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SECRETARY OF THE AIR FORCE**

**AIR FORCE MANUAL 11-2F-15,
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Flying Operations

**F-15--AIRCREW EVALUATION
CRITERIA**



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This volume establishes criteria and procedures for F-15C flight evaluations and implements AFPD 11-2, Aircrew Operations, and AFPD 11-4, Aviation Service, and references AFI 11-200, Aircrew Training, Standardizations, and General Operations Procedures, and AFI 11-202V2, Aircrew Standardization/Evaluation Program. It applies to all F-15C units, including those in the Regular Air Force, Air Force Reserve and the Air National Guard.

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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 Table 1.1 of AFI 33-360, *Communications and Information*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the ACC/A3TV for non-tiered compliance items. Records created as a result of processes prescribed in this publication are to be maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with (IAW) the Air Force Records Disposition Schedule maintained in the Air Force Records Information Management System

SUMMARY OF CHANGES

This document has been substantially revised and needs to be completely reviewed. Major changes include conversion from AFI to AFMAN, incorporation of compliance statement Tiering (“T-0, T-1, T-2, T-3”) per AFI 33-360, and numerous minor updates since last publishing.

Chapter 1— ROLES AND RESPONSIBILITIES	4
1.1. Flight Examiners (FEs)	4
1.2. Examinees.	4
Chapter 2— EVALUATION REQUIREMENTS	5
2.1. General.....	5
2.2. Instrument/Qualification (INSTM/QUAL) Evaluations.....	6
2.3. Mission (MSN) Evaluations.	6
2.4. Formal Course Evaluations.	7
2.5. Instructor Evaluations.	7
2.6. Formal Training Unit (FTU) Instructor Pilot (IP) and Weapons Instructor Course (WIC) Mission, and Rear Cockpit Evaluations.	7
Table 2.1. Aircrew Evaluation Grading Areas.....	8
2.7. Emergency Procedures Evaluations.....	13
Table 2.2. EPE Grading Areas.	14

Chapter 3— EVALUATION CRITERIA	19
3.1. General Grading Standards.....	19
Table 3.1. General Aircraft Control Criteria.....	19
3.2. Documentation of Weapons Employment Results.	20
Table 3.2. Weapons Eemployment Scores were (examples).....	20
3.3. General Aircrew Evaluation Criteria.	20
3.4. Aircrew Evaluation Criteria—Instruments.	34
3.5. Aircrew Evaluation Criteria—Tactical Employment.	37
3.6. EPE Criteria.	44
Attachment 1— GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	48

Chapter 1

ROLES AND RESPONSIBILITIES

1.1. Flight Examiners (FEs). FEs:

- 1.1.1. should exercise judgment when assigning subjective area grades, when assigning the overall qualification level, and when evaluating in situations not covered explicitly by this document.
- 1.1.2. will brief the examinee on the purpose, conduct, and extent of each evaluation. (T-3).
- 1.1.3. may assist in evaluation mission planning/briefing as tasked by the examinee.
- 1.1.4. may evaluate from any flight position (to include chase) necessary to conduct a thorough evaluation.
- 1.1.5. will apply the grading criteria contained in **Chapter 3**, as applicable. (T-2).
- 1.1.6. will debrief the examinee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training, at a minimum. (T-3).
- 1.1.7. should use all electronic means available, to reconstruct, evaluate, and debrief the mission adequately.

1.2. Examinees. Examinees:

- 1.2.1. will accomplish required flight planning in accordance with the flight position assigned during the evaluation, furnishing Higher Headquarters FEs (and unit FEs, as determined locally) a copy of necessary mission data and mission materials, if appropriate. (T-2).
- 1.2.2. will brief planned maneuver parameters (i.e. altitudes, airspeeds, angle of attack (AOA), and approaches). (T-3).

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2. The procedures and flight profiles outlined in this AFMAN apply to all F-15 units. Evaluation requirements are depicted in [Table 2.1](#).

2.1.1.1. Publications Check/Currency of Flight Publications. All Qualification (QUAL) evaluations include a currency and accuracy check on all the following publications/checklists. If pilots fly with standardized squadron publications maintained by operations group or squadron stan/eval or a designated operations representative, then the examinee is responsible for the publications he or she brings to the evaluation.

2.1.1.2. Technical Order (T.O.) 1F-15X-1CL-1, *Flight Manual Checklist – F-15C*

2.1.1.3. T.O. 1F-15X-34-1-3CL-1, *Non-Nuclear Weapons Delivery Flight Manual Checklist – F-15C*

2.1.1.4. Local In-Flight Guide

2.1.1.5. Any additional publications issued to aircrews and specified in the unit addendum to AFI 11-202V2.

2.1.2. Cockpit/Crew Resource Management (CRM). In accordance with AFI 11-290, *Cockpit/Crew Resource Management*, all evaluations include assessment of CRM skills. CRM skills are integral to all phases of flight, but evaluations include specific CRM grading under Area 37 (ref. [Table 2.1](#) below). As all the CRM skills listed on the AF Form 4031, *CRM Skills Criteria Training/Evaluation Form*, are included/embedded, use of the AF Form 4031 is unnecessary for evaluations in the F-15. The Stan/Eval trend program can be used to measure the effectiveness of CRM training.

2.1.3. Combined Evaluations. With the approval of the operations group commander, the Instrument/Qualification (INSTM/QUAL) and Mission (MSN) evaluation may be combined as a single evaluation. This option is intended only for experienced pilots.

2.1.3.1. Combined evaluations include all current INSTM and MSN evaluation requirements, including requisites.

2.1.3.2. One event may satisfy both the INSTM and MSN emergency procedures evaluation (EPE)s, as long as the EPE includes the required areas for both evaluations.

2.1.4. Required Graded Areas. Required graded areas are annotated in [Tables 2.1](#) and [2.2](#), respectively. When it is impractical or impossible to accomplish a required evaluation area in-flight, an alternate method (i.e., simulator, aircrew training device, or verbal examination) may be used in order to complete the evaluation. FEs will document the reason and type of alternate method used in the “Additional Comments” portion of the AF Form 8, *Certificate of Aircrew Qualification*. (T-2). If the FE determines the required item cannot be adequately evaluated by an alternate method, an additional flight is required to complete the evaluation. In [Tables 2.1](#) and [2.2](#):

2.2. Instrument/Qualification (INSTM/QUAL) Evaluations.

2.2.1. Procedures.

2.2.1.1. A mission flown according to instrument flight rules, to the maximum extent practical, best fulfills the objective of the INSTM/QUAL evaluation.

2.2.1.2. To the maximum extent possible, this evaluation should include approaches at airfields other than home or deployed locations.

2.2.1.3. Approaches may be flown to fields which have a non-published, practice approach available (e.g. Visual Flight Rules (VFR) conditions only approach), but not a published Flight Information Publications approach. For these approaches, operations group stan/eval shops will ensure that:

2.2.1.3.1. non-published approaches are built using the standards applied to published approach plates. (T-3).

2.2.1.3.2. approval for use of such an approach on evaluation missions is documented in the local unit supplement to AFI 11-202V2. (T-3).

2.2.1.4. INSTM/QUAL evaluations may be administered on any compatible training mission.

2.2.2. Minimum Requisites. The minimum requisites for an INSTM/QUAL evaluation are:

2.2.2.1. an instrument examination,

2.2.2.2. a closed book examination,

2.2.2.3. an open book examination, and an

2.2.2.4. EPE.

2.3. Mission (MSN) Evaluations.

2.3.1. Procedures.

2.3.1.1. Squadron Commanders:

2.3.1.1.1. ensure that FEs administer initial MSN evaluations in the primary designed operational capability of the unit, unless the unit has a different assigned contingency for which to prepare.

2.3.1.1.2. ensure that FEs administer a sampling of Aerospace Control Alert (ACA) mission evaluations, if squadron pilots are tasked to such missions.

2.3.1.2. FEs:

2.3.1.2.1. should tailor MSN evaluations IAW current tactics, unit designed operational capability statement, theater area of responsibility scenarios, and should incorporate all appropriate evaluation requirements from **Table 2.1** The profiles should be designed to evaluate the training/flight position/special qualifications as well as basic airmanship of the examinee.

2.3.1.2.2. will evaluate examinees in the position of their highest qualification, even if a portion of the evaluation is flown in another position. (T-3).

2.3.1.2.3. may allow wingman to brief and/or lead certain phases of the mission, but should not evaluate the area of Flight Leadership.

2.3.1.3. Evaluations during exercises are encouraged.

2.3.1.4. Evaluations during contingency/combat deployments should be given as a last resort in order to maintain mission qualification status.

2.3.1.5. Evaluate basic mission capable aircrew only on missions which are performed routinely.

2.3.2. Requisites. The MSN EPE is the only MSN evaluation requisite.

2.3.3. MSN Evaluation Requirements. A planned MSN evaluation includes the following events, as a minimum:

2.3.3.1. one intercept,

2.3.3.2. offensive maneuvering,

2.3.3.3. planned weapons employment, and

2.3.3.4. the opportunity to employ beyond visual range air-to-air weapons.

2.4. Formal Course Evaluations. Syllabus evaluations should be flown IAW syllabus mission profile guidelines, if stated, or on a mission profile developed from syllabus training objectives. FEs may modify course guidelines based on other factors, such as local operating considerations, in order to complete the evaluation.

2.5. Instructor Evaluations. Initial instructor evaluations will be conducted IAW AFI 11-202V2. Except for Area 33, Instructor Performance, FEs determine specific profiles and events. Subsequent evaluations (e.g., INSTM/QUAL, MSN) will include instructor portions during the evaluations. If an instructional ride allows completion of all requirements for a periodic check, the evaluation may be used to update periodic evaluation providing all other requisites are completed.

2.6. Formal Training Unit (FTU) Instructor Pilot (IP) and Weapons Instructor Course (WIC) Mission, and Rear Cockpit Evaluations.

2.6.1. Profiles. WIC and FTU IP mission evaluation profiles should normally be IAW the formal course syllabus for any mission that the IP is qualified to instruct. The only required items for a WIC or FTU IP mission check are those items required by the syllabus for the specific syllabus sortie flown.

2.6.2. Chase Evaluation. FTU Instructor Pilots (IPs) are evaluated on chase procedures during INSTM/QUAL or MSN evaluations prior to performing FTU duties for the first time, and on subsequent INSTM/QUAL evaluations.

2.6.3. Rear Cockpit (RCP) Evaluations. When FTU IPs are required to perform rear cockpit instructor duties, an evaluation of RCP landings will be completed prior to performing RCP landing instructor duties. These duties include instruction for and demonstration of landings during initial qualification training, requalification training, or additional training. Not required for operational unit RCP qualified IPs.

2.6.3.1. Examinees will complete the evaluation as follows:

2.6.3.1.1. All RCP landing qualification evaluations will include satisfactory demonstration of overhead, straight-in and emergency pattern approaches and landings performed from the rear cockpit.

2.6.3.1.2. FTU IPs will accomplish the RCP landing qualification during the combined instrument/qualification sortie, the mission evaluation sortie or during another sortie as a requisite. Each unit will specify when the RCP landing qualification will be completed and identify procedures for completion of this requirement in the unit supplement to AFI 11-202V2.

2.6.3.2. When the RCP landing qualification is evaluated during a separate sortie as a requisite for a flight evaluation, record "SPOT" in the Flight Phase block on the AF Form 8. Describe the purpose of the evaluation as "Rear Cockpit Landing Qualification" in the Mission Description section of the Comments block. In addition, flight examiners will document all discrepancies on the AF Form 8 in Block IV, paragraph b, under a subparagraph after the Emergency Procedures Evaluation (EPE) discrepancies as follows: "2. Rear Cockpit Landing Qualification." If no discrepancies are identified, enter "None" after the subparagraph title and use a subparagraph "3." for flight discrepancies. If a reevaluation is required, an additional "SPOT" entry will be recorded in the Flight Phase block on the front of the AF Form 8. Additional training will be documented IAW AFI 11-202V2.

2.6.3.3. An initial RCP landing qualification may be conducted independently of another evaluation. Flight examiners will document completion of this RCP Landing Qualification as a "SPOT" on an AF Form 8. Align the expiration date with the expiration date of the current evaluation during which the examinee would normally complete this requirement.

2.6.3.4. In [Table 2.1](#) Aircrew Evaluation Grading Areas, areas annotated with an "R" are required items for that event.

Table 2.1. Aircrew Evaluation Grading Areas..

AREA	NOTE	AREA TITLE	I/Q	MSN
AIRCREW EVALUATION CRITERIA - GENERAL				
1		MISSION PLANNING	R	R
2		BRIEFING (if applicable)	R	R
3		PRE-TAKEOFF	R	R
4		TAKEOFF	R	
5		FORMATION TAKEOFF		
6		DEPARTURE	R	

7		LEVEL OFF	R	
8		CRUISE/NAVIGATION	R	
9		FORMATION		
10		IN-FLIGHT CHECKS	R	
11		FUEL MANAGEMENT	R	R
12		COMMUNICATION/NAVIGATION/ IDENTIFICATION FRIEND OR FOE (IFF)	R	R
14	1	AIRWORK	R	
15	2	UNUSUAL ATTITUDE RECOVERIES	R	
16		WEAPONS SYSTEM/BUILT IN TEST CHECKS		
17		AIR REFUELING		
18		DESCENT	R	
19		GO-AROUND		
20		RECOVERY		
21		EMERGENCY TRAFFIC PATTERNS	R	
22		EMERGENCY APP/LANDING	R	
23		VFR PATTERN/APPROACH	R	
24		FORMATION APPROACH		
25		LANDING	R	
26		AFTER LANDING	R	
27		FLIGHT LEADERSHIP (if applicable)	R	R
28		DEBRIEFING/CRITIQUE	R	R
29		KNOWLEDGE	R	R

30	Critical	AIRMANSHIP/ SITUATIONAL AWARENESS	R	R
31	Critical	SAFETY	R	R
32	Critical	FLIGHT DISCIPLINE	R	R
33		INSTRUCTOR PERFORMANCE (if applicable)	R	R
35		SENSOR INTERPRETATION		
36		TASK PRIORITIZATION		
37		COCKPIT/CREW RESOURCE MANAGEMENT		
INSTRUMENTS				
61		HOLDING		
62		INSTRUMENT PENETRATION/ENROUTE DESCENT HOLDING	R	
63		INSTRUMENT PATTERNS	R	
64		NONPRECISION APPROACH	R	
65	3	PRECISION APPROACH (PRECISION APPROACH RADAR (PAR))	R	
66	3	PRECISION APPROACH (INSTRUMENT LANDING SYSTEM (ILS))	R	
67		MISSED APPROACH/CLIMB OUT	R	
68		CIRCLING/SIDESTEP APPROACH		
69		INSTRUMENT CROSS-CHECK		

TACTICAL EMPLOYMENT				
GENERAL				
81		TACTICAL/MISSION PLAN		R
82		AEROSPACE CONTROL ALERT (ACA) TASKING (Tasked units)		
83		TACTICAL/MISSION EXECUTION		R
84		COMPOSITE FORCE INTERFACE		
85		RADIO USE/TACTICAL COMMUNICATION		R
86		VISUAL/SENSOR LOOKOUT		R
87		MUTUAL SUPPORT (if applicable)		R
88		TACTICAL NAVIGATION		
89		INGRESS		
90		EGRESS		
91		COMBAT SEPARATION		
92		TIMING		
93		TRAINING RULES/RULES OF ENGAGEMENT (ROE)		R
94	4	EVASIVE ACTION/THREAT REACTIONS		R
95		IN-FLIGHT REPORT		R

96		ELECTRONIC WARFARE/ EXPENDABLE COUNTERMEASURES/ ALL ASPECT MISSILE DEFENSE (EW/EXCM/AAMD)		R
97		WEAPONS SYSTEM UTILIZATION		R
98		SENSOR MANAGEMENT		
AIR-TO-AIR				
111	4	SENSOR SEARCH/SORTING		R
112		TACTICAL INTERCEPT/COMBAT AIR PATROL (CAP)		R
113	4	OFFENSIVE MANEUVERING		
114		DEFENSIVE/COUNTER OFFENSIVE MANEUVERING		
115	5	AIR-TO-AIR WEAPONS EMPLOYMENT		
116		AIR-TO-AIR SYSTEMS INTEGRATION		
117		COMMAND AND CONTROL INTEGRATION		
<p>Notes:</p> <ol style="list-style-type: none"> 1. Airwork includes advanced handling and tactical maneuvering. Units determine appropriate proficiency maneuvers for pilot experience levels. Examples are, but are not limited to: <ol style="list-style-type: none"> a. Basic fighter maneuvers b. Advanced handling characteristics c. Formation (fingertip, tactical, trail) 2. Do not perform unusual attitude recoveries in single-seat aircraft. They will be evaluated during EPEs or if evaluated in dual-seat aircraft in-flight, will be performed with a flight examiner in the aircraft. 3. Either PAR or ILS is required, not both. 				

4. It may be impractical to evaluate these required items on certain FTU Instructor evaluations due to student syllabus constraints (e.g. basic fighter maneuvers mission checks). Squadron commanders may approve these exceptions to validate instructor effectiveness. Document in Block IV, Comments, item “D. Additional Comments” of the AF Form 8.
5. During ACA evaluations, Air-to-Air Weapons Employment (Area 115) and ACA Tasking (Area 82) may be accomplished during EPE profiles.

2.7. Emergency Procedures Evaluations.

2.7.1. General. The EPE should be conducted in a flight simulator or other advanced training device to the maximum extent possible. Grading criteria for each required item are listed in [Chapter 3](#).

2.7.2. The following graded areas are required on all EPEs:

2.7.2.1. Aircraft General Knowledge,

2.7.2.2. Cockpit/Crew Resource Management (CRM),

2.7.2.3. Unusual Attitude Recoveries,

2.7.2.4. Emergency Procedures/Aircraft Malfunctions. The FE will evaluate a minimum of two emergency procedures per the pre-takeoff, takeoff, inflight, and landing phases of flight. (T-3).

2.7.3. The following additional graded areas are required on all INSTM and/or QUAL EPEs:

2.7.3.1. Instrument flight procedures, IAW AFMAN 11-217V1, *Instrument Flight Procedures*. This area includes a minimum of one heads up display–Out approach, where the FE should focus on whether or not the approach permits landing, and the use of standby/emergency instruments.

2.7.3.2. Alternate/Divert airfields. This area includes a minimum of one approach at a divert/alternate airfield.

2.7.4. The following items are required on all MSN EPEs, as the FE tailors the MSN evaluation scenario to the unit tasking/mission:

2.7.4.1. Weapons system operation,

2.7.4.2. Threat reaction,

2.7.4.3. Weapons employment and switchology, and

2.7.4.4. Air defense qualified pilots in wings that support a full-time ACA detachment (or home-station alert) are required to complete at least one ACA intercept during every MSN EPE.

2.7.5. In [Table 2.2](#) EPE grading areas, areas annotated with an "R" are required items for that event, and areas indicated with an “R2” require evaluation of at least two of the items under the associated section.

Table 2.2. EPE Grading Areas.

AREA	NOTES	AREA TITLE	I/Q	MSN
GENERAL				
29		AIRCRAFT GENERAL KNOWLEDGE	R	R
37		COCKPIT/CREW RESOURCE MANAGEMENT	R	R
82	1	AEROSPACE ALERT (ACA) TASKING (Tasked units)		R
301		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (GENERAL)		
305		WEAPON SYSTEM OPERATION		R
306		WEAPONS EMPLOYMENT AND SWITCHOLOGY		R
PRE-TAKEOFF			R2	R2
321		HYDRAULIC EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
331		ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
341		FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
351		ENVIRONMENTAL CONTROL SYSTEM (ECS)/OXYGEN EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
361		ENGINE/AUXILLARY POWER UNIT (APU) EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
371		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		

381		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
391		FLIGHT CONTROL SYSTEM (FLCS) EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
401		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
411		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
TAKEOFF			R2	R2
421		HYDRAULIC EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
431		ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
441		FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
451		ECS/OXYGEN EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
461		ENGINE/APU EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
471		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
481		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
491		FLCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		

501		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
511		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
INFLIGHT			R2	R2
94		EVASIVE ACTION / THREAT REACTION		R
521		HYDRAULIC EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
531		ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
541		FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
551		ECS/OXYGEN EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
561		ENGINE/APU EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
571		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
581		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
591		FLCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
601		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		

611		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
614	2	UNUSUAL ATTITUDE RECOVERIES	R	R
615		AFI 11-217 PROCEDURES/HEADS UP DISPLAY OUT APPROACH/USE OF STANDBY INSTRUMENTS	R	
616		ALTERNATE/DIVERT AIRFIELDS	R	
LANDING			R2	R2
631		HYDRAULIC EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
641		ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
651		FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
661		ECS/OXYGEN EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
671		ENGINE/APU EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
681		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
691		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
701		FLCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
711		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		

721		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
<p>Notes:</p> <ol style="list-style-type: none">1. ACA certified aircrew only.2. Unusual attitude recoveries are required during the EPE only if not accomplished during the aircrew evaluation.				

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards.

3.1.1. FE assigns appropriate area grades by comparing examinee performance against standards per descriptions in this chapter. The overall flight evaluation grade should be derived from individual area grades based on a composite for the observed events and tasks. The grading criteria in this chapter are divided into three sections: General, Instrument, and Tactical Employment.

3.1.2. If the examinee receives an unqualified area grade in any of the areas identified as “critical” by this volume, the overall qualification level must be a "Q3."

3.1.3. If an FE assigns a qualification level of unqualified (Q3), or if the FE assigns a qualification level of qualified (Q1 or Q2) but assigns additional training:

3.1.3.1. FE recommends if such an examinee is allowed to fly before the additional training or re-evaluation is successfully completed.

3.1.3.2. Squadron commander determines if such an examinee is allowed to fly before the additional training or re-evaluation is successfully completed.

Table 3.1. General Aircraft Control Criteria.

The following general criteria apply at all times unless more specific criteria from Table 3.2. apply.		
Q	Altitude	+/- 200 feet
	Airspeed	+/- 5%
	Course	+/- 5 degrees/3 nautical miles (NM) (whichever is greater)
	Tactical Air Navigation (TACAN) Arc	≤ 3 NM
Q-	Altitude	+/- 300 feet
	Airspeed	+/- 10%
	Course	+/- 10 degrees/5 NM (whichever is greater)
	TACAN Arc	> 3 NM

U	Exceeded Q- limits
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3.2. Documentation of Weapons Employment Results.

3.2.1. FE documents weapons employment results in the Block IV, Comments, item “A. Mission Description,” of the AF Form 8 for MSN evaluations. Include entries for each type of actual and simulated ordnance employed.

3.2.2. Air-to-surface results should be recorded as Hit or Miss for each air-to-surface record delivery. Document results as in **Table 3.2** (see Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1.F-15, *Tactical Employment – F-15*).

3.2.3. The number of simulated air-to-air missile/gun firing attempts and valid attempts are recorded as in **Table 3.2** (see AFI 11-2F-15V1, *F-15-Aircrew Training*).

3.2.4. FE judgment should be the determining factor in deciding the weapons employment grade. The FE may elect to award a higher area grade than warranted by the score(s), and include the justification in the Comments section (Block IV) of the AF Form 8.

3.2.5. In **Table 3.2** gives examples of how to document weapons employment scores See **Attachment 1** for abbreviations and acronyms.

Table 3.2. Weapons Employment Scores were (examples)

Weapons employment scores were: (examples)		
	ATTEMPTED	VALID
Air-to-air Gun	2	1
Air Intercept Missile (AIM)-120	2	2
AIM-9	1	1
Mission recording assessment is considered normal operations,		

3.3. General Aircrew Evaluation Criteria.

3.3.1. Area 1--Mission Planning:

3.3.1.1. Mission Preparation:

3.3.1.1.1. **Q.** Clearly defined the mission overview and mission goals. Developed a sound plan to accomplish the mission. Provided specific information on what needed to be done. Solicited feedback from other pilots to ensure understanding of mission requirements. Thoroughly analyzed plans to identify potential problem areas and ensured all flight members understood possible contingencies. Checked all factors applicable to flight in accordance with applicable directives. When required, extracted necessary information from air tasking order/frag. Aware of alternatives available if

flight cannot be completed as planned. Read and initialed for all items in the flight crew information file and read files. Prepared at briefing time.

3.3.1.1.2. **Q-** Did not adequately define the mission overview and mission goals. Did not adequately address potential problem areas. Did not adequately solicit feedback or critique the plans to ensure understanding of possible contingencies. Minor error(s) or omission(s) detracted from mission effectiveness, but did not affect mission accomplishment. Demonstrated limited knowledge of performance capabilities or approved operating procedures/rules in some areas.

3.3.1.1.3. **U.** Did not define the mission overview and goals. Lack of specific information on required items. Did not solicit feedback from other pilots to ensure understanding. Did not critique plans to identify potential problem areas. Major error(s) or omission(s) would have prevented a safe or effective mission. Displayed unsatisfactory knowledge of operating data or procedures. Did not review or initial Go/No Go items. Not prepared at briefing time.

3.3.1.2. Publications:

3.3.1.2.1. **Q.** Publications were current and usable for any of the unit's combat taskings. Contained only minor deviations, omissions, and/or errors.

3.3.1.2.2. **Q-** Publications contained deviations, omissions, and/or errors; however, contained everything necessary to effectively accomplish the mission and did not compromise safety of flight.

3.3.1.2.3. **U.** Not up to "Q-" standards. Contained major deviations, omissions, and/or errors.

3.3.2. Area 2--Briefing (if applicable):

3.3.2.1. Organization:

3.3.2.1.1. **Q.** Well organized, included all applicable information and presented in a logical sequence. Briefed flight member responsibilities, deconfliction contracts, combat mission priorities and sensor management. Concluded briefing in time to allow for element briefing (if applicable) and preflight of personal equipment, aircraft and ordnance.

3.3.2.1.2. **Q-** Events out of sequence, hard to follow, some redundancy. Not fully prepared for briefing.

3.3.2.1.3. **U.** Confusing presentation, poorly organized and not presented in a logical sequence. Did not allow time for element briefing (if applicable) and preflight of personal equipment, aircraft and ordnance. Failed to brief required areas.

3.3.2.2. Presentation:

3.3.2.2.1. **Q.** Presented briefing in a professional manner covering all pertinent items. Effectively used available briefing aids. Flight members clearly understood mission requirements.

3.3.2.2.2. **Q-** Some difficulty communicating clearly. Did not make effective use of available briefing aids. Dwelt on nonessential mission items.

3.3.2.2.3. **U.** Failed to conduct/attend required briefings. Failed to use available briefing aids. Redundant with lack of continuity. Lost interest of flight members. Demonstrated lack of knowledge of subject. Presentation created doubts or confusion.

3.3.2.3. Mission Coverage:

3.3.2.3.1. **Q.** Established objectives for the mission. Presented all training events and special interest items. Included effective technique discussion for accomplishing the mission.

3.3.2.3.2. **Q-.** Omitted items pertinent, but not critical, to the mission. Limited discussion of training events or special interest items. Dwelt on non-essential items. Limited discussion of valid techniques.

3.3.2.3.3. **U.** Did not establish relevant objectives for the mission. Omitted essential items. Failed to discuss training events or special interest items. Presented erroneous information and/or did not correct erroneous information that would affect safe/effective mission accomplishment. Omitted major training events. Did not discuss valid techniques.

3.3.2.4. Flight Member Consideration:

3.3.2.4.1. **Q.** Properly assessed the abilities of all flight members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.3.2.4.2. **Q-.** Did not correctly assess all flight members' abilities. Did not identify probable problem areas.

3.3.2.4.3. **U.** Ignored flight members' abilities and past problem areas.

3.3.3. Area 3--Pre-Takeoff:

3.3.3.1. **Q.** Established and adhered to station, start engine, taxi and take-off times to assure thorough preflight, check of personal equipment, crew briefing, etc. Accurately determined readiness of aircraft for flight. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives.

3.3.3.2. **Q-.** Same as above except for minor procedural deviations which did not detract from mission effectiveness.

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

3.3.4. Area 4--Takeoff:

3.3.4.1. **Q.** Maintained smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures AFTTP 3-3.F-15, *Combat Aircraft Fundamentals – F-15*, procedures and techniques.

3.3.4.2. **Q-.** Minor flight manual procedural or AFTTP 3-3.F-15 procedural deviations. Control was inconsistent, rough or erratic.

3.3.4.3. **U.** Takeoff potentially dangerous. Exceeded aircraft/systems limitations and/or violated applicable flight rules. Over-controlled aircraft resulting in excessive deviations from intended flight path.

3.3.5. Area 5--Formation Takeoff:

3.3.5.1. Lead:

3.3.5.1.1. **Q.** Smooth on controls. Excellent wingman consideration.

3.3.5.1.2. **Q-.** Occasionally rough on controls. Not unsafe; however, lack of wingman consideration made it difficult for the wingman to maintain position.

3.3.5.1.3. **U.** Rough on the controls. Did not consider the wingman.

3.3.5.2. Wingman:

3.3.5.2.1. **Q.** Maintained position with only momentary deviations. Maintained appropriate separation and complied with procedures and leader's instructions.

3.3.5.2.2. **Q-.** Over controlled the aircraft to the extent that formation position varied considerably.

3.3.5.2.3. **U.** Abrupt position corrections. Did not maintain appropriate separation or formation position throughout the takeoff.

3.3.6. Area 6--Departure:

3.3.6.1. Instrument/Visual Flight Rules:

3.3.6.1.1. **Q.** Performed departures as published/directed and complied with all restrictions.

3.3.6.1.2. **Q-.** Minor deviations in airspeed and navigation occurred during completion of departure.

3.3.6.1.3. **U.** Failed to comply with published/directed departure instructions.

3.3.6.2. Trail Departure/Rejoin:

3.3.6.2.1. **Q.** Effective use of radar. Trail departure/rejoin accomplished using proper procedures and techniques. Provided efficient commentary throughout departure and/or rejoin.

3.3.6.2.2. **Q-.** Minor deviations from established or appropriate procedures. Slow to obtain radar lock-on and/or contact due to poor technique. Delayed rejoin due to poor radar technique or inefficient commentary.

3.3.6.2.3. **U.** Unable to accomplish trail departure or rejoin. Gross overshoot or excessively slow rejoin caused by poor technique. Missed rejoin.

3.3.7. Area 7--Level Off:

3.3.7.1. **Q.** Levelled off smoothly. Promptly established proper cruise airspeed.

3.3.7.2. **Q-.** Level off was erratic. Slow in establishing proper cruise airspeed. Slow to set/reset altimeter, as required.

3.3.7.3. **U.** Level-off was erratic. Exceeded Q- limits. Excessive delay or failed to establish proper cruise airspeed. Failed to set/reset altimeter, as required.

3.3.8. Area 8--Cruise/Navigation:

3.3.8.1. **Q.** Demonstrated 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.

3.3.8.2. **Q-.** Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring nav aids. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course.

3.3.8.3. **U.** Major errors in procedures/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-.**

3.3.9. Area 9--Formation:

3.3.9.1. Flight Lead:

3.3.9.1.1. **Q.** Established and maintained appropriate formations utilizing published and briefed procedures. Maintained positive control of flight/element. Smooth control and considered the wingman appropriately. Planned ahead and made timely decisions. Ensured wingman position and adherence to deconfliction contracts. Effectively coordinated with other flight members throughout the mission. Ensured smooth and efficient flight operation.

3.3.9.1.2. **Q-.** Made minor deviations from published and/or briefed procedures. Demonstrated limited flight management. Occasionally rough on the controls. Maneuvered excessively, making it difficult for wingman to maintain position. Did not always plan ahead and/or hesitant in making decisions. Flight coordination was adequate to accomplish the mission. Deficiencies in communication or interaction resulted in degraded flight or mission efficiency.

3.3.9.1.3. **U.** Formation flight not accomplished in accordance with published and/or briefed procedures. Did not establish appropriate formations. Continually rough on the controls. Maneuvered erratically causing wingman to break out or overshoot formation. Provided little consideration for wingman. Indecisive. Failed to ensure wingman maintained proper position. Failed to maintain deconfliction contracts. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

3.3.9.2. Wingman:

3.3.9.2.1. **Q.** Maintained position in accordance with published and briefed procedures with only momentary deviations. Demonstrated smooth and immediate position corrections. Maintained appropriate separation and complied with leader's instructions. Rejoin was smooth and timely. Contributed to the smooth and efficient operation of the flight. Maintained mutual support during the entire sortie.

3.3.9.2.2. **Q-.** Made minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Over-controlled. Slow to rejoin.

Made minor mistakes reducing mutual support. Minor errors in performing assigned flight tasks.

3.3.9.2.3. **U.** Formation flight not accomplished in accordance with published and/or briefed procedures. Did not comply with leader's instructions. Unable to maintain a formation position. Failed to maintain deconfliction contracts. Made abrupt position corrections. Did not maintain appropriate separation. Rejoin was unsafe. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

3.3.10. Area 10--In-Flight Checks:

3.3.10.1. **Q.** Performed all in-flight checks as required.

3.3.10.2. **Q-.** Same as qualified, except for minor deviations or omissions during checks. Did not detract from mission accomplishment.

3.3.10.3. **U.** Did not perform in-flight checks or monitor systems to the degree that an emergency condition would have developed if allowed to continue uncorrected or would have severely degraded mission accomplishment.

3.3.11. Area 11--Fuel Management:

3.3.11.1. **Q.** Properly managed fuel throughout the mission. Complied with all established fuel requirements. Adhered to briefed Joker/Bingo calls.

3.3.11.2. **Q-.** Errors in fuel management procedures that did not preclude mission accomplishment.

3.3.11.3. **U.** Failed to monitor fuel status or comply with established fuel requirements. Poor fuel management precluded mission accomplishment or required intervention for safety. Did not adhere to briefed fuel requirements.

3.3.12. Area 12--Communications, Navigation, and IFF:

3.3.12.1. **Q.** Complete knowledge of and compliance with correct communication and IFF procedures. Transmissions concise, accurate and utilized proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

3.3.12.2. **Q-.** Occasional deviations from correct procedures required retransmissions or resetting codes. Slow in initiating or missed several required calls. Minor errors or omissions did not significantly detract from situational awareness, threat warning or mission accomplishment. Transmissions contained extraneous matter, were not in proper sequence or used nonstandard terminology. Demonstrated limited knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

3.3.12.3. **U.** Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning or mission accomplishment. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

3.3.13. Area 14--Airwork:

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

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

3.3.13.3. **U.** Aircraft control erratic. Aircraft handling caused unsatisfactory accomplishment of maneuvers. Exceeded **Q-** criteria. Failed to consider the tactical situation. Temporary loss of aircraft control.

3.3.14. Area 16--Weapons System/Built In Test Checks:

3.3.14.1. **Q.** Completed all checks. Thorough knowledge and performance of weapons system checks.

3.3.14.2. **Q-.** Completed most weapons system checks. Limited knowledge of checks. Unsure of systems degradation due to check failure.

3.3.14.3. **U.** Failed to complete weapons system checks. General lack of knowledge on how to perform weapons system checks. Unable to determine systems degradation due to check failures.

3.3.15. Area 17--Air Refueling:**3.3.15.1. Air Refueling Rendezvous:**

3.3.15.1.1. **Q.** Rendezvous effectively accomplished using proper procedures. Demonstrated effective use of radio communications. Used proper communication procedures for briefed Emission Control level.

3.3.15.1.2. **Q-.** Rendezvous delayed by improper techniques, procedures or radio communications.

3.3.15.1.3. **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. Gross overshoot, spent excessive time in trail or safety of flight jeopardized due to poor judgment.

3.3.15.2. Air Refueling Procedures/Techniques:

3.3.15.2.1. **Q.** Expeditiously established and maintained proper position. Used proper procedures. Aircraft control was positive and smooth. Refueled without pilot-induced disconnects.

3.3.15.2.2. **Q-.** 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 procedures with deviations or omissions that did not affect the successful completion of air refueling.

3.3.15.2.3. **U.** Erratic in the pre-contact/refueling position. Made deviations or omissions that affected flight safety and/or the successful completion of the air refueling. Used unacceptable procedures. Excessive time to hookup delayed mission

accomplishment. Performance caused excessive and unnecessary pilot-induced disconnects and/or delayed mission accomplishment.

3.3.16. Area 18--Descent:

3.3.16.1. **Q.** Performed descent as directed, complied with all restrictions.

3.3.16.2. **Q-.** Performed descent as directed with minor deviations.

3.3.16.3. **U.** Performed descent with major deviations.

3.3.17. Area 19--Go-Around:

3.3.17.1. **Q.** Initiated and performed go-around promptly in accordance with flight manual and operational procedures and directives.

3.3.17.2. **Q-.** Slow to initiate go-around or procedural steps.

3.3.17.3. **U.** Did not self-initiate go-around when appropriate or directed. Applied incorrect procedures.

3.3.18. Area 20--Recovery:

3.3.18.1. **Q.** Performed recovery IAW applicable procedures using proper techniques. Effective use of radar during radar assisted trail recovery. Provided efficient commentary throughout recovery.

3.3.18.2. **Q-.** Performed recovery with minor deviations from established or appropriate procedures. Slow to obtain radar lock-on and/or contact due to poor technique during radar assisted trail recovery. Inefficient commentary.

3.3.18.3. **U.** Recovery not performed IAW applicable procedures. Unable to accomplish radar assisted trail recovery (if applicable) due to poor technique.

3.3.19. Area 21—Emergency Traffic Pattern

3.3.19.1. **Q.** Complied with all flight manual and operational procedures. Maintained safe maneuvering airspeed/AOA and adjusted approach for type of emergency simulated.

3.3.19.2. **Q-.** Minor procedural errors. Erratic airspeed/AOA control. Errors did not detract from safe handling of the situation.

3.3.19.3. **U.** Did not comply with applicable procedures. Erratic airspeed/AOA control compounded problems associated with the emergency. Flew an approach that was incompatible with the simulated emergency. Did not adjust approach for simulated emergency.

3.3.20. Area 22—Emergency Approach/Landing (Configuration through rollout):

3.3.20.1. **Q.** Used sound judgment and could have safely landed. Configured at the appropriate position/altitude. Flew final based on recommended procedures, airspeed/AOA and glide path. Smooth, positive control of aircraft. Touchdown point was IAW applicable guidance and/or permitted safe stopping on available runway. Arrestment gear could have been safely used.

3.3.20.2. **Q-.** Safety not compromised. Configured at a position and altitude which allowed for a safe approach. Could have landed safely with the following deviations: minor

deviations from recommended procedures, airspeed/AOA and altitudes. Unnecessary maneuvering due to minor errors in planning or judgment.

3.3.20.3. **U.** Major deviations from recommended procedures, airspeed/AOA and altitudes. Required excessive maneuvering due to inadequate planning or judgment. Could not have landed safely. Touchdown point was not IAW applicable guidance and did not or would not allow for safe stopping on available runway. Arrestment gear could not have been used. Did not attempt go-around if approach was unsuccessful.

3.3.21. Area 23--VFR Pattern/Approach:

3.3.21.1. **Q.** Performed patterns/approaches IAW flight manual procedures and AFTTP 3-3.F-15 procedures, techniques, and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper/briefed airspeed/AOA. Airspeed -5/+10 knots.

3.3.21.2. **Q-.** Performed patterns/approaches with minor deviations to flight manual procedures and AFTTP 3-3.F-15 procedures, techniques, and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper/briefed airspeed/AOA. Airspeed -5/+15 knots.

3.3.21.3. **U.** Approaches not performed IAW flight manual procedures and AFTTP 3-3.F-15 procedures, techniques, and local directives. Erratic aircraft control. Large deviations in runway alignment. Exceeded Q- parameters.

3.3.22. Area 24--Formation Approach:

3.3.22.1. Flight Lead:

3.3.22.1.1. **Q.** Smooth on controls and considered wingman. Flew approach as published/directed.

3.3.22.1.2. **Q-.** Occasionally rough on the controls. Made it difficult for wingman to maintain position. Some procedural deviations. Slow to comply with published procedures.

3.3.22.1.3. **U.** Did not monitor wingman's position or configuration. Rough on the controls. No consideration for wingman. Major deviations in procedures. Did not fly approach as published/directed. Flight could not land from approach.

3.3.22.2. Wingman:

3.3.22.2.1. **Q.** Maintained position with only momentary deviations. Smooth and immediate corrections. Maintained appropriate separation and complied with procedures and leader's instructions.

3.3.22.2.2. **Q-.** Varied position considerably. Over-controlled.

3.3.22.2.3. **U.** Abrupt position corrections. Did not maintain appropriate separation. Erratic wing position and/or procedural deviations.

3.3.23. **Area 25--Landing.** Listed criteria only applicable to normal VFR approaches. Where runway configuration, arresting cable placement or flight manual procedures and AFTTP 3-3.F-15 limitations require an adjustment to the desired touchdown point, a simulated runway threshold should be identified and the grading criteria applied accordingly. For instrument

approaches, the examinee should utilize a normal glideslope from either the decision height or from a point where visual acquisition of the runway environment is made.

3.3.23.1. **Q.** Performed landings IAW flight manual procedures and AFTTP 3-3.F-15 procedures, techniques, and local directives. Touchdown Point 150 feet to 1,000 feet from the runway threshold.

3.3.23.2. **Q-.** Performed landings with minor deviations to flight manual procedures and AFTTP 3-3.F-15 procedures, techniques, and local directives. Touchdown Point 0 to 149 feet or 1,001 feet to 1,500 feet from the runway threshold.

3.3.23.3. **U.** Landing not performed IAW flight manual procedures and AFTTP 3-3.F-15 procedures, techniques, and local directives. Touchdown Point exceeded **Q-** criteria.

3.3.24. Area 26--After Landing:

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

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

3.3.24.3. **U.** Major deviations or omissions were made in performance of after-landing check or aircraft taxi procedures which could have jeopardized safety. Data recorded inaccurately or omitted.

3.3.25. Area 27--Flight Leadership (if applicable):

3.3.25.1. **Q.** Positively and effectively led the flight and made timely comments to correct discrepancies when required. Made sound and timely in-flight decisions. Provided direction/information when needed. Adapted effectively to meet new situational demands. Knew assigned tasks of other flight members. Asked for inputs and made positive statements to motivate flight members/other agencies. Coordinated effectively with other flight members/other agencies without misunderstanding, confusion, or undue delay.

3.3.25.2. **Q-.** In-flight decisions delayed mission accomplishment or degraded training benefit. Flight coordination was limited though adequate to accomplish the mission. Provided limited direction/information when needed. Slow to adapt to meet new situational demands. Demonstrated only limited knowledge of assigned tasks of other flight members. Did not consistently seek inputs from other flight members/other agencies. Limited effort to motivate flight members/other agencies through positive statements.

3.3.25.3. **U.** Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions were unsafe and/or jeopardized mission accomplishment. Failed to maintain briefed formation roles and responsibilities. Did not provide direction/information when needed. Did not adapt to meet new situational demands. Did not know the assigned tasks of other flight members. Did not ask for inputs. Made no effort to make positive statements to motivate flight members/other agencies. Lack of flight/other agency coordination resulted in significant degradation of mission accomplishment.

3.3.26. Area 28--Debriefing/Critique:

3.3.26.1. **Q.** Thoroughly debriefed the mission (or applicable portions) in a timely manner. Correctly analyzed mission results with respect to established objectives. Provided specific, objective, non-threatening positive and negative feedback on team and individual performance. Debriefed deviations. Offered corrective guidance as appropriate. Thoroughly debriefed any breakdowns in deconfliction contracts, roles and responsibilities. Asked for reactions/inputs from other mission participants. Re-capped key points and compared mission results with mission objectives.

3.3.26.2. **Q-.** Limited debriefing. Did not thoroughly discuss performance relative to mission objectives. Minor time management problems. Debriefed mission without specific, non-threatening positive and negative feedback on individual and team performance. Did not debrief significant deviations to an acceptable level. Did not consistently seek input from other mission participants. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives.

3.3.26.3. **U.** Did not correctly debrief mission deviations or offer corrective guidance. Used excessive time to debrief. Failed to debrief breakdowns in deconfliction contracts, roles and responsibilities. Did not provide non-threatening positive and negative feedback during debriefing. Did not seek input from other mission participants. Did not re-cap key mission points nor compare mission results to mission objectives.

3.3.27. **Area 29--Knowledge.** Evaluate all applicable subareas.

3.3.27.1. **Aircraft General:**

3.3.27.1.1. **Q.** Demonstrated thorough knowledge of aircraft systems, limitations and performance characteristics.

3.3.27.1.2. **Q-.** Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

3.3.27.1.3. **U.** Demonstrated unsatisfactory knowledge of aircraft systems, limitations or performance characteristics.

3.3.27.2. **Emergency Procedures:**

3.3.27.2.1. **Q.** Displayed correct, immediate response to emergency situations. Effectively used checklist.

3.3.27.2.2. **Q-.** Response to certain emergencies was slow/confused. Used the checklist when appropriate, but slow to locate required data.

3.3.27.2.3. **U.** Unable to analyze problems or take corrective action. Did not use checklist, or lacks acceptable familiarity with its arrangement or contents.

3.3.27.3. **Flight Rules/Procedures:**

3.3.27.3.1. **Q.** Thorough knowledge of flight rules and procedures.

3.3.27.3.2. **Q-.** Deficiencies in depth of knowledge.

3.3.27.3.3. **U.** Inadequate knowledge of flight rules and procedures.

3.3.27.4. **Weapon/Tactics/Threat:**

3.3.27.4.1. **Q.** Thorough knowledge of all aircraft weapons systems, weapons effects, tactics and threats applicable to the unit mission.

3.3.27.4.2. **Q-.** Deficiencies in depth of knowledge or comprehension of weapons systems, weapons effects, tactics and threat knowledge which would not preclude successful mission accomplishment.

3.3.27.4.3. **U.** Insufficient knowledge of weapons, tactics and threat contributed to ineffective mission accomplishment.

3.3.27.5. Local Area Procedures:

3.3.27.5.1. **Q.** Thorough knowledge of local procedures.

3.3.27.5.2. **Q-.** Limited knowledge of local procedures.

3.3.27.5.3. **U.** Inadequate knowledge of local procedures.

3.3.27.6. Plans/Alert Procedures:

3.3.27.6.1. **Q.** Adequate knowledge of plans applicable to the unit mission. Thoroughly familiar with alert procedures and contingencies.

3.3.27.6.2. **Q-.** Deficiencies in depth of knowledge or comprehension of plans or alert procedures applicable to the unit.

3.3.27.6.3. **U.** Knowledge of plans/alert procedures insufficient to ensure effective mission accomplishment.

3.3.27.7. Authentication Procedures:

3.3.27.7.1. **Q.** Performed authentication with no errors.

3.3.27.7.2. **Q-.** Minor errors in authentication. Required numerous attempts to complete authentication.

3.3.27.7.3. **U.** Unable to authenticate or authenticated incorrectly.

3.3.28. Area 30--Airmanship/Situational Awareness (Critical):

3.3.28.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Made appropriate decisions based on available information. Recognized the need for action. Aware of performance of self and other flight members. Aware of on-going mission status. Recognized, verbalized and correctly acted on unexpected events.

3.3.28.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Inappropriately analyzed flight conditions and/or failed to recognize/understand mission developments, or demonstrated poor judgment to the extent that flight safety could have been compromised. Did not recognize the need for action. Not aware of performance of self and other flight members. Not aware of on-going mission status. Failed to recognize, verbalize and act on unexpected events.

3.3.29. Area 31--Safety (Critical):

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

3.3.29.2. **U.** Was not aware of or did not comply with all safety factors required for safe operation or mission accomplishment. Did not adequately clear aircraft flight path. Operated the aircraft in a dangerous manner.

3.3.30. Area 32--Flight Discipline (Critical):

3.3.30.1. **Q.** Provided required direction/information. Correctly adapted to meet new situational demands. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.3.30.2. **U.** Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Failed to exhibit strict flight or pilot discipline. Violated or ignored rules or instructions.

3.3.31. Area 33--Instructor Performance (if applicable).

3.3.31.1. Briefing/Debriefing:

3.3.31.1.1. **Q.** Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made excellent use of training aids. Excellent analysis of all events/maneuvers. Clearly defined objectives. Gave positive and negative performance feedback at appropriate times—feedback was specific, objective, based on observable behavior, and given constructively. Re-capped key points/compared mission's results with objectives. When appropriate, took the initiative and time to share operational knowledge and experience.

3.3.31.1.2. **Q-.** Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers. Some feedback given, but was not always given at appropriate times and not always a positive learning experience for the entire formation. Debrief covered the mission highlights but was not specific enough.

3.3.31.1.3. **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. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives. Feedback not given or given poorly. Attempted to hide mistakes. Elected not to conduct flight debrief.

3.3.31.2. Demonstration of Maneuvers:

3.3.31.2.1. **Q.** Performed required maneuvers within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated excellent instructor proficiency.

3.3.31.2.2. **Q-.** Performed required maneuvers with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.3.31.2.3. **U.** Was unable to properly perform required maneuvers. Made major procedural errors. Did not provide in-flight commentary. Demonstrated below average instructor proficiency.

3.3.31.3. Instructor Knowledge:

3.3.31.3.1. **Q.** Demonstrated in-depth knowledge of procedures, requirements, aircraft systems/performance characteristics, mission and tactics beyond that expected of non-instructors.

3.3.31.3.2. **Q-.** Deficiencies in depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission or tactics.

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

3.3.31.4. Ability to Instruct:

3.3.31.4.1. **Q.** Demonstrated excellent instructor/evaluator 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.

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

3.3.31.4.3. **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.

3.3.31.5. Training/Evaluation Forms Preparation:

3.3.31.5.1. **Q.** Completed appropriate training/evaluation records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

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

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

3.3.32. Area 35--Sensor Interpretation:

3.3.32.1. **Q.** Correctly interpreted sensor display. Had no difficulties compensating for errors or unanticipated developments.

3.3.32.2. **Q-.** Slow to interpret sensor display. Had difficulties compensating for system errors or unanticipated developments.

3.3.32.3. **U.** Could not interpret sensor display. Could not compensate for or identify system errors or unanticipated developments.

3.3.33. Area 36--Task Prioritization:

3.3.33.1. **Q.** Correctly identified, prioritized and managed tasks based on existing and new information that assured mission success. Used available resources to manage workload, communicated task priorities to other flight members. Asked for assistance when required. Displayed sound knowledge of systems. Effectively identified contingencies and alternatives. Gathered and crosschecked available data before acting. Clearly stated

decisions and ensured they were understood. Investigated doubts and concerns of other flight members when necessary.

3.3.33.2. **Q-** Made minor errors in prioritization, management of tasks, system knowledge which did not affect safe or effective mission accomplishment. Did not completely communicate task priorities to other flight members. Made minor errors in identifying contingencies, gathering data, or communicating a decision which did not affect safe or effective mission accomplishment.

3.3.33.3. **U.** Incorrectly prioritized or managed tasks. Displayed lack of systems knowledge causing task overload that seriously degraded mission accomplishment or safety of flight. Failed to communicate task priorities to other flight members. Failed to ask for assistance when overloaded. Improperly or ineffectively identified contingencies, gathered data, or communicated a decision that seriously degraded mission accomplishment or safety of flight.

3.3.34. Area 37--Cockpit/Crew Resource Management:

3.3.34.1. **Q.** Effectively employed available resources to mitigate identified and/or emerging risks during the mission.

3.3.34.2. **Q-** Adequately employed available resources to mitigated identified and/or emerging risks during the mission.

3.3.34.3. **U.** Failed to employ available resources to mitigated identified and/or emerging risks during the mission.

3.4. Aircrew Evaluation Criteria—Instruments.

3.4.1. Area 61--Holding:

3.4.1.1. **Q.** Performed entry and holding IAW published procedures and directives. Holding pattern limit exceeded by not more than: Leg Timing \pm 15 seconds, Tactical Air Navigation (TACAN) \pm 2 NM.

3.4.1.2. **Q-** Minor deviations to procedures or directives. Holding pattern limit exceeded by not more than: Leg Timing \pm 20 seconds, TACAN \pm 3 NM.

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

3.4.2. Area 62--Instrument Penetration (Initial Approach Fix to Final Approach Fix/Descent Point)/Enroute Descent (Radar Vectors To Final Approach):

3.4.2.1. **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.

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

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

3.4.3. Area 63--Instrument Patterns (Downwind/Base Leg):

3.4.3.1. **Q.** Performed procedures as published or directed and IAW flight manual procedures. Smooth and timely response to controller instruction.

3.4.3.2. **Q-.** Performed procedures with minor deviations. Slow to respond to controller instruction.

3.4.3.3. **U.** Performed procedures with major deviations/erratic corrections. Failed to comply with controller instruction.

3.4.4. Area 64—Non-Precision Approach:

3.4.4.1. **Q.** Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at Minimum Descent Altitude (MDA) at or before visual descent point/Missed Approach Point (MAP). Position would have permitted a safe landing. Maintained proper/briefed AOA.

3.4.4.1.1. Airspeed +10/-5 knots.

3.4.4.1.2. Heading +5 degrees (Airport Surveillance Radar approach).

3.4.4.1.3. Course +5 degrees at MAP.

3.4.4.1.4. Localizer less than one dot deflection.

3.4.4.1.5. Minimum Descent Altitude +100/-0 feet.

3.4.4.2. **Q-.** Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the visual descent point. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA.

3.4.4.2.1. Airspeed +15/-5 knots.

3.4.4.2.2. Heading +10 degrees (for Airport Surveillance Radar approach).

3.4.4.2.3. Course +10 degrees at MAP.

3.4.4.2.4. Localizer within two dots deflection.

3.4.4.2.5. Minimum Descent Altitude +150/-50 feet.

3.4.4.3. **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.

3.4.4.4. Area 65--Precision Approach (Precision Approach Radar) (See Note 3, Table 2.1):

3.4.4.5. **Q.** Performed procedures as directed and IAW flight manual procedures. Smooth and timely response to controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained proper/briefed AOA. Maintained glide path with only minor deviations.

3.4.4.5.1. Airspeed +10/-5 knots.

3.4.4.5.2. Heading within 5 degrees of controller's instructions.

3.4.4.5.3. Initiated missed approach (if applicable) at decision height.

3.4.4.6. **Q-**. Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA. Improper glide path control.

3.4.4.6.1. Airspeed +15/-5 knots.

3.4.4.6.2. Heading within 10 degrees of controller's instructions.

3.4.4.6.3. Initiated missed approach (if applicable) at decision height, +50/-0 ft.

3.4.4.7. **U**. Performed procedures with major deviations. Did not respond to controller's instructions. Erratic corrections. Exceeded **Q-** limits. Did not comply with decision height and/or position would not have permitted a safe landing. Erratic glide path control.

3.4.5. Area 66--Precision Approach (ILS) (See Note 3, Table 2.1):

3.4.5.1. **Q**. Performed procedures as published and IAW flight manual procedures. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position would have permitted a safe landing. Maintained proper/briefed AOA.

3.4.5.1.1. Airspeed +10/-5 knots.

3.4.5.1.2. Glide Slope/Azimuth within one dot.

3.4.5.1.3. Initiated missed approach (if applicable) at decision height.

3.4.5.2. **Q-**. Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA.

3.4.5.2.1. Airspeed +15/-5 knots.

3.4.5.2.2. Glide Slope within one dot low/two dots high.

3.4.5.2.3. Azimuth within two dots.

3.4.5.2.4. Initiated missed approach (if applicable) at decision height, +50/-0 feet.

3.4.5.3. **U**. Performed procedures with major deviations. Erratic corrections. Exceeded **Q-** limits. Did not comply with Decision Height or position at Decision Height would not have permitted a safe landing.

3.4.6. Area 67--Missed Approach/Climb Out:

3.4.6.1. **Q**. Executed missed approach/climb out as published/directed. Completed all actions IAW flight manual procedures.

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

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

3.4.7. Area 68--Circling/Sidestep Approach:

3.4.7.1. **Q**. Performed circling/sidestep approach in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217V1. Aircraft control was positive and smooth. Proper runway alignment.

3.4.7.2. **Q-**. Performed circling/sidestep approach with minor deviations to procedures and techniques outlined in the flight manual and AFMAN 11-217V1. Aircraft control was not consistently smooth, but safe. Runway alignment varied, but go-around not required.

3.4.7.3. **U**. Circling/sidestep approach not performed in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217V1. Erratic aircraft control. Large deviations in runway alignment required go-around.

3.4.8. Area 69--Instrument Cross-Check:

3.4.8.1. **Q**. Effective instrument cross-check. Smooth and positive aircraft control throughout flight. Meets "**Q**" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.4.8.2. **Q-**. Slow instrument cross-check. Aircraft control occasionally abrupt to compensate for recognition of errors. Meets "**Q-**" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.4.8.3. **U**. Inadequate instrument cross-check. Erratic aircraft control. Exceeded **Q-** limits.

3.5. Aircrew Evaluation Criteria—Tactical Employment.

3.5.1. General:

3.5.1.1. Area 81--Tactical/Mission Plan:

3.5.1.1.1. **Q**. Realistic, well-developed plan that encompassed mission objectives, threats and capabilities of all flight members. Addressed contingencies in development of plan.

3.5.1.1.2. **Q-**. Minor omissions in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

3.5.1.1.3. **U**. Major errors in the plan precluded accomplishment of the stated objectives.

3.5.1.2. Area 82—Aerospace Control Alert (ACA) Tasking (Tasked units):

3.5.1.2.1. **Q**. Responded properly to directive commentary. Completed all required armament/safety checks. Successfully completed visual identification pass. Properly performed procedures for air defense operations.

3.5.1.2.2. **Q-**. Slow response to directive commentary contributed to delayed completion of a visual identification pass or required large position corrections to complete a firing pass. Completed all required armament/safety checks. Minor deficiencies during performance of procedures for air defense operations.

3.5.1.2.3. **U**. Failed to complete intercepts/visual identification passes because of improper procedures. Did not complete an armament/safety check. Failed to perform proper procedures for air defense operations.

3.5.1.3. Area 83--Tactical/Mission Execution:

3.5.1.3.1. **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.

3.5.1.3.2. **Q-.** Minor deviations from tactical plan which did not result in an ineffective mission. Slow to adapt to changing environment. Low situational awareness.

3.5.1.3.3. **U.** Unable to accomplish the mission due to major errors of commission or omission during execution of the plan. Situational awareness lost.

3.5.1.4. Area 84--Composite Force Interface:

3.5.1.4.1. **Q.** Effectively planned for and used composite force assets to enhance mission and achieve objectives.

3.5.1.4.2. **Q-.** Minor confusion between composite force assets and fighters. Less than optimum use of composite force assets which did not affect the fighter's offensive advantage.

3.5.1.4.3. **U.** Inadequate or incorrect use of composite force assets resulted in loss of offensive potential.

3.5.1.5. Area 85--Radio Use/Tactical Communications:

3.5.1.5.1. **Q.** Radio communications were concise, accurate and effectively used to direct maneuvers or describe the tactical situation.

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

3.5.1.5.3. **U.** Radio communications over primary/secondary radios were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness or mission accomplishment.

3.5.1.6. Area 86—Visual/Sensor Lookout:

3.5.1.6.1. **Q.** Demonstrated thorough knowledge and effective application of visual lookout techniques and integration of sensor information throughout all phases of flight. Maintained deconfliction contracts.

3.5.1.6.2. **Q-.** Demonstrated limited knowledge of visual lookout techniques. Slow to establish lookout responsibilities for all phases of flight. Slow to integrate visual lookout and sensor information to acquire threats to flight or targets to be attacked. Made minor deviations in deconfliction contract adherence.

3.5.1.6.3. **U.** Demonstrated unsatisfactory knowledge and/or application of visual lookout and sensor integration. Allowed threat to penetrate to short range undetected. Failed to maintain deconfliction contracts.

3.5.1.7. Area 87--Mutual Support:

3.5.1.7.1. **Q.** Maintained mutual support during entire engagement thus sustaining an offensive posture and/or negating all attacks. Adhered to all engaged and supporting responsibilities and formation contracts.

3.5.1.7.2. **Q-.** Mutual support occasionally broke down resulting in temporary confusion or the loss of an offensive advantage. Demonstrated limited knowledge of engaged and supporting responsibilities.

3.5.1.7.3. **U.** Mutual support broke down resulting in the flight being put in a defensive position from which all attacks were not negated. Demonstrated inadequate knowledge of engaged and supporting responsibilities and formation contracts.

3.5.1.8. **Area 88--Tactical Navigation:**

3.5.1.8.1. **General:**

3.5.1.8.1.1. **Q.** Navigated to desired destination and remained geographically oriented during the tactical portion of the mission along the desired route. Altitude and route of flight reflected consideration for enemy threats. Maintained terrain awareness. Complied with established altitude minimums. Adhered to airspace restrictions. **Note:** Airspace restrictions include buffer zones, restrictive fire plans, fire support coordination lines, friendly artillery fans, ingress/egress corridors and other airspace restrictions.

3.5.1.8.1.2. **Q-.** Deviations from planned route of flight were recognized and corrected. Maintained terrain awareness. Altitude control contributed to exposure to threats for brief periods. Did not optimize terrain masking (if applicable).

3.5.1.8.1.3. **U.** Failed to locate desired destination. Deviations from planned route of flight exposed flight to threats. Violated airspace restrictions or altitude minimums. Poor airspeed/altitude control contributed to disorientation. Inadequate terrain awareness. Did not use terrain masking (if applicable).

3.5.1.8.2. **High/Medium Altitude:**

3.5.1.8.2.1. **Q.** Demonstrated satisfactory ability to adjust for deviations in time and course; only minor corrections required.

3.5.1.8.2.2. **Q-.** Medium level course and airspeed control resulted in large corrections. Minor error in procedures/use of navigation equipment.

3.5.1.8.2.3. **U.** Failed to recognize checkpoints or adjust for deviations in course. Major errors in procedures/use of navigation equipment.

3.5.1.8.3. **Low Altitude:**

3.5.1.8.3.1. **Q.** Demonstrated satisfactory ability to adjust for deviations in time and course; only minor corrections required. Remained oriented within planned route and took into consideration simulated/actual threats, weather, air space restrictions, and air traffic control for all course adjustments to accomplish the mission. Used terrain masking as circumstances allowed.

3.5.1.8.3.2. **Q-.** Low-level altitude and airspeed control resulted in large corrections.

3.5.1.8.3.3. **U.** Failed to recognize checkpoints or adjust for deviations in time and course. Exceeded low-level route boundaries. Did not use terrain masking if available and tactically required. Major errors in procedures/use of navigation equipment. Violated low-level instructions/restricted airspace.

3.5.1.9. Area 89--Ingress:

3.5.1.9.1. **Q.** Aware of all known/simulated threats and defenses. Employed effective use of evasive maneuvers, terrain masking and/or route and altitude selection.

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

3.5.1.9.3. **U.** Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective evasive maneuvers, terrain masking and/or route or altitude threat deconfliction.

3.5.1.10. Area 90--Egress:

3.5.1.10.1. **Q.** Effectively used evasive maneuvers and terrain masking to complete an expeditious egress from the target area. Flight/element join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.5.1.10.2. **Q-.** Egress contributed to unnecessary exposure to threats and delayed flight join-up and departure from target area.

3.5.1.10.3. **U.** Egress caused excessive exposure to threats. Flight/element join-up was not accomplished or resulted in excessive exposure to threats.

3.5.1.11. Area 91--Combat Separation:

3.5.1.11.1. **Q.** Adhered to briefed/directed separation procedures. Positive control of flight/element during separation. Maintained mutual support with adversary unable to achieve valid simulated missile/gun firing parameters.

3.5.1.11.2. **Q-.** Minor deviations from briefed/directed separation procedures. Limited control of flight/element during separation. Allowed mutual support to break down intermittently.

3.5.1.11.3. **U.** Did not adhere to briefed/directed separation procedures to the degree that an emergency fuel condition would have developed if allowed to continue uncorrected. Could not effectively separate from the engagement or could not regain mutual support.

3.5.1.12. Area 92--Timing. Time should be based on preplanned period (Defensive Counter Air) or push time (Offensive Counter Air/Sweep).

3.5.1.12.1. **Q.** ± 1 minute. Covered time on target (TOT).

3.5.1.12.2. **Q-.** ± 2 minutes. Covered time on target.

3.5.1.12.3. **U.** Exceeded Q- parameters. Failed to cover time on target due to inadequate planning or use of resources.

3.5.1.13. Area 93--Training Rules/Rules of Engagement (ROE):

- 3.5.1.13.1. **Q.** Adhered to and knowledgeable of all training rules (see AFI 11-214, *Air Operations Rules and Procedures*)/ROE.
- 3.5.1.13.2. **Q-.** Minor deviations. Made timely and positive corrections. Did not jeopardize safety of flight.
- 3.5.1.13.3. **U.** Significant deviations indicating a lack of knowledge of training rules/ROE.
- 3.5.1.14. Area 94--Evasive Action/Threat Reactions:**
- 3.5.1.14.1. **Q.** Threat reactions were timely and correct. Accomplished appropriate countermeasures and performed maneuvers to counter threat.
- 3.5.1.14.2. **Q-.** Threat reactions were slow or inconsistent. Slow to accomplish appropriate countermeasures or perform maneuvers to counter threat.
- 3.5.1.14.3. **U.** Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.
- 3.5.1.15. Area 95--In-Flight Report (not applicable for FTU):**
- 3.5.1.15.1. **Q.** Gave accurate, precise in-flight reports in correct format.
- 3.5.1.15.2. **Q-.** Deviated from established procedures/format. Completed reports.
- 3.5.1.15.3. **U.** Failed to make in-flight reports. Unfamiliar with in-flight reporting procedures.
- 3.5.1.16. Area 96—Electronic Warfare (EW) / Expendable Countermeasures (EXCM) / All Aspect Missile Defense (AAMD)**
- 3.5.1.16.1. **Q.** Displayed thorough knowledge and operation of EW, EXCM, and AAMD.
- 3.5.1.16.2. **Q-.** Displayed limited knowledge and/or minor errors in operation of these systems.
- 3.5.1.16.3. **U.** Displayed unsatisfactory knowledge and/or minor errors in operation of these systems.
- 3.5.1.17. Area 97--Weapons System Utilization:**
- 3.5.1.17.1. **Q.** Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated). Executed all required procedures to successfully employ the weapon.
- 3.5.1.17.2. **Q-.** Late to prepare the weapon system to deliver the desired ordnance. Minor procedural errors degraded weapons employment. **Note:** A successful reattack following a dry pass caused by minor procedural errors during the delivery is an example of degraded weapons employment.
- 3.5.1.17.3. **U.** Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery.
- 3.5.1.18. Area 98--Sensor Management:**

3.5.1.18.1. **Q.** Correctly planned, briefed, prioritized and executed a sound sensor management plan. Identified high task periods and primary/secondary/tertiary sensors based on mission priorities and flight member responsibilities. Accounted for threats, changes in tasking, weather and flight member experience. Re-prioritized sensor tasks based on existing and new information to ensure mission success. Displayed sound knowledge of sensor systems.

3.5.1.18.2. **Q-.** Made minor errors in planning, prioritization and management of sensor tasks. Did not completely account for threats, changes in tasking, weather or flight member experience.

3.5.1.18.3. **U.** Incorrectly prioritized or managed sensor tasks in a manner which seriously degraded mission accomplishment or safety of flight. Overtasked other flight members or failed to communicate task overload. Displayed lack of knowledge of sensor systems.

3.5.2. **Air-to-Air:**

3.5.2.1. **Area 111--Sensor Search/Sorting:**

3.5.2.1.1. **Q.** Correctly planned, briefed, prioritized and executed a sound sensor management plan. Identified high task periods and primary/secondary/tertiary sensors based on mission priorities and flight member responsibilities. Accounted for threats, changes in tasking, weather and flight member experience. Re-prioritized sensor tasks based on existing and new information to ensure mission success. Displayed sound knowledge of sensor systems.

3.5.2.1.2. **Q-.** Made minor errors in planning, prioritization and management of sensor tasks. Did not completely account for threats, changes in tasking, weather or flight member experience.

3.5.2.1.3. **U.** Incorrectly prioritized or managed sensor tasks in a manner which seriously degraded mission accomplishment or safety of flight. Overtasked other flight members or failed to communicate task overload. Displayed lack of knowledge of sensor systems.

3.5.2.2. **Area 112--Tactical Intercept/Combat Air Patrol (CAP):**

3.5.2.2.1. **Q.** Thorough knowledge and correct employment of tactical intercept procedures. Effective CAP of designated airspace resulting in successful threat identification and intercept, if applicable. Successfully engaged all factor threats.

3.5.2.2.2. **Q-.** Limited knowledge of tactical intercept procedures. Intercept resulted in successful threat identification; however, excessive corrections were required to complete the intercept and/or threat engagement. CAP could have been more effective.

3.5.2.2.3. **U.** CAP did not adequately cover designated airspace. Threat identification and/or intercept unsuccessful due to poor techniques and/or improper procedures. Engagement terminated in a defensive position.

3.5.2.3. **Area 113--Offensive Maneuvering:**

3.5.2.3.1. **Q.** Effective use of basic fighter maneuvering and air combat maneuvering or beyond visual range weapons employment IAW the ROE to successfully engage

opposing aircraft. Effectively managed energy level during engagements. Maintained offensive advantage.

3.5.2.3.2. **Q-** Limited maneuvering proficiency. Did not effectively counter opposing aircraft. Occasionally mismanaged energy levels, jeopardizing offensive advantage.

3.5.2.3.3. **U.** Unsatisfactory knowledge or performance of maneuvers, aircraft handling or energy management. Lost offensive advantage.

3.5.2.4. Area 114--Defensive/Counteroffensive Maneuvering:

3.5.2.4.1. **Q.** Performed correct initial move to counter attack of opposing aircraft. Used correct maneuvers to negate the threat. Effectively gained counteroffensive advantage.

3.5.2.4.2. **Q-** Some hesitation or confusion/defensive situation. Minor errors in energy management or maneuvering delayed negating the attack of opposing aircraft.

3.5.2.4.3. **U.** Unable to negate attack of opposing aircraft.

3.5.2.5. Area 115--Air-to-Air Weapons Employment. Snapshot gun attacks assessed as misses may be discounted from computations if attacks were tactically sound and attempted within designated parameters.

3.5.2.5.1. **Q.** Demonstrated proper knowledge of weapons employment procedures and attack parameters. Simulated weapons employment was accomplished at each opportunity and within designated parameters. Successfully completed 75 percent (or two of three or one of two) of all attempted shots.

3.5.2.5.2. **Q-** Demonstrated limited knowledge of weapons employment or attack parameters. Simulated weapons employment of weapons was successful but slow to recognize appropriate parameters. Did not meet Q criteria for attempted shots, but minor errors did not affect overall result.

3.5.2.5.3. **U.** Demonstrated inadequate knowledge of weapons employment procedures or attack parameters. All attempts to simulate weapons employment were unsuccessful due to pilot error.

3.5.2.6. Area 116--Air-to-Air Systems Integration:

3.5.2.6.1. **Q.** Effective use and integration of sensors. Optimized information flow to other flight members and participants.

3.5.2.6.2. **Q-** Slow to integrate use of sensors. Passed sub-optimal information to other flight members and participants.

3.5.2.6.3. **U.** Failed to effectively integrate sensors. Failed to pass appropriate information to other flight members and participants.

3.5.2.7. Area 117--Command and Control Integration:

3.5.2.7.1. **Q.** Effectively integrated Airborne Warning and Control System/ Ground Control Intercept (AWACS/GCI) information into tactical plan when necessary. Requested threat declarations when required. Communicated changes in the tactical situation, weather and threats to command and control agencies.

3.5.2.7.2. **Q-** Slow to integrate AWACS/GCI information into tactical plan when necessary. Slow to request threat declarations. Incomplete communication of changes in the tactical situation, weather and threats to command and control agencies.

3.5.2.7.3. **U.** Failed to integrate AWACS/GCI information into tactical plan when necessary. Failed to request or did not abide by threat declarations. Inadequate communication of changes in the tactical situation, weather and threats to command and control agencies.

3.6. EPE Criteria.

3.6.1. General:

3.6.1.1. See [paragraphs 3.4, 3.5, 3.6](#) for the following criteria:

3.6.1.1.1. **Area 29--Aircraft General Knowledge.**

3.6.1.1.2. **Area 37--Cockpit/Crew Resource Management.**

3.6.1.1.3. **Area 82—Aerospace Control Alert (ACA) Tasking (Tasked units).**

3.6.1.2. Area 301--Emergency Procedures/Aircraft Malfunctions (General):

3.6.1.2.1. **Q.** Recognized and analyzed malfunction in a timely manner. Displayed correct, immediate response to emergency situations. Effectively used checklist.

3.6.1.2.2. **Q-** Slow to recognize and/or analyze malfunction. Response to certain required steps in emergency procedures was slow/confused. Used the checklist when appropriate, but slow to locate required data and implement guidance.

3.6.1.2.3. **U.** Unable to analyze problems or take corrective action. Did not use checklist and/or lacked acceptable familiarity with its arrangement or contents.

3.6.1.3. Area 305--Weapons System Operation:

3.6.1.3.1. **Q.** Displayed thorough knowledge of aircraft weapons systems capabilities, limitations and backups/workarounds in event of malfunctions.

3.6.1.3.2. **Q-** Displayed deficiencies in depth of knowledge or comprehension of aircraft weapons systems capabilities, limitations and backups/workarounds in event of malfunctions which would not preclude successful mission accomplishment.

3.6.1.3.3. **U.** Displayed insufficient knowledge or comprehension of aircraft weapons systems capabilities, limitations and backups/workarounds in event of malfunctions which could preclude successful mission accomplishment.

3.6.1.4. Area 306--Weapons Employment and Switchology:

3.6.1.4.1. **Q.** Displayed thorough knowledge of aircraft weapons systems effects, tactics and switchology, when employing weapons in degraded modes of operation.

3.6.1.4.2. **Q-** Displayed deficiencies in depth of knowledge or comprehension of aircraft weapons systems effects, tactics and switchology, when employing weapons in degraded modes of operation, which would not preclude successful mission accomplishment.

3.6.1.4.3. U. Displayed insufficient knowledge or comprehension of aircraft weapons systems effects, tactics and switchology, when employing weapons in degraded modes of operation, which could preclude successful mission accomplishment.

3.6.2. **Pre-Takeoff.** The following items are graded using the same criteria as Area 301.

3.6.2.1. **Area 321--Hydraulic Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.2. **Area 331--Electrical Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.3. **Area 341--Fuel Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.4. **Area 351--Environment Control System (ECS)/Oxygen Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.5. **Area 361--Engine/APU Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.6. **Area 371--Avionics Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.7. **Area 381--Weapons Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.8. **Area 391--Flight Control System (FLCS) Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.9. **Area 401--Landing Gear/Wheel Brakes Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.2.10. **Area 411--Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

3.6.3. **Takeoff.** The following items are graded using the same criteria as Area 301.

3.6.3.1. **Area 421--Hydraulic Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.2. **Area 431--Electrical Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.3. **Area 441--Fuel Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.4. **Area 451--Environment Control System (ECS)/Oxygen Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.5. **Area 461--Engine/APU Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.6. **Area 471--Avionics Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.7. **Area 481--Weapons Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.8. **Area 491--Flight Control System (FLCS) Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.9. **Area 501--Landing Gear/Wheel Brakes Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.3.10. **Area 511--Emergency Procedures/Aircraft Malfunctions (Takeoff).**

3.6.4. In-Flight.

3.6.4.1. See [paragraphs 3.4, 3.5, 3.6](#) for the following criteria:

3.6.4.1.1. **Area 94--Evasive Action/Threat Reactions.**

3.6.4.2. The following items are graded using the same criteria as Area 301.

3.6.4.2.1. **Area 521--Hydraulic Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.2. **Area 531--Electrical Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.3. **Area 541--Fuel Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.4. **Area 551--Environment Control System (ECS)/Oxygen Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.5. **Area 561--Engine/APU Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.6. **Area 571--Avionics Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.7. **Area 581--Weapons Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.8. **Area 591--Flight Control System (FLCS) Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.9. **Area 601--Landing Gear/Wheel Brakes Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.2.10. **Area 611--Emergency Procedures/Aircraft Malfunctions (In-Flight).**

3.6.4.3. Area 614--Unusual Attitude Recoveries.

3.6.4.3.1. **Q.** Smooth, positive recovery to level flight with correct recovery procedures.

3.6.4.3.2. **Q-** Slow to analyze attitude, or erratic in recovery to level flight. Correct recovery procedures used.

3.6.4.3.3. **U.** Unable to determine attitude. Improper recovery procedures were used.

3.6.4.4. Area 615--AFMAN 11-217V1 Procedures/Heads-Up Display -Out Approach/Use of Standby Instruments.

3.6.4.4.1. **Q.** Performed approach in accordance with directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217V1. Maintained proper/briefed AOA. Maintained desired glide path with only minor deviations.

- 3.6.4.4.2. **Q-** Performed approach with minor deviations to directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217V1. Slow to correct to proper/briefed AOA. Did not always maintain desired glide path control.
- 3.6.4.4.3. **U.** Performed procedures with major deviations to directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217V1. Failed to attain and/or maintain proper/briefed AOA. Displayed erratic glide slope control.
- 3.6.4.5. Area 616--Alternate/Divert Airfields.**
- 3.6.4.5.1. **Q.** Made proper divert decision and correctly performed initial divert execution actions.
- 3.6.4.5.2. **Q-** Slow to make divert decision and/or slow to correctly perform initial divert execution actions.
- 3.6.4.5.3. **U.** Failed to make proper divert decision and/or correctly perform initial divert execution actions.
- 3.6.5. Landing.** The following items are graded using the same criteria as Area 301.
- 3.6.5.1. **Area 631--Hydraulic Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.2. **Area 641--Electrical Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.3. **Area 651--Fuel Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.4. **Area 661--Environment Control System (ECS)/Oxygen Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.5. **Area 671--Engine/APU Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.6. **Area 681--Avionics Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.7. **Area 691--Weapons Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.8. **Area 701--Flight Control System (FLCS) Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.9. **Area 711--Landing Gear/Wheel Brakes Emergency Procedures/Aircraft Malfunctions (Landing).**
- 3.6.5.10. **Area 721--Emergency Procedures/Aircraft Malfunctions (Landing).**

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Deputy Director Of Training And Readiness

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

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

AFPD 11-4, *Aviation Service*, 1 Sep 2004

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 19 Jan 2012

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AFI 11-2F-15V1, *F-15-Aircrew Training*, 7 Sep 2010

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Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 847, *Recommendation for Change of Publication*

AF Form 4031, *CRM Skills Training/ Evaluation Form*

Abbreviations and Acronyms

AAMD—All Aspect Missile Defense

ACA—Aerospace Control Alert

ACC—Air Combat Command
AF—Air Force
AFTTP—Air Force Tactics, Techniques, and Procedures
AFI—Air Force Instruction
AFMAN—Air Force Manual
AFPD—Air Force Policy Directive
AIM—Air Intercept Missile
AOA—Angle of Attack
APU—Auxillary Power Unit
ARMS—Aviation Resource Management System
AWACS—Airborne Warning and Control System
CAP—Combat Air Patrol
CRM—Cockpit/Crew Resource Management
DRU—Direct Reporting Unit
ECS—Environmental Control System
EPE—Emergency Procedures Evaluation
EW—Electronic Warfare
EXCM—Expendable Countermeasures
FE—Flight Examiner
FLCS—Flight Control System
FOA—Field Operating Agency
FTU—Formal Training Unit
GCI—Ground Control Intercept
IAW—In Accordance With
IFF—Identification, Friend or Foe
ILS—Instrument Landing System
INSTM—Instrument
IP—Instructor Pilot
MAJCOM—Major Command
MAP—Missed Approach Point
MDA—Minimum Descent Altitude
MSN—Mission

NM—Nautical Mile

OPR—Office of Primary Responsibility

PA—Privacy Act

PAR—Precision Approach Radar

QUAL—Qualification

RCP—Rear Cockpit

ROE—Rules of Engagement

TACAN—Tactical Air Navigation

T.O.—Technical Order

VFR—Visual Flight Rules

WIC—Weapons Instructor Course