN**—Tactical Air Navigation

**UHF**—Ultra High Frequency

**USAF**—United States Air Force

**USAFWS**—United States Air Force Weapons School

**VDP**—Visual Descent Point

**VFR**—Visual Flight Rules

**VHF**—Very High Frequency

**WST**—Weapon System Trainer

### *Terms*

**Breakaway**—maneuver or command used by either the tanker or receiver to indicate a need for emergency vertical and horizontal separation of tanker and receiver.

**Canned**—A term used to identify a portion of a mission or flight that was preplanned for a standard profile to be used multiple times.

**Certification**—Procedure used to document competency in a particular task. Not interchangeable with—qualification, which requires AF Form 8 documentation.

**Commission**—To perform an action where no action was required.

**Crew Resource Management (CRM)**—The effective use of all available resources--people, weapon systems, facilities, equipment, and environment—by individuals or crews, to safely and accomplish efficiently an assigned mission or task.

**Deviation**—Performing an action not in sequence with current procedures, directives, or regulations. 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.

**Difference Certificate**—A certificate required when an individual qualifies in a different area, tactic, weapon, or weapon system.



**Emergency Procedures Evaluation (EPE)**—A flight, ATD, SIM or verbal evaluation used to evaluate emergency procedures and systems knowledge.

**Error**—Departure from standard procedures. Performing incorrect actions or recording incorrect information.

**Flight Examiner**—An aircrew member designated to perform evaluation duties as specified by this manual. Flight examiners must be qualified in the events they evaluate (EXCEPTION: SPOT evaluations). Unit Flight Examiners include squadron flight examiners assigned to the flying squadron, OGV flight examiners assigned to the OGV but attached to the flying squadron and other wing individuals tasked with flight examiner duties assigned above the squadron level. A HHQ Flight Examiner is a flight examiner assigned to a NAF or MAJCOM. Senior Flight Examiners are senior flying commanders – specifically, flying NAF/CCs and OG/CCs (and/or, their deputies) – that act in the capacity of flight examiners. (T-2)

**Initial Evaluation**—The first evaluation of any type for an MDS (e.g., INIT QUAL/INSTM, INIT MSN, INIT INSTR).

**Instructor Evaluation**—An evaluation that initially establishes or reestablishes instructor qualification of the examinee in an MDS (i.e., INIT INSTR and RQ INSTR) as directed in AFI11-2MDS Vol 1.

**Major**—Detracted from mission accomplishment. Adversely affected use of equipment, or violated safety.

**Minor**—Did not detract from mission accomplishment.

**Mission Evaluation**—Qualifies an aircrew member to employ the member's assigned weapon system in accomplishing the unit's operational or DOC statement mission. Requires AF Form 8 documentation.

**Omission**—To leave out a required action or annotation.

**Qualification Evaluation**—Qualifies an aircrew member to perform the duties of a particular crew position in the specified aircraft. Requires AF Form 8 documentation.

**SPOT Evaluation**—An evaluation other than one used to satisfy the requirements of a periodic, initial instructor or requalification instructor evaluation. May be no-notice. Requires AF Form 8 documentation.