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SECRETARY OF THE AIR FORCE**

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**F-35A—AIRCREW EVALUATION
CRITERIA**

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SUMMARY OF CHANGES

This publication has been substantially revised and must be thoroughly reviewed. Major changes include: Updated opening paragraph and other DAFMAN 90-161 changes, removed unnecessary acronyms, numerous AFIs changed to AFMAN. In **Chapter 2** removed all references to forward air controller (airborne) (FAC(A)) from **Table 2.1**. In **Chapter 3** minor edits. ACC/A3 directed addition to Qual landing criteria. Deleted FAC(A) **paragraph 3.5.5** entirely. In **Attachment 1** added Office Symbols section.

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Chapter 1

ROLES AND RESPONSIBILITIES

1.1. Flight Examiners (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. Briefs the examinee on the purpose, conduct, and extent of each evaluation.
- 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. Applies the grading criteria contained in [Chapter 3](#), as applicable.
- 1.1.6. Debriefs the examinee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training, at a minimum.
- 1.1.7. Should use all electronic means available, to reconstruct, evaluate, and debrief the mission adequately.

1.2. Examinees:

- 1.2.1. Accomplish required flight planning IAW 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.
- 1.2.2. Brief the planned maneuver parameter for maneuvers which have published guidance that contains only a minimum, maximum, or recommended parameter (e.g., altitudes, airspeeds, angle of attack (AOA) and approach angle for approaches, and precautionary flame-out (PFO) landing parameters).

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. Publications Check/Currency of Flight Publications. All Qualification (QUAL) evaluations include a currency and accuracy check on all issued publications/checklists. Unit commanders may specify additional publications to be evaluated in the unit supplement to AFMAN 11-202V2, *Aircrew Standardization/Evaluation Program*.

2.1.2. Cockpit/Crew Resource Management (CRM). IAW AFMAN 11-290, *Cockpit/Crew Resource Management and Threat & Error Management Program*, 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 (see [Table 2.1](#)). As all the CRM skills listed on the Air Force (AF) Form 4031, *CRM/TEM Skills Criteria Training/Evaluation*, are included/embedded, use of the AF Form 4031 is unnecessary for evaluations in the F-35A. The standardization and evaluation (Stan/Eval) trend program can be used to measure the effectiveness of CRM training.

2.1.3. Combined Evaluations. With the approval of the squadron commander (SQ/CC), the Instrument (INSTM), QUAL and Mission (MSN) evaluations may be combined as a single evaluation. **Note:** This option is intended only for experienced pilots.

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

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

2.1.4. Required Graded Areas. Required graded areas are annotated in [Table 2.1](#) and [Table 2.2](#), respectively. When it is impractical or impossible to accomplish a required evaluation area in-flight (or in a simulator (SIM) IAW [paragraph 2.3.1.3](#) and [paragraph 2.4.1.6](#)), an alternate method may be used in order to complete the evaluation. FEs document the reason and type of alternate method used in the “Additional Comments” portion of the AF Form 8, *Certificate of Aircrew Qualification*. If the FE determines the required item cannot be adequately evaluated by an alternate method, an additional flight is required to complete the evaluation.

2.1.4.1. Areas annotated with an "R" are necessary items for that event.

2.1.4.2. Areas annotated with an “R2” require evaluation of at least two of the items under the associated section.

2.1.4.3. Areas annotated with an “R3” require evaluation of at least three of the items under the associated section.

2.1.4.4. Areas not indicated as being required for evaluation are graded and marked accordingly as observed by the FE or during discussions.

2.2. Instrument (INSTM)/Qualification (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 evaluation.

2.2.1.2. INSTM evaluations may be administered on any compatible training mission.

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

2.2.2.1. An instrument examination.

2.2.2.2. The required graded areas on the EPE portion ([Table 2.2](#)) of the evaluation.

2.3. Qualification (QUAL) Evaluations.

2.3.1. Procedures.

2.3.1.1. A mission flown that best fulfills the objective of the QUAL evaluation.

2.3.1.2. QUAL evaluations may be administered on any compatible training mission.

2.3.1.3. With the approval of the operations group commander (OG/CC), pilots may accomplish many graded areas of periodic QUAL evaluations in the SIM. Those items are annotated in [Table 2.1](#). Document approval on the AF Form 8 by stating in the additional comments “OG/CC has approved a SIM evaluation.”

2.3.1.3.1. This portion of the evaluation should be labeled “SIM QUAL” on the AF Form 8 in the Flight Phase with the EPE portion documented as a requisite, even if the EPE portion is accomplished concurrently with the evaluation.

2.3.1.3.2. An in-flight evaluation is required for:

2.3.1.3.2.1. Initial (INIT) QUAL

2.3.1.3.2.2. Re-qualification (RQ) QUAL evaluations or for evaluations to regain a qualification (e.g., after loss of qualification due to commander directed downgrade or failed checkride).

2.3.1.3.3. Ensure the graded areas that are not accomplished in the SIM are completed in-flight. Document the evaluation of these items as an additional line entry on the AF Form 8 under Flight Phase as “QUAL.” For example, the FE who conducts the preponderance of the evaluation in the “SIM QUAL” line ensures the airborne Visual Flight Rules (VFR) pattern/landing is accomplished, ensures the flight portion is annotated in the “QUAL” line, and signs as the FE.

2.3.2. Minimum Requisites. The minimum requisites for QUAL evaluations are:

2.3.2.1. A closed book examination.

2.3.2.2. An open book examination.

2.3.2.3. The required graded areas on the EPE portion ([Table 2.2](#)) of the evaluation.

2.4. Mission (MSN) Evaluations.

2.4.1. Procedures.

2.4.1.1. SQ/CCs:

2.4.1.1.1. Ensure that FEs administer initial MSN evaluations in the primary designed operational capability of the unit unless that unit has a different assigned contingency for which to prepare. **(T-3)**

2.4.1.1.2. Ensure that FEs administer a sampling of Aerospace Control Alert (ACA) mission evaluations if squadron pilots are tasked to such missions. **(T-3)**

2.4.1.2. FEs:

2.4.1.2.1. 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.

2.4.1.2.2. Will evaluate examinees in the position of their highest certification (e.g., 2-ship flight lead, 4-ship flight lead), even if a portion of the evaluation is flown in another position. **(T-1)**

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

2.4.1.3. Evaluations during exercises are encouraged.

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

2.4.1.5. Evaluate basic mission capable aircrew only on those missions which are routinely flown.

2.4.1.6. With the approval of the OG/CC, pilots may accomplish many graded areas of periodic MSN evaluations in the SIM. Those items are annotated in [Table 2.1](#). The FE will document approval on the AF Form 8, by stating in the additional comments “OG/CC has approved a SIM evaluation”. **(T-3)**

2.4.1.6.1. This portion of the evaluation should be labeled “SIM MSN” on the AF Form 8 in the Flight Phase with the EPE portion documented as a requisite, even if the EPE portion is accomplished concurrently with the evaluation.

2.4.1.6.2. An in-flight evaluation is required for INIT MSN or RQ MSN evaluations or for evaluations to regain a qualification (e.g., after loss of qualification due to commander directed downgrade or failed checkride).

2.4.1.6.3. The graded areas that are not accomplished in the SIM are completed in-flight. **(T-2)** The FE will document the evaluation of these items as an additional line entry on the AF Form 8 under Flight Phase as “MSN”. **(T-2)** For example, the FE who conducts the preponderance of the evaluation in the “SIM MSN” line ensures the airborne VFR pattern/landing is accomplished, ensures the flight portion is annotated in the “MSN” line, and signs as the FE.

2.4.2. Minimum Requisites. The MSN EPE portion (required graded areas in [Table 2.2](#)) is the only MSN evaluation requisite.

2.5. 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.

2.6. Instructor (INSTR) Evaluations. INIT INSTR evaluations will be conducted IAW AFMAN 11-202V2. Except for Area 33, Instructor Performance (**paragraph 3.3.30.**), 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.

2.7. Formal Training Unit (FTU) Instructor Pilot (IP) and Weapons Instructor Course (WIC) Mission Evaluations.

2.7.1. 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.

2.7.2. Chase Evaluation. FTU 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 or QUAL evaluations.

Table 2.1. Aircrew Evaluation Grading Areas.

AREA	NOTE	AREA TITLE	INSTM	QUAL	MSN A/S	MSN A/A
1	7	MISSION PLANNING	R	R	R	R
2	7	BRIEFING (if applicable)	R	R	R	R
3	7	PRE-TAKEOFF	R	R	R	R
4	7	TAKEOFF	R	R		
6	7	DEPARTURE	R	R		
7	7	LEVEL OFF	R	R		
8	7	CRUISE/NAVIGATION	R	R		
9	8	FORMATION		R	R	R
10	7	IN-FLIGHT CHECKS	R	R	R	R
11	7	FUEL MANAGEMENT	R		R	R

12	7	COMMUNICATION/NAVIGATION (CNI) /IDENTIFICATION FRIEND OR FOE (IFF)	R	R	R	R
14	1, 7	AIRWORK		R		
16	7	WEAPONS SYSTEM/ BUILT IN TEST (BIT) CHECKS			R	R
17		AIR REFUELING				
18	7	DESCENT	R			
19	7	GO-AROUND		R		
20	7	RECOVERY	R	R		
21	2	PFO TRAFFIC PATTERNS		R		
22	2	PRECAUTIONARY FLAME OUT (PFO) APPROACH/LANDING		R		
23		VFR PATTERN/APPROACH		R		
24	7	FORMATION APPROACH				
25		LANDING		R		
26	7	AFTER LANDING		R		
27	7	FLIGHT LEADERSHIP (if applicable)		R	R	R
28	7	DEBRIEFING/CRITIQUE	R	R	R	R
29	7	KNOWLEDGE	R	R	R	R
30	1, 6, 7	AIRMANSHIP/ SITUATIONAL AWARENESS	R	R	R	R
31	1, 6, 7	SAFETY	R	R	R	R
32	1, 6, 7	FLIGHT DISCIPLINE	R	R	R	R
33	7	INSTRUCTOR PERFORMANCE (if applicable)	R	R	R	R

35	7	SENSOR INTERPRETATION	R	R	R	R
36	7	TASK PRIORITIZATION	R	R	R	R
37	7	COCKPIT/CREW RESOURCE MANAGEMENT (CRM)	R	R	R	R
INSTRUMENTS						
61	7	HOLDING	R			
62	7	INSTRUMENT PENETRATION/ENROUTE DESCENT HOLDING	R			
63	7	INSTRUMENT PATTERNS	R			
64	7	NONPRECISION APPROACH	R			
65	3, 7	PRECISION APPROACH (PRECISION APPROACH RADAR (PAR))	R			
66	3, 7	PRECISION APPROACH (INSTRUMENT LANDING SYSTEM (ILS))	R			
67	7	MISSED APPROACH/CLIMB OUT	R			
68	7	CIRCLING/SIDESTEP APPROACH				
69	7	INSTRUMENT CROSS-CHECK	R			
TACTICAL EMPLOYMENT						
GENERAL						
81	7	TACTICAL/MISSION PLAN			R	R
82	7	ACA TASKING (Tasked Units)				R
83	7	TACTICAL/MISSION EXECUTION			R	R
84	7	COMPOSITE FORCE INTERFACE				

85	7	RADIO USE/TACTICAL COMMUNICATION			R	R
86	7	VISUAL/SENSOR LOOKOUT			R	R
87	7	MUTUAL SUPPORT (if applicable)			R	R
88	7	TACTICAL NAVIGATION			R	R
89	7	INGRESS			R	
90	7	EGRESS			R	
92	7	TIMING			R	
93	7	TRAINING RULES/RULES OF ENGAGEMENT (ROE)			R	R
94	4, 5, 7	EVASIVE ACTION/THREAT REACTIONS			R	R
95	7	IN-FLIGHT REPORT				
96	7	ELECTRONIC WARFARE (EW) / EXPENDABLE COUNTER-MEASURES (EXCM) / ALL ASPECT MISSILE DEFENSE (AAMD)			R	R
97	7	WEAPONS SYSTEM UTILIZATION			R	R
98	7	SENSOR MANAGEMENT			R	R
99	4, 5, 7	SIGNATURE MANAGEMENT			R	R
111	4, 5, 7	SENSOR SEARCH and SORT				R
AIR-TO-AIR EMPLOYMENT						
112	4, 5, 7	TACTICAL INTERCEPT/COMBAT AIR PATROL (CAP)				R
113	4, 5	OFFENSIVE MANEUVERING				R
114	7	DEFENSIVE/COUNTER OFFENSIVE MANEUVERING				

115	4, 5, 7	AIR-TO-AIR (A/A) WEAPONS EMPLOYMENT				R
116	7	A/A SYSTEMS INTEGRATION				
117	7	COMMAND AND CONTROL INTEGRATION				
AIR-TO-SURFACE EMPLOYMENT						
131	7	TARGET/THREAT ACQUISITION			R	
132	7	AIR-TO-SURFACE (A/S) WEAPONS EMPLOYMENT			R	
133	7	RANGE/AIRSPACE PROCEDURES				
134	7	A/S SENSOR OPERATIONS			R	
135	7	LASER GUIDED BOMB (LGB) DELIVERY PROCEDURES				
136	7	INERTIALLY AIDED MUNITIONS (IAM) DELIVERY PROCEDURES				
139	7	CLOSE AIR SUPPORT (CAS) / TIME SENSITIVE TARGETING (TST)				
151	7	ELECTRONIC THREAT/ORDER OF BATTLE MANAGEMENT			R	

Notes:

1. Airwork/Advanced Handling/Tactical Maneuvering. This area is necessary for pilots receiving QUAL evaluations. Maneuvers can be:
 - a. Aerobatics
 - b. Advanced handling characteristics/confidence maneuvers
 - c. Any A/A mission (basic fighter maneuvers, air combat maneuvering, air combat training, adversary training aid, etc.)
 - d. Any A/S mission
2. PFO Traffic Patterns/Approach/Landing. Pilots unable to accomplish a PFO during their QUAL evaluation may delay completion of this requirement until their next periodic evaluation. When delayed until the next periodic evaluation, that evaluation is incomplete until the PFO is accomplished. **Exception:** Should adverse weather conditions impede accomplishment of a PFO, a SIM evaluation may be used with OG/CC approval. Pilots not requiring a MSN evaluation must accomplish a PFO during every QUAL evaluation and can also pursue OG/CC approval to evaluate it via SIM. **(T-3)** Verbal evaluation of a PFO is never approved. Document alternate method PFO evaluations in the Block IV, Comments, item “D. Additional Comments” of the AF Form 8.
3. Precision Approach. FEs will ensure that at least one precision approach (PAR or ILS) is flown and annotated to complete the flight evaluation. **(T-1)**
4. Air Education and Training Command. These items are not required on FTU INSTR evaluations when syllabus profiles make accomplishment impractical (e.g., basic fighter maneuver mission checks). Document the omissions in the Block IV, Comments, item “D. Additional Comments” of the AF Form 8.
5. These items are not required on United States Air Force Weapon School (USAFWS) INSTR evaluations when syllabus profiles make accomplishment impractical. Document the omissions in the Block IV, Comments, item “D. Additional Comments” of AF Form 8.
6. Critical Items
7. Flight or events may be evaluated in the SIM if the event(s) were recommended for training accreditation by the 29th Test and Systems Squadron (TSS) SIM evaluation for the installed sim software.
8. Evaluation on formation tasks in SIM are limited to day formation only.

2.8. Emergency Procedures Evaluation (EPE) Portion.

2.8.1. General. The graded areas on the EPE portion of the overall evaluation (**Table 2.1**) should be conducted in the full mission SIM or other advanced training device to the maximum extent possible provided the SIM Operational Flight Program matches the aircraft Operational Flight Program. Grading criteria for each required item are listed in **Chapter 3**.

2.8.2. The following EPE graded areas are required for all evaluations.

2.8.2.1. Aircraft General Knowledge.

2.8.2.2. CRM.

2.8.2.3. Emergency Procedures/Aircraft Malfunctions.

2.8.2.3.1. The FE will evaluate a minimum of two emergency procedures per the pre-takeoff, takeoff, and landing phases of flight. **(T-1)**

2.8.2.3.2. The FE will evaluate a minimum of three emergency procedures during the inflight phase. **(T-1)**

2.8.3. The following EPE graded areas are required on all INSTM evaluations.

2.8.3.1. Unusual Attitude Recoveries.

2.8.3.2. Instrument Flight Procedures, IAW AFMAN 11-202 Volume 3, *Flight Operations*. This area also includes, as directed by ACC/A3, a minimum of one helmet mounted display (HMD)–Out approach, where the FE should focus on whether or not the approach permits landing, and the use of standby/emergency instruments.

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

2.8.4. The following additional EPE graded areas are required on all INSTM and/or QUAL evaluations.

2.8.4.1. Automatic Ground Collision Avoidance System (AGCAS) Recoveries.

2.8.4.2. Flame-Out Procedures.

2.8.5. The following EPE graded areas are required on all MSN evaluations, as the FE tailors the scenario to the unit tasking/mission.

2.8.5.1. Weapons system operation.

2.8.5.2. Threat reaction.

2.8.5.3. Weapons employment and Switchology.

2.8.5.4. Signature management.

2.8.5.5. Flame-Out Procedures.

Table 2.2. Emergency Procedures Evaluation (EPE) Grading Areas².

AREA	NOTE	AREA TITLE	INSTM	QUAL	MSN
GENERAL					
29		AIRCRAFT GENERAL KNOWLEDGE	R	R	R
37		COCKPIT/CREW RESOURCE MANAGEMENT	R	R	R
82	2	ACA TASKING (Tasked Units)	R	R	R
91		COMBAT SEPARATION			

96	1	EW/EXCM/AAMD			R
301		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (GENERAL)	R	R	R
305		WEAPON SYSTEM OPERATION			R
306		WEAPONS EMPLOYMENT AND SWITCHOLOGY			R
PRE-TAKEOFF			R2	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/INTEGRATED POWER PACK (IPP) 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 (FCS) 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	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/IPPEM EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)			
462		SINGLE ENGINE FAILURE/FIRE ON TAKEOFF (TAKEOFF CONTINUED)			
471		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)			
481		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)			
491		FCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)			
501		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)			

511		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)			
IN-FLIGHT			R3	R3	R3
94	1	SURFACE TO AIR COUNTER TACTICS			R
99		SIGNATURE MANAGEMENT			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/IPPEM EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)			
564		FLAMEOUT PROCEDURES (CONFIGURATION THROUGH ROLLOUT)		R	R
571		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)			
581		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)			
591		FCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)			
601		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)			

611		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)			
614		UNUSUAL ATTITUDE RECOVERIES	R		
615		ACC/A3 DIRECTED /HMD-OUT/USE OF STANDBY INSTRUMENT APPROACH	R		
616		ALTERNATE/DIVERT AIRFIELDS	R		
610		AGCAS RECOVERIES		R	
LANDING			R2	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/IPP EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)			
681		AVIONICS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)			
691		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)			
701		FCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)			

711		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)			
721		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)			
Notes: 1. One threat reaction is required; either Area 94 or 114 may fulfill this requirement. 2. All items on this table may be evaluated in the SIM if the event(s) were recommended for training accreditation by the 29 TSS SIM evaluation for the installed SIM software.					

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards.

3.1.1. FEs assign 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. See [Table 3.1](#) for parameters concerning general aircraft control evaluation criteria.

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.” (T-1)

3.1.3. If FEs assign a qualification level of unqualified (Q3), or if FEs assign a qualification level of qualified but assigns additional training (Q2), FEs recommend, and SQ/CCs approve, whether or not such an examinee is allowed to fly before the additional training or re-evaluation is successfully completed.

Table 3.1. General Aircraft Control Criteria.

Aircraft Control Criteria. The following general criteria apply at all times unless more specific criteria from Table 2.1 or Table 2.2 apply.		
Q	Altitude	+/- 200 feet
	Airspeed	+/- 5%
	Course	+/- 5 degrees / 3 nautical miles (NM) (whichever is greater)
	TACAN Arc	< 2 NM
Q-	Altitude	+/- 300 feet
	Airspeed	+/- 10%
	Course	+/- 10 degrees / 5 NM (whichever is greater)
	TACAN Arc	≤ 3 NM > 2 NM
U		Exceeded Q- limits

3.2. Documentation of Weapons Employment Results.

3.2.1. FEs document 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. A/S 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-35, *Tactical Employment – F-35A*).

3.2.3. The number of simulated air-to-air missile/gun firing attempts and valid attempts are recorded as in **Table 3.3** (see AFMAN 11-2F-35A Volume 1, *F-35A 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.

Table 3.2. A/S Weapons Employment Scores.

Air-to-Surface (A/S) Scoring		
LGB	IAM	Strafe
Hit / Miss	*Hit	**Hit
Note: Mission recording assessment is considered normal operations, otherwise *SIM assessed/ **Range Scored		

Table 3.3. Air to Air (A/A) Weapons Employment Scores.

A/A Scoring		
	ATTEMPTED	VALID
A/A Gun	2	1
Air Intercept Missile (AIM)-120	2	2
AIM-9	1	1
Note: Mission recording assessment is considered normal operations, otherwise *SIM assessed/ **Range Scored		

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 crewmembers 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 IAW applicable directives. When required, extracted necessary information from air tasking order. 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 crewmembers 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 tasking. Contained no 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.** 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, de-confliction 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 IAW 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 IAW F35A-FM-001, *Flight Series Data*, (FSD) and AFTTP 3-3.F-35, *Combat Aircraft Fundamentals – F-35*, procedures and techniques.

3.3.4.2. **Q-.** Minor FSD and AFTTP 3-3.F-35 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 6--Departure.

3.3.5.1. Instrument/VFR.

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

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

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

3.3.5.2. Trail Departure/Rejoin.

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

3.3.5.2.2. **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.

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

3.3.6. Area 7--Level Off.

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

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

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

3.3.7. Area 8--Cruise/Navigation.

3.3.7.1. **Q.** Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured navigational aids were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace.

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

3.3.7.3. **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-.**

3.3.8. Area 9--Formation.

3.3.8.1. Flight Lead.

3.3.8.1.1. **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 de-confliction contracts. Effectively

coordinated with other flight members throughout the mission. Ensured smooth and efficient flight operation.

3.3.8.1.2. **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.

3.3.8.1.3. **U**. Formation flight not accomplished IAW 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 de-confliction contracts. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

3.3.8.2. Wingman.

3.3.8.2.1. **Q**. Maintained position IAW 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.

3.3.8.2.2. **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.

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

3.3.9. Area 10--In-Flight Checks.

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

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

3.3.9.3. **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.

3.3.10. Area 11--Fuel Management.

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

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

3.3.10.3. **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.

3.3.11. Area 12--CNI and IFF Usage.

3.3.11.1. **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, Multifunction Advanced Data Link, HAVE QUICK and secure voice equipment.

3.3.11.2. **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, Multifunction Advanced Data Link, HAVE QUICK and secure voice equipment.

3.3.11.3. **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, Multifunction Advanced Data Link, HAVE QUICK and secure voice equipment.

3.3.12. Area 14--Airwork.

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

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

3.3.12.3. **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.

3.3.13. Area 16--Weapons System/BIT Checks.

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

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

3.3.13.3. **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.

3.3.14. Area 17--Air Refueling.

3.3.14.1. Air Refueling Rendezvous.

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

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

3.3.14.1.3. **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.

3.3.14.2. Air Refueling Procedures/Techniques.

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

3.3.14.2.2. **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.

3.3.14.2.3. **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.

3.3.15. Area 18--Descent.

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

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

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

3.3.16. Area 19--Go-Around.

3.3.16.1. **Q.** Initiated and performed go-around promptly IAW FSD and operational procedures and directives.

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

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

3.3.17. Area 20--Recovery.

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

3.3.17.2. **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 sensor assisted trail recovery. Inefficient commentary.

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

3.3.18. Area 21--PFO Traffic Pattern (Prior to configuration).

3.3.18.1. **Q**. Complied with FSD and AFTTP 3-3.F-35. Maintained safe maneuvering airspeed/AOA. Flew approach compatible with the situation and adjusted approach for type emergency simulated.

3.3.18.2. **Q-**. Minor procedural errors. Erratic airspeed/AOA control. Errors did not detract from safe handling of the situation but were inappropriate for the situation/emergency.

3.3.18.3. **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.

3.3.19. Area 22--PFO Approach/Landing (Configuration through rollout).

3.3.19.1. **Q**. Used sound judgment and could have safely landed. Configured at the appropriate position/altitude for the situation and emergency. Flew final, based on recommended procedures, airspeed/AOA and glide path, that was appropriate for the situation and emergency. Smooth, positive control of aircraft. Touchdown point was IAW FSD and AFTTP 3-3.F-35 guidance and/or permitted safe stopping on available runway. Arrestment gear could have been safely used.

3.3.19.2. **Q-**. Safety not compromised. Configured at a position and altitude which allowed for a safe approach. Could have landed safely, however deviations from recommended procedures, airspeed/AOA and altitudes were not appropriate for the situation or emergency. Unnecessary maneuvering due to minor errors in planning or judgment.

3.3.19.3. **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.

3.3.20. Area 23--VFR Pattern/Approach.

3.3.20.1. **Q**. Performed patterns/approaches IAW FSD, AFTTP 3-3.F-35, and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper/briefed airspeed/AOA. Airspeed -5/+10 knots.

3.3.20.2. **Q-**. Performed patterns/approaches with minor deviations to FSD, AFTTP 3-3.F-35, 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.

3.3.20.3. **U.** Approaches not performed IAW FSD, AFTTP 3-3.F-35, and local directives. Erratic aircraft control. Large deviations in runway alignment. Exceeded Q- parameters.

3.3.21. Area 24--Formation Approach.

3.3.21.1. Flight Lead.

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

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

3.3.21.1.3. **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.

3.3.21.2. Wingman.

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

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

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

3.3.22. Area 25--Landing. Listed criteria only applicable to normal VFR approaches. Where runway configuration, arresting cable placement or FSD and AFTTP 3-3.F-35 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.

3.3.22.1. **Q.** Performed landings IAW FSD, AFTTP 3-3.F-35, and local directives. Landing within 11-15 degrees AOA. Touchdown Point 500 to 1,500 feet from the runway threshold.

3.3.22.2. **Q-.** Performed landings with minor deviations to FSD, AFTTP 3-3.F-35, and local directives. Touchdown Point 0 to 499 feet or 1,501 feet to 2,000 feet from the runway threshold.

3.3.22.3. **U.** Landing not performed IAW FSD, AFTTP 3-3.F-35, and local directives. Touchdown Point exceeded Q- criteria.

3.3.23. Area 26--After Landing.

3.3.23.1. **Q.** Appropriate after landing checks and aircraft taxi procedures accomplished IAW FSD and applicable directives. Completed all required forms accurately.

3.3.23.2. **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.

3.3.23.3. **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.

3.3.24. Area 27--Flight Leadership (if applicable).

3.3.24.1. **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.

3.3.24.2. **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.

3.3.24.3. **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.

3.3.25. Area 28--Debriefing/Critique.

3.3.25.1. **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 de-confliction contracts, roles and responsibilities. Asked for reactions/inputs from other mission participants. Re-capped key points and compared mission results with mission objectives.

3.3.25.2. **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.

3.3.25.3. **U.** Did not correctly debrief mission deviations or offer corrective guidance. Used excessive time to debrief. Failed to debrief breakdowns in de-confliction 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.

3.3.26. Area 29--Knowledge. Evaluate all applicable subareas.

3.3.26.1. Aircraft General.

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

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

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

3.3.26.2. Emergency Procedures.

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

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

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

3.3.26.3. Flight Rules/Procedures.

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

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

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

3.3.26.4. Weapon/Tactics/Threat.

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

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

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

3.3.26.5. Local Area Procedures.

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

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

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

3.3.26.6. Authentication Procedures.

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

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

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

3.3.27. Area 30--Airmanship/Situational Awareness (Critical).

3.3.27.1. **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.

3.3.27.2. **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.

3.3.28. Area 31--Safety (Critical).

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

3.3.28.2. **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.

3.3.29. Area 32--Aircrew Discipline (Critical).

3.3.29.1. **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.

3.3.29.2. **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.

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

3.3.30.1. Briefing/Debriefing.

3.3.30.1.1. **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.

3.3.30.1.2. **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.

3.3.30.1.3. **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.

3.3.30.2. Demonstration of Maneuvers.

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

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

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

3.3.30.3. Instructor Knowledge.

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

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

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

3.3.30.4. Ability to Instruct.

3.3.30.4.1. **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.

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

3.3.30.4.3. **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.

3.3.30.5. Training/Evaluation Forms Preparation.

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

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

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

3.3.31. Area 35--Sensor Interpretation.

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

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

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

3.3.32. Area 36--Task Prioritization.

3.3.32.1. **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.

3.3.32.2. **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.

3.3.32.3. **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.

3.3.33. Area 37--Cockpit/Crew Resource Management.

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

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

3.3.33.3. **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 ± 20 seconds, TACAN ± 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 FSD 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. MDA +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.

3.4.5. Area 65--Precision Approach (PAR) (See Note 3, [Table 2.1.](#)).

3.4.5.1. **Q.** Performed procedures as directed and IAW FSD 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.

3.4.5.1.1. Airspeed +10/-5 knots.

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

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 respond to controller's instructions. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA. Improper glide path control.

3.4.5.2.1. Airspeed +15/-5 knots.

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

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

3.4.5.3. **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.

3.4.6. Area 66--Precision Approach (ILS) (See Note 3, [Table 2.1.](#)).

3.4.6.1. **Q.** Performed procedures as published and IAW FSD 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.

3.4.6.1.1. Airspeed +10/-5 knots.

3.4.6.1.2. Glide Slope/Azimuth within one dot.

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

3.4.6.2. **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.

3.4.6.2.1. Airspeed +15/-5 knots.

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

3.4.6.2.3. Azimuth within two dots.

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

3.4.6.3. **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.

3.4.7. Area 67--Missed Approach/Climb Out.

3.4.7.1. **Q.** Executed missed approach/climb out as published/directed. Completed all actions IAW FSD procedures.

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

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

3.4.8. Area 68--Circling/Sidestep Approach.

3.4.8.1. **Q.** Performed circling/sidestep approach IAW procedures and techniques outlined in the FSD and AFMAN 11-202V3. Aircraft control was positive and smooth. Proper runway alignment.

3.4.8.2. **Q-.** Performed circling/sidestep approach with minor deviations to procedures and techniques outlined in the FSD and AFMAN 11-202V3. Aircraft control was not consistently smooth, but safe. Runway alignment varied, but go-around not required.

3.4.8.3. **U.** Circling/sidestep approach not performed IAW procedures and techniques outlined in the FSD and AFMAN 11-202V3. Erratic aircraft control. Large deviations in runway alignment required go-around.

3.4.9. Area 69--Instrument Cross-Check.

3.4.9.1. **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.

3.4.9.2. **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.

3.4.9.3. **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--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 de-confliction 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 de-confliction 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 de-confliction 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 de-confliction.

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 time on target (TOT), time to target for ordnance impact or vulnerability period (Suppression of Enemy Air Defenses/Defensive Counter Air) or push time (Offensive Counter Air Sweep). CAS missions may use either TOT or vulnerability period criteria, depending on tasking. This area may be evaluated as a first run attack or with Joint Terminal Air Controller (JTAC) or Forward Air Controller (Airborne) (FAC(A)).
- 3.5.1.12.1. Coordination. Adjustments in TOT should be made for non-pilot caused delays. In the case of "no spot," timing should be adjusted to a bomb release or "off" call. If range clearance is delayed, time at a preplanned point may be substituted for TOT. The FE may widen this timing criterion if the examinee was forced to maneuver extensively along the ingress route due to simulated enemy air or ground defense reactions, air traffic control instructions, and/or weather.
- 3.5.1.12.2. Conventional.
- 3.5.1.12.2.1. **Q.** ± 1 minute. Covered TOT.
- 3.5.1.12.2.2. **Q-.** ± 2 minutes. Covered TOT.
- 3.5.1.12.2.3. **U.** Exceeded Q- parameters. Failed to cover TOT due to inadequate planning or use of resources.
- 3.5.1.12.3. Air-to-Air Escort/Sweep/CAP.
- 3.5.1.12.3.1. **Q.** Arrived on station not more than 1 minute late. Covered TOT.
- 3.5.1.12.3.2. **Q-.** Arrived on station not more than 2 minutes late. Covered TOT.
- 3.5.1.12.3.3. **U.** Exceeded Q- parameters. Failed to cover TOT due to inadequate planning or use of resources.
- 3.5.1.13. Area 93--Training Rules (see AFMAN 11-214, *Air Operations Rules and Procedures*)/Theater ROE.
- 3.5.1.13.1. **Q.** Adhered to and knowledgeable of all training rules/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.

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 electronic attack /electronic protection systems.

3.5.1.16.2. **Q-.** Displayed limited knowledge and/or minor errors in operation of electronic attack /electronic protection systems.

3.5.1.16.3. **U.** Displayed unsatisfactory knowledge and/or minor errors in operation of electronic attack /electronic protection 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.

3.5.1.19. Area 99--Signature Management.

3.5.1.19.1. **Q.** Correctly planned, briefed, prioritized and executed a sound signature management plan. Accounted for threats, changes in tasking, and weather. Displayed sound knowledge of aircraft signature.

3.5.1.19.2. **Q-** Made minor errors in planning, prioritization and management of aircraft signature. Did not completely account for threats, changes in tasking, or weather.

3.5.1.19.3. **U.** Incorrectly prioritized or managed aircraft signature in a manner which seriously degraded mission accomplishment or safety of flight. Displayed lack of knowledge of aircraft signature.

3.5.2. Air-to-Air.

3.5.2.1. Area 111--Sensor Management/Sorting.

3.5.2.1.1. **Q.** Correctly planned, briefed, prioritized and executed a sound sensor search/sorting 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 search and sorting tasks based on existing and new information to ensure mission success. Displayed sound knowledge of search and sorting systems.

3.5.2.1.2. **Q-** Made minor errors in planning, prioritization and management of search/sorting 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 search/sorting 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 search/sorting management.

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 counterattack 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.

3.5.3. Air-to-Surface.

3.5.3.1. Area 131--Target (TGT)/Threat Acquisition.

3.5.3.1.1. **Q.** Target acquired on the first attack with radar, TGT infrared and/or visual acquisition or, if missed due to safety, clearance to expend, or difficult target identification features, a successful reattack was accomplished. For multiple target scenarios, all targets were acquired on the first attack or with a successful reattack.

3.5.3.1.2. **Q-.** Late to acquire the target with radar and/or TGT infrared and/or visual acquisition, degraded the initial attack or reattack. For multiple target scenarios, 50 percent or more of the targets were acquired on the first attack or with a successful reattack.

3.5.3.1.3. **U.** Target was not acquired. For multiple target scenarios, less than 50 percent of the targets were acquired on the first attack or with a successful reattack. **Note:** A successful reattack is defined as being within parameters to effectively employ the planned weapons against the target.

3.5.3.2. Area 132--Air-to-Surface Weapons Employment.

3.5.3.2.1. **Note 1.** Scoreable Ranges. When weapons deliveries are performed on different ranges during the same mission, or like deliveries constituting separate events are performed on the same range, all events count for evaluation, and the area grade should be predicated upon the criteria below.

3.5.3.2.2. **Note 2.** Unscoreable Ranges. The FE should determine Hit/Miss based on impact of the ordnance (e.g., LGB, IAM, 25mm gun) and/or desired weapons effects for the pass flown.

3.5.3.2.3. **Note 3.** Simulated Releases. FEs determine Hit(s)/Miss(es) based on mission recording debrief review.

3.5.3.2.4. **Note 4.** FEs determine Hit/Miss by reference to mission recording debrief in cases where unexplained weapons delivery misses occur (e.g., wind shear, weapons malfunctions).

3.5.3.2.5. Single Pass (Tactical Attack).

3.5.3.2.5.1. **Q.** Demonstrated complete knowledge of weapons delivery procedures, attack parameters, and weapons computations for the events performed. Weapon/Strafe score was within hit criteria.

3.5.3.2.5.2. **Q-.** Minor errors in knowledge of weapons delivery procedures, attack parameters, or weapons computations for the events performed. Weapon score less than or equal to 150% of hit criteria.

3.5.3.2.5.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, or weapons computations for the events flown. Failed to deliver ordnance on original attack or reattack due to pilot error (switch error, navigation error, etc.). Weapon score exceeded 150% of hit criteria.

3.5.3.2.6. Single Weapon Event.

3.5.3.2.6.1. **Q.** Demonstrated complete knowledge of weapons delivery procedures, attack parameters, weapons computations and error analysis for the events performed. At least 50% of all weapons were within hit criteria.

3.5.3.2.6.2. **Q-.** Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. At least 50% of all weapons were within hit criteria.

3.5.3.2.6.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations or error analysis for the events flown. Less than 50% of all weapons were within hit criteria.

3.5.3.2.7. Multiple Weapon Events.

3.5.3.2.7.1. **Q.** Qualified within the applicable criteria in all events attempted. At least 50% of all bombs in each event were within hit criteria.

3.5.3.2.7.1.1. IAM LGB

3.5.3.2.7.1.2. Miss/Hit Miss/Hit

3.5.3.2.7.2. **Q-.** Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. Less than Q criteria.

3.5.3.2.7.2.1. IAM LGB

3.5.3.2.7.2.2. Miss/Hit Miss/Hit

3.5.3.2.7.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events flown. Unqualified in greater than 50% of all events attempted.

3.5.3.2.7.3.1. IAM LGB

3.5.3.2.7.3.2. Miss/Hit Miss/Hit

3.5.3.3. Area 133--Range/Airspace Procedures.

3.5.3.3.1. **Q.** Used proper procedures for entering and exiting the range. Range operations followed established procedures.

3.5.3.3.2. **Q-.** Minor deviations from established procedures for range entry, exit or operations.

3.5.3.3.3. **U.** Major deviations from established procedures for range entry, exit or operations.

3.5.3.4. Area 134--Air-to-Surface Sensor Operation.

3.5.3.4.1. **Q.** Correctly operated the sensor to acquire the target. Was able to properly search and set up the sensor display to permit weapons delivery.

3.5.3.4.2. **Q-.** Poor tuning of sensor hindered target identification degrading weapons delivery. Did not thoroughly understand system set-up procedures.

3.5.3.4.3. **U.** Improper search technique resulted in late or no target acquisition. Improper set-up of sensor created an unusable picture and prevented target identification or weapons delivery.

3.5.3.5. Area 135--Laser Guided Bomb (LGB) Delivery Procedures.

3.5.3.5.1. **Q.** Correctly released the LGB at the planned delivery parameters. Used proper lasing procedures to optimally guide the LGB. Followed all current procedures and guidance during the LGB delivery and recovery.

3.5.3.5.2. **Q-.** Minor errors resulting in release outside the planned LGB delivery parameters degraded weapons effectiveness. Lasing procedures degraded weapon effectiveness. Minor errors in LGB delivery and recovery procedures degraded weapons effectiveness.

3.5.3.5.3. **U.** Improper release parameters resulted in the LGB being delivered outside weapon/seeker limits. Used improper lasing procedures which caused the weapon to miss the target. Major errors in execution of LGB delivery and/or recovery procedures.

3.5.3.6. Area 136--Inertially Aided Delivery Procedures (Global Positioning System (GPS) Aided Weapons).

3.5.3.6.1. **Q.** Correctly released the weapon at the planned delivery parameters. Followed all current procedures and guidance during the weapon delivery and recovery. Performed proper built in test checks and weapon crypto key loading. Weapon time of flight adequate for maximum GPS accuracy.

3.5.3.6.2. **Q-.** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Mission planning errors resulted in degraded weapon effectiveness. Slow to analyze or correct built in test, check or crypto key errors. Minor errors in weapon delivery and recovery procedures degraded weapons effectiveness. GPS accuracy degraded due to inadequate time of flight.

3.5.3.6.3. **U.** Improper release parameters resulted in the weapon being delivered outside weapon limits. Used improper procedures which caused the weapon to miss the

target. Major errors in execution of weapon delivery and/or recovery procedures. Unable to test, check or key weapon.

3.5.3.7. Area 139--Close Air Support/Time Sensitive Targeting (CAS/TST).

3.5.3.7.1. **Q.** Effective coordination with outside agencies and contract execution within the flight resulted in prompt employment IAW the ROE, given restrictions or tactical situation.

3.5.3.7.2. **Q-.** Minor errors during contract execution or slow/confused coordination with outside agencies resulted in delayed employment IAW the ROE, given restrictions or tactical situation.

3.5.3.7.3. **U.** Major errors during contract execution or ineffective coordination with outside agencies resulted in employment outside the ROE, given restrictions or tactical situation.

3.5.4. Suppression of Enemy Air Defenses.

3.5.4.1. Area 151--Electronic Threat/Order of Battle Management.

3.5.4.1.1. **Q.** Effective detection, analysis, and prioritization of factor threats. Efficient and timely use of available on or off-board systems to effectively detect, engage, and/or suppress threat emitters. Identified factor threats IAW pre-briefed tactical plan. Effectively reacted to pop-up threats or unplanned threats.

3.5.4.1.2. **Q-.** Slow to detect, prioritize, target, or suppress briefed or pop-up factor threat emitters. Inefficient use of on or off-board systems.

3.5.4.1.3. **U.** Failed to detect, prioritize, or target to effectively suppress factor threats. Incorrect identification of threats. Ineffective reactions to pop-up threats.

3.6. EPE Portion Criteria.

3.6.1. General.

3.6.1.1. See [paragraph 3.3.](#), [paragraph 3.5.](#), above 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--ACA Tasking (Tasked Units).

3.6.1.1.4. Area 96--EW/EXCM/AAMD.

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--ECS/On-Board Oxygen Generation System Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).

3.6.2.5. Area 361--Engine/IPP 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--FCS 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--ECS/On-Board Oxygen Generation System Emergency Procedures/Aircraft Malfunctions (Takeoff).
- 3.6.3.5. Area 461--Engine/IPP Emergency Procedures/Aircraft Malfunctions (Takeoff).
- 3.6.3.6. Area 462--Single Engine Failure/Fire on Takeoff (Takeoff Continued).
- 3.6.3.7. Area 471--Avionics Emergency Procedures/Aircraft Malfunctions (Takeoff).
- 3.6.3.8. Area 481--Weapons Emergency Procedures/Aircraft Malfunctions (Takeoff).
- 3.6.3.9. Area 491--FCS Emergency Procedures/Aircraft Malfunctions (Takeoff).
- 3.6.3.10. Area 501--Landing Gear/Wheel Brakes Emergency Procedures/Aircraft Malfunctions (Takeoff).
- 3.6.3.11. Area 511--Emergency Procedures/Aircraft Malfunctions (Takeoff).

3.6.4. In-Flight.

- 3.6.4.1. See [paragraph 3.5](#) above for the following criteria:

- 3.6.4.1.1. Area 94--Evasive Action/Threat Reactions.
- 3.6.4.1.2. Area 99--Signature Management

- 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--ECS/On-Board Oxygen Generation System Emergency Procedures/Aircraft Malfunctions (In-Flight).
- 3.6.4.2.5. Area 561--Engine/IPP 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--FCS 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 564--Flameout Approach/Landing (Configuration Through Roll-Out):

3.6.4.3.1. **Q.** Used sound judgment. Flew an approach compatible with the emergency, situation, runway available, and cable configuration. Safely stopped on available runway; if necessary, used arrestment gear IAW applicable guidance. If situation dictated, ejected IAW applicable guidance. 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.

3.6.4.3.2. **Q-.** Safety not compromised. Deviations from recommended procedures not appropriate for the emergency, situation, runway available, or cable configuration. Unnecessary maneuvering due to minor errors in planning or judgment. 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.

3.6.4.3.3. **U.** Major deviations from recommended procedures, airspeed/AOA and altitudes resulted in an unsafe approach. Required excessive maneuvering due to inadequate planning or judgment. Touchdown point did not allow for safe stopping on available runway. Arrestment gear could not be used. Did not eject from unsuccessful approach/landing. 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.

3.6.4.4. Area 614--Unusual Attitude Recoveries.

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

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

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

3.6.4.5. Area 615--ACC/A3 Directed. Helmet Mounted Display (HMD)-Out Approach/Use of Standby Instruments. (T-2)

3.6.4.5.1. **Q.** Performed approach IAW directives, published procedures and techniques outlined in the FSD and AFMAN 11-202V3. Maintained proper/briefed AOA. Maintained desired glide path with only minor deviations.

3.6.4.5.2. **Q-.** Performed approach with minor deviations to directives, published procedures and techniques outlined in the FSD and AFMAN 11-202V3. Slow to correct to proper/briefed AOA. Did not always maintain desired glide path control.

3.6.4.5.3. **U.** Performed procedures with major deviations to directives, published procedures and techniques outlined in the FSD and AFMAN 11-202V3. Failed to attain and/or maintain proper/briefed AOA. Displayed erratic glide slope control.

3.6.4.6. Area 616--Alternate/Divert Airfields.

3.6.4.6.1. **Q.** Made proper divert decision and correctly performed initial divert execution actions.

3.6.4.6.2. **Q-.** Slow to make divert decision and/or slow to correctly perform initial divert execution actions.

3.6.4.6.3. **U.** Failed to make proper divert decision and/or correctly perform initial divert execution actions.

3.6.4.7. Area 610—AGCAS Recoveries.

3.6.4.7.1. **Q.** Correctly assessed activation of AGCAS and whether or not safety or terrain were a factor.

3.6.4.7.2. **Q-.** Slow to assess AGCAS was activated. Overrode AGCAS based on improper analysis.

3.6.4.7.3. **U.** Unable to assess why AGCAS was activated. Overrode AGCAS based on improper analysis which resulted in ground impact.

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--ECS/On-Board Oxygen Generation System Emergency Procedures/Aircraft Malfunctions (Landing).

3.6.5.5. Area 671--Engine/IPP 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--FCS 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 Chief of Staff, Operations

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

AFPD 11-2, *Flight Operations*, 31 January 2019

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 3 May 2022

AFMAN 11-202V2, *Aircrew Standardization and Evaluation Program*, 30 August 2021

AFMAN 11-202V3, *Flight Operations*, 10 January 2022

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFMAN 11-290, *Cockpit/Crew Resource Management and Threat & Error Management Program*, 25 October 2021

AFTTP 3-1.F-35, *Tactical Employment--F-35A*, 13 December 2019

AFMAN 11-2F-35AV1, *F-35A Aircrew Training*, 13 October 2022

F35A-FM-001, *Flight Series Data*, 6 April 2021

AFTTP 3-3.F-35, *Combat Aircraft Fundamentals--F-35*, 9 December 2019

AFMAN 11-214, *Air Operations Rules and Procedures*, 29 November 2022

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

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

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

A/A—Air-to-Air

AAMD—All Aspect Missile Defense

ACA—Aerospace Control Alert

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFR—Air Force Reserve

AFTTP—Air Force Tactics, Techniques, and Procedures

AGCAS—Automatic Ground Collision Avoidance System

AIM—Air Intercept Missile

ANG—Air National Guard

AOA—Angle of Attack

A/S—Air-to-Surface

AWACS—Airborne Warning and Control System

BIT—Built In Test

CAP—Combat Air Patrol

CAS—Close Air Support

CNI—Communication, Navigation, Identification

CRM—Cockpit/Crew Resource Management

DAF—Department of the Air Force

DAFMAN—Department of the Air Force Manual

DRU—Direct Reporting Unit

ECS—Environmental Control System

EPE—Emergency Procedures Evaluation

EW—Electronic Warfare

EXCM—Expendable Countermeasures

FAC(A)—Forward Air Controller (Airborne)

FE—Flight Examiner

FCS—Flight Control System

FOA—Field Operating Agency

FSD—Flight Series Data

FTU—Formal Training Unit

GCI—Ground Control Intercept

GPS—Global Positioning System

HMD—Helmet Mounted Display

IAM—Inertially Aided Munition

IAW—In Accordance With

IFF—Identification, Friend or Foe

ILS—Instrument Landing System

INIT—Initial

INSTM—Instrument

INSTR—Instructor

IP—Instructor Pilot

IPP—Integrated Power Pack
JTAC—Joint Terminal Air Controller
LGB—Laser-Guided Bomb
MAJCOM—Major Command
MAP—Missed Approach Point
MDA—Minimum Descent Altitude
MSN—Mission
NM—Nautical Mile
OG/CC—Operations Group Commander
OPR—Office of Primary Responsibility
PAR—Precision Approach Radar
PFO—Precautionary Flame Out
QUAL—Qualification
ROE—Rules of Engagement
RQ—Re-Qualification
SIM—Simulator
SQ/CC—Squadron Commander
TACAN—Tactical Air Navigation
TEM—Threat and Error Management
TGT—Target
TOT—Time on Target
TSS—Training Systems Squadron
TST—Time Sensitive Targeting
USAFWS—United States Air Force Weapons School
VFR—Visual Flight Rules
WIC—Weapons Instructor Course

Office Symbols

ACC/A3—Air Combat Command Director of Operations
ACC/A3T—Air Combat Command Flight Operations Division
ACC/A3TV—Air Combat Command Standardization and Evaluation Branch
AF/A3—Deputy Chief of Staff of the Air Force for Operations
AF/A3T—Air Force Training and Readiness Directorate

AF/A3OF—Air Force Flight Standards Agency

Terms

Stan/Eval—Standardization and Evaluation

Switchology—Knowledge and operation of aircraft switches and buttons.