

**BY ORDER OF THE COMMANDER
OF AIR COMBAT COMMAND**

**AIR COMBAT COMMAND MANUAL 11-
2QF-16, VOLUME 2**



13 OCTOBER 2023

Flying Operations

**QF-16—AIRCREW EVALUATION
CRITERIA**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: This publication is available for downloading or ordering on the e-Publishing website at www.e-Publishing.af.mil.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: ACC/A3TV

Certified by: ACC/A3T
(Mr. John F. Costa)

Supersedes: AFI11-2QF-16V2, 29 April 2019

Pages: 48

This publication implements AFMAN 11-202, Volume 2, *Aircrew Standardization and Evaluation Program*. It applies to all assigned aircrew under Air Combat Command (ACC) authority, including Air Force Reserve (AFR) or Air National Guard (ANG) personnel that operate QF-16 aircraft. This volume establishes criteria and procedures for QF-16 flight evaluations. Ensure that all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW the Air Force Records Disposition Schedule which is located in the Air Force Information Management System. Submit suggested improvements to this volume on DAF Form 847, *Recommendation for Change of Publication*, through Standardization/Evaluation (Stan/Eval) channels, to the OPR (ACC Standardization and Evaluations Branch (ACC/A3TV), email at ACC.A3TV.FlightManual-AF847@us.af.mil, street address 205 Dodd Blvd, Suite 234, Langley AFB VA 23666). 53 WEG will forward proposed unit level supplements to this volume to Air Force Flight Safety Agency Flight Directives Division (AFFSA/XOF), through ACC/A3TV, for approval prior to publication. Copies of 53 WEG supplements, after approved and published, will be provided to AFFSA/XOF and ACC/A3TV. The authorities to waive wing/unit level requirements in this publication are at the 53d Weapons Evaluation Group Commander (53 WEG/CC) level delegable to the 82d Aerial Targets Squadron Commander (82 ATRS/CC). See DAFMAN 90-161, *Publishing Processes and Procedures*, Table A10.1, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the ACC/A3TV for non-tiered compliance items.

SUMMARY OF CHANGES

This publication has been substantially revised and must be thoroughly reviewed. Major changes include consolidating pilot and remote pilot training guidance into this single manual, identifying criteria for upgrading to remote instructor pilot (IP), clarifying re-currency and documentation requirements for differences training, authorizing the use of the simulator (SIM) for large portions of the evaluation, and re-organization and re-formatting for clarity. This document has been reformatted and revised to match the new standard ACC Director of Operations (ACC/A3) master grading criteria list. All paragraphs that are redundant with AFMAN 11-202V2 were deleted.

Chapter 1—ROLES AND RESPONSIBILITIES	3
1.1. Flight Examiners (FEs):.....	3
1.2. Examinees:.....	3
Chapter 2—EVALUATION REQUIREMENTS	4
2.1. General.....	4
2.2. Pilot Instrument/Qualification (INSTM/QUAL) Evaluations.	4
2.3. Remote Pilot Qualification (QUAL) Evaluations.....	5
2.4. Mission (MSN) Evaluations.	6
2.5. Formal Course Evaluations.....	7
2.6. Instructor Evaluations.....	7
2.7. Instructor Pilot (IP) Rear Cockpit (RCP)Landing Evaluations.....	7
Table 2.1. Aircrew Evaluation Grading Areas.....	8
2.8. Emergency Procedure Evaluations (EPEs).....	11
Table 2.2. Pilot EPE Grading Areas.	12
Table 2.3. Remote Pilot EPE Grading Areas.....	17
Chapter 3—EVALUATION CRITERIA	22
3.1. General Grading Standards.....	22
Table 3.1. General Aircraft Control Criteria.....	22
3.2. General Aircrew Evaluation Criteria.	23
3.3. Aircrew Evaluation Criteria—Instruments.	35
3.4. Aircrew Evaluation Criteria—Remote Operations.....	38
3.5. EPE Criteria.....	43
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	45

Chapter 1

ROLES AND RESPONSIBILITIES

1.1. Flight Examiners (FEs):

- 1.1.1. should exercise good 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. brief 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, formation, or remote crew position (to include chase) necessary to conduct a thorough evaluation. For remote pilot evaluations, the FE should occupy the assistant remote pilot (Yankee) position. For initial remote pilot qualifications, the Yankee will be dedicated to support only the primary remote pilot (X-Ray) being evaluated.
- 1.1.5. may evaluate pilot Mission (MSN) evaluations from the Target Control System (TCS) console.
- 1.1.6. apply the grading criteria contained in [Chapter 3](#), as applicable.
- 1.1.7. debrief the examinee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training, at a minimum.
- 1.1.8. 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 and furnish FEs a copy of necessary mission data and mission materials, as appropriate.
- 1.2.2. may brief the mission if qualified as a QF-16 remote pilot on pilot MSN evaluations. Examinees normally conduct the briefing during Instrument (INSTM)/Qualification (QUAL) and remote pilot evaluations.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. Publications Check/Currency of Flight Publications. All QUAL evaluations include a currency and accuracy check on all flight-required publications/checklists/FLIP/in-flight guides.

2.1.2. Cockpit/Crew Resource Management (CRM). In accordance with AFMAN 11-290, *Cockpit/Crew Resource Management and Threat Error Management Program*, all evaluations will include assessment of CRM skills.

2.1.3. Combined Evaluations. With the approval of the 82 ATRS/CC, pilot INSTM/QUAL and MSN evaluations may be combined as a single evaluation. Document approval on the AF Form 8, *Certificate of Aircrew Qualification*, by stating in the additional comments “82 ATRS/CC has approved a combined evaluation.” Remote pilot evaluations will be either QUAL or MSN/QUAL based upon remote pilot qualification level.

2.1.4. Required Areas. Required areas are annotated in Tables 2.1 and 2.2, respectively.

2.1.4.1. Alternate Evaluation Method. When it is impractical or impossible to accomplish a required evaluation area in-flight, an alternate method (i.e., Unit Training Device (UTD), TCS simulator (SIM), or verbal examination) 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. If the FE determines the required item cannot be adequately evaluated by an alternate method, an additional flight is required to complete the evaluation. In Tables 2.1 and 2.2.: The 82 ATRS/CC is the wavier authority to accomplish other than safety pilot (SP) evaluations and should only be accomplished on a case by case basis and is not the normal checkride.

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

2.1.4.3. Areas Annotated with an “R1” require evaluation of at least one area under the associated section.

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

2.1.5. SIM evaluations. Pilots/remote pilots will be evaluated in the highest fidelity training device available, if required.

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

2.2.1. Procedures.

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

2.2.1.2. For inexperienced pilots, to the maximum extent practical, this evaluation should include approaches at airfields other than the home airfield.

2.2.1.3. FEs may use non-published, practice approaches (e.g., Visual Flight Rules (VFR) conditions only approach) for evaluations if approved by Operations Group Stan/Eval (OGV). For these approaches, OGV shops will ensure that:

2.2.1.3.1. Non-published approaches are built using the standards applied to published approach plates.

2.2.1.3.2. Approval for use of such an approach on evaluation missions is documented in the local unit supplement to AFMAN 11-202V2.

2.2.1.4. INSTM/QUAL evaluations may be administered on any compatible training mission and should be flown with the FE as the wingman for the instrument portions of the flight.

2.2.1.5. When B/D model aircraft are available, pilots may complete their INSTM/QUAL evaluation with an FE occupying the rear cockpit (RCP).

2.2.1.6. With the approval of the Operations Group Commander (OG/CC) (can be delegated to OGV or CCV), experienced pilots may accomplish many graded areas of periodic INSTM/QUAL evaluations in the certified 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” and having the OG/CC initial in the additional reviewer remarks, if his/her signature is not elsewhere on the AF Form 8.

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

2.2.1.6.2. An in-flight evaluation is required for inexperienced pilots, INIT or Re-Qualification (RQ) evaluations.

2.2.1.6.3. The graded areas that are not accomplished in the SIM must be evaluated in-flight or verbally. Document the evaluation of these items as an additional line entry on the AF Form 8 under Flight Phase as “INSTM/QUAL”.

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

2.2.2.1. Instrument examination (INSTM evaluation),

2.2.2.2. Closed book examination (QUAL evaluation),

2.2.2.3. Open book examination (QUAL evaluation),

2.2.2.4. Critical Action Procedure (CAP) Written Exam. Answers must contain all critical action items in proper sequence. Abbreviations are allowed (both).

2.2.2.5. Emergency Procedures Evaluation (EPE) (both).

2.3. Remote Pilot Qualification (QUAL) Evaluations.

2.3.1. Procedures.

2.3.1.1. Remote pilot QUAL evaluations require remote control operations using the TCS and will be flown manned, on a Fixed Control Site (FCS) profile. Initial (INTI) remote pilot QUAL evaluations will be accomplished IAW approved, 53 WEG Full-Scale Aerial

Target (FSAT) Qualification Training (QT), *53D WEG FSAT QT* syllabus. Subsequent remote pilot QUAL evaluations should be tailored to represent typical aerial target profiles and will incorporate all appropriate evaluation requirements from **Table 2.1**. The profiles should be designed to evaluate the training and basic airmanship of the examinee.

2.3.1.2. FEs will evaluate examinees in the position of their highest qualification (e.g., remote IP.).

2.3.1.3. With the approval of the OG/CC (can be delegated to OGV or CCV), experienced remote 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” and having the OG/CC initial in the additional reviewer remarks, if his/her signature is not elsewhere on the AF Form 8.

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 an EPE documented as a requisite, even if the EPE is accomplished concurrently with the evaluation.

2.3.1.3.2. The graded areas that are not accomplished in the SIM must be completed in-flight or evaluated verbally. Document the evaluation of these items as an additional line entry on the AF Form 8 under Flight Phase as “QUAL”.

2.3.2. Minimum Requisites. The minimum ground phase requisites for a remote pilot QUAL evaluation are:

2.3.2.1. Closed book examination.

2.3.2.2. Open book examination.

2.3.2.3. CAP Written Exam. Answers must contain all critical action items in proper sequence. Abbreviations are allowed.

2.3.2.4. EPE.

2.4. Mission (MSN) Evaluations.

2.4.1. Procedures.

2.4.1.1. Squadron Commanders: Ensure that FEs administer initial MSN evaluations in the assigned mission.

2.4.1.2. FEs:

2.4.1.2.1. Should tailor MSN evaluations IAW typical aerial target profiles and will incorporate all appropriate evaluation requirements from **Table 2.1**. The profiles should be designed to evaluate the training and basic airmanship of the examinee.

2.4.1.2.2. Will evaluate examinees in the position of their highest qualification (e.g., IP, remote IP). **(T-3)**

2.4.1.3. QF-16 pilot MSN evaluations will evaluate remote control operations using the TCS or in the case of non-safety pilot qualified individuals, evaluate planning and execution of customer test support missions. Any exceptions must be approved by 82 ATRS/CC.

2.4.1.4. QF-16 remote pilot MSN evaluations require remote control operations using the TCS and will normally be administered on an unmanned remote mission. In the event an unmanned remote mission is not available, QF-16 remote pilot QUAL/MSN evaluations may be accomplished on a manned mission and will be flown using a Not Under Live Local Operator (NULLO) profile. MSN evaluations will incorporate all appropriate evaluation requirements from **Table 2.2**. The unmanned QF-16 FSAT is commonly referred to as a NULLO. Since NULLO missions support actual test customers, the profile will be based upon project mission requirements. INIT remote pilot QUAL/MSN evaluations will be accomplished IAW approved 53D WEG FSAT QT syllabus.

2.4.1.5. With the approval of the OG/CC (can be delegated to OGV or CCV), experienced pilots/remote pilots may accomplish many graded areas of periodic MSN 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” and having the OG/CC initial in the additional reviewer remarks, if his/her signature is not elsewhere on the AF Form 8.

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

2.4.1.5.2. An in-flight evaluation is required for inexperienced pilots/remote pilots, INIT or RQ evaluations.

2.4.1.5.3. The graded areas that are not accomplished in the SIM must be completed in-flight or evaluated verbally. Document the evaluation of these items as an additional line entry on the AF Form 8 under Flight Phase as “MSN”.

2.4.2. Minimum Requisites. The minimum ground phase requisites for a MSN evaluation are:

2.4.2.1. CAP Written Exam. Answers must contain all critical action items in proper sequence. Abbreviations are allowed.

2.4.2.2. EPE.

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. FE’s may modify the mission profile based on other factors, such as local operating considerations, weather, etc. in order to complete the evaluation.

2.6. Instructor Evaluations. Except for Area 33, Instructor Performance, FEs determine specific profiles and events for instructor evaluations. IPs/remote pilots will brief and lead the mission. **(T-3)** Subsequent periodic evaluations (for example, INSTM/QUAL, MSN) 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. Instructor Pilot (IP) Rear Cockpit (RCP) Landing Evaluations. An evaluation of RCP landings will be completed prior to performing RCP landing instructor duties. These duties include instruction for and demonstration of landings during initial qualification training, requalification training, or additional training.

2.7.1. Examinees will complete the evaluation as follows:

2.7.1.1. All RCP landing qualification evaluations will include satisfactory demonstration of overhead and emergency patterns, and a landing performed from the RCP.

2.7.1.2. IPs will accomplish the initial RCP landing qualification during either an evaluation sortie, or during another sortie as a requisite.

2.7.2. When the RCP landing qualification is evaluated during a separate sortie as a requisite for a flight evaluation, record "SPOT" in the Flight Phase block on the AF Form 8. Describe the purpose of the evaluation as "Rear Cockpit Landing Qualification" in the Mission Description section of the Comments block. In addition, FEs will document all discrepancies on the AF Form 8 in Section IV, paragraph B, under a sub-paragraph after the EPE discrepancies as follows: "2. Rear Cockpit Landing Qualification." If no discrepancies are identified, enter "None" after the sub-paragraph title. A sub-paragraph 3 would then be used for flight discrepancies. If a reevaluation is required, an additional "SPOT" entry will be recorded in the Flight Phase block on the front of the AF Form 8. Additional training will be documented IAW AFMAN 11-202V2.

2.7.3. When an initial RCP landing qualification is conducted independently of another evaluation, FEs will document completion of this RCP Landing Qualification as a "SPOT" evaluation on an AF Form 8. If the entire INSTM/QUAL evaluation sortie is flown from the RCP and RCP landing requirements IAW [paragraph 2.7.1.1](#) are met, annotate the AF Form 8 with an INSTM/QUAL flight only, and add RCP landing qualification in the mission description on the back of the AF Form 8.

Table 2.1. Aircrew Evaluation Grading Areas.

AREA	NOTE	AREA TITLE	PILOT		REMOTE PILOT	
			I/Q	MSN	QUAL	MSN
AIRCREW EVALUATION CRITERIA – GENERAL						
1		MISSION PLANNING	R	R	R	R
2		BRIEFING (if applicable)	R	R	R	R
3		PRE-TAKEOFF	R	R		
4		TAKEOFF	R			
5		FORMATION TAKEOFF				
6		DEPARTURE	R	R	R	R
7		LEVEL OFF	R		R	R
8		CRUISE/NAVIGATION	R	R	R	R
9		FORMATION				

10		IN-FLIGHT CHECKS	R	R	R	R
11		FUEL MANAGEMENT	R	R	R	R
12		COMMUNICATION/NAVIGATION/IFF (CNI)	R	R		
14	1	AIRWORK/AHC/BFM	R			
15	2	UNUSUAL ATTITUDE RECOVERIES	R		R	
17		AIR REFUELING				
18	4	DESCENT	R		R	R
19	4	GO-AROUND			R	
20	4	RECOVERY	R	R	R	R
21	3	SFO TRAFFIC PATTERNS	R			
22	3	SFO APPROACH/LANDING	R			
23		VFR PATTERN/APPROACH	R			
24		FORMATION APPROACH/LANDING				
25		LANDING	R		R	R
26		AFTER LANDING	R			R
27		FLIGHT LEADERSHIP (if applicable)	R	R		
28		DEBRIEFING/CRITIQUE	R	R	R	R
29		KNOWLEDGE	R	R	R	R
30	Critical	AIRMANSHIP/SITUATIONAL AWARENESS	R	R	R	R
31	Critical	SAFETY	R	R	R	R
32	Critical	FLIGHT DISCIPLINE	R	R	R	R
33		INSTRUCTOR PERFORMANCE (if applicable)	R	R	R	R
36	4	TASK PRIORITIZATION	R	R	R	R
37		COCKPIT/CREW RESOURCE MANAGEMENT				

INSTRUMENTS						
61	4	HOLDING				
62	4	INSTRUMENT PENETRATION/ENROUTE DESCENT	R			
63	4	INSTRUMENT PATTERNS	R			
64	4	NON-PRECISION APPROACH	R			
65	4	PRECISION APPROACH	R			
66	4	MISSED APPROACH/CLIMB OUT	R			
67		CIRCLING/SIDESTEP APPROACH				
68	4	INSTRUMENT CROSS-CHECK	R			
QF-16 FCS FLIGHT						
GENERAL						
43	4	AUTO TAKEOFF			R	R
102		REMOTE PRESENTATION/MANEUVERS			R	R
103		REMOTE FORMATION				
104	4	REMOTE RECOVERY/CHASE REJOIN			R	R
44		FCS PATTERN			R	
45	4	REMOTE APPROACH/LANDING		R	R	R
105		REMOTE GO AROUND		R	R	
106	4	AFTER LANDING PROCEDURES				R
46		SP/REMOTE PILOT COORDINATION		R		
107		REMOTE CREW COORDINATION/CRM				R
108		TCS CONSOLE MANAGEMENT			R	R
<p>Notes:</p> <ol style="list-style-type: none"> 1. Airwork/Advanced Handling Characteristics (AHC)/Tactical Maneuvering. Maneuvers can be: <ol style="list-style-type: none"> a. Aerobatics, to include a G-awareness exercise. b. Advanced handling characteristics / Confidence maneuvers c. Any Air-to-air mission (e.g., Basic Fighter Maneuvers (BFM), Air Combat Maneuvering, Air Combat Training, adversary training aid etc.) d. Threat reaction 						

2. Unusual attitude recoveries are not performed in single seat aircraft. For single seat aircraft they are evaluated in the SIM.
3. Simulated Flame Out (SFO) Traffic Patterns/Approach/Landing. Pilots unable to accomplish an SFO during their INSTM/QUAL evaluation may delay this emergency traffic pattern/approach requirement until their next periodic evaluation (usually a MSN evaluation). When delayed until the next periodic evaluation, that evaluation will be incomplete until the SFO is accomplished.
Exception: Should adverse weather conditions impede accomplishment of an SFO, a SIM/UTD evaluation may be used only after every attempt has been made to evaluate the SFO in the eligibility window of the subsequent evaluation. For all cases, if an SFO is evaluated via SIM/UTD the subsequent INST/QUAL evaluation must include in-flight evaluation of the SFO. Verbal evaluation of an SFO is never approved.
4. May be evaluated in the SIM IAW **paragraph 2.2.1.6 and 2.3.1.6.**

2.8. Emergency Procedure Evaluations (EPEs).

2.8.1. The EPE should be conducted in the highest fidelity training device available, or via table-top verbal evaluation, if necessary. Grading criteria for each required item are listed in **Chapter 3**.

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

2.8.2.1. Aircraft General Knowledge,

2.8.2.2. Cockpit/Crew Resource Management (CRM)

2.8.2.3. Emergency Procedures/Aircraft Malfunctions

2.8.2.3.1. All Critical Action Procedures (CAPs)

2.8.2.3.2. In addition to all CAPs, the FE will evaluate at least one emergency procedure in the ground (pre-takeoff) phase and two emergency procedures in each of the takeoff, inflight, and landing phases of flight. **(T-3)** One of the takeoff emergencies shall be at/around takeoff speed. **(T-3)**

2.8.2.4. Checklist Usage.

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

2.8.3.1. Instrument Flight Procedures, IAW AFMAN 11-202, Volume 3, *Flight Operations*. This area includes a minimum of one Heads-Up Display (HUD)–Out Approach, where the FE should focus on whether or not the approach permits landing, and the use of standby/emergency instruments.

2.8.3.2. Unusual Attitude Recoveries

2.8.3.3. Alternate/Divert Airfields. This area includes a minimum of one approach at a divert/alternate airfield, other than home base.

Table 2.2. Pilot EPE Grading Areas.

AREA	NOTES	AREA TITLE	I/Q ^{1,2}	MSN ^{1,2}
362		FIRE/OVERHEAT/FUEL LEAK (GROUND)	R	R
412		GROUND EGRESS	R	R
463		ABORT	R	R
464		AB MALFUNCTION ON TAKEOFF (TAKEOFF CONTINUED)	R	R
465		ENGINE FAILURE ON TAKEOFF (TAKEOFF CONTINUED)	R	R
466		ENGINE FIRE ON TAKEOFF (TAKEOFF CONTINUED)	R	R
467		LOW THRUST ON TAKEOFF/AT LOW ALTITUDE (NON-AB)		
563		ENGINE FAILURE/AIRSTART	R	R
613		OUT-OF-CONTROL RECOVERY	R	R
NON-CAP MALFUNCTIONS				
GENERAL				
301		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (GENERAL)		
302		CHECKLIST USAGE	R	R
305		WEAPON SYSTEM OPERATION		
306		WEAPONS EMPLOYMENT AND SWITCHOLOGY		
GROUND EMERGENCIES			R1	R1
ELECTRICAL SYSTEM FAILURES				
332		MAIN / STANDBY GENERATOR FAILURE		
333		MAIN AND STANDBY FAILURE (GROUND)		
ENGINE				
364		AUTO ACCELERATION		

366		HUNG START		
373		HOT START/NO START		
MISCELLANEOUS				
322		ACTIVATED EPU / HYDRAZINE LEAK		
382		EMERGENCY GROUND JETTISON		
402		NWS DEGRADED / FAILURE		
BRAKE SYSTEM				
403		ANTISKID MALFUNCTION		
404		BRAKE FAILURE		
405		HOT BRAKES		
TAKEOFF EMERGENCIES			R2	R2
LANDING GEAR (LG) MALFUNCTIONS				
504		GEAR FAILS TO RETRACT/ LG HANDLE WILL NOT RAISE		
505		BLOWN TIRE ON TAKEOFF		
IN-FLIGHT EMERGENCIES			R2	R2
ELECTRICAL SYSTEM FAILURES				
432		ELECTRICAL CYCLING		
433		EMERGENCY POWER DISTRIBUTION		
434		UNCOMMANDED / ABNORMAL EPU OPERATION		
532		LOSS OF ELECTRICAL POWER		
534		ABNORMAL EPU OPERATION		
535		MAIN, AND / OR STANDBY AND / OR EPU GENERATOR FAILURE		
536		BATTERY FAILURE / DISCHARGE		
591		FLCS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
FLIGHT CONTROL FAILURES				
435		ADC / AIR DATA MALFUNCTIONS		

453		AOA PROBE ICING		
495		LEF MALFUNCTION (SYMMETRIC/ASYMETRIC)		
499		CADC MALFUNCTION		
500		P, R AND/OR Y MALFUNCTIONS		
591		DUAL/SINGLE FLCS FAIL		
592		CONTROLLABILITY CHECK		
704		SERVO MALFUNCTION		
705		TRIM MALFUNCTION		
ENGINE MALFUNCTIONS				
303		ENGINE FIRE		
567		OVERHEAT CAUTION LIGHT		
675		ENGINE VIBRATIONS		
569		OIL SYSTEM MALFUNCTION		
367		ENGINE FAULT CAUTION LIGHT		
368		SEC CAUTION LIGHT		
369		FTIT INDICATOR FAILURE		
674		ZERO RPM/ERRONEOUS RPM INDICATION		
370		ABNORMAL OR NO ENGINE RESPONSE		
676		NOZZLE FAILURE [PW220]		
464		AB BLOWOUT/FAILURE TO LIGHT		
677		ENGINE STALL RECOVERY		
678		FLAMEOUT LANDING		
673		STUCK THROTTLE		
FUEL MALFUNCTIONS				
652		FUEL MANAGEMENT SYSTEM PFL		
362		FUEL LEAK		
653		FUEL LOW		

645		HOT FUEL/OIL OR GRAVITY FEED		
549		FUEL IMBALANCE		
548		TRAPPED EXTERNAL FUEL		
HYDRAULIC MALFUNCTIONS				
523		SINGLE HYDRAULIC (SYSTEM A/B) FAILURE, DUAL HYDRAULIC FAILURE, HYDRAULIC OVERPRESSURE		
535		SYSTEM B AND GENERATOR FAILURE (PTO SHAFT)		
MISCELLANEOUS				
472		EGI FAILURE, INS COMPUTER FAILURE, TOTAL INS FAILURE		
551		OXYGEN MALFUNCTION, PBG MALFUNCTION		
553		SMOKE AND FUMES		
CANOPY MALFUNCTIONS				
556		CANOPY WARNING LIGHT ON, CANOPY LOSS/PENETRATION IN FLIGHT		
ENVIRONMENTAL CONTROL SYSTEM				
557		COCKPIT PRESSURE/TEMPERATURE MALFUNCTION		
623		EQUIP HOT CAUTION LIGHT		
EJECTION				
617		EJECTION IMMEDIATE		
618		EJECTION TIME PERMITTING		
621		FAILURE OF CANOPY TO SEPARATE		
619		EJECTION SEAT FAILURE		
622		MANUAL SEAT SEPARATION		
JETTISON				
588		SELECTIVE JETTISON		
584		EMERGENCY JETTISON		

LANDING EMERGENCIES			R2	R2
LG MALFUNCTIONS				
714		LG HANDLE WILL NOT LOWER, LG FAILS TO EXTEND, LANDING WITH LG UNSAFE/UP, LANDING WITH A BLOWN MAIN GEAR TIRE, LANDING WITH A BLOWN NOSE GEAR TIRE		
603		ALTERNATE LG EXTENSION		
MISCELLANEOUS				
322		ACTIVATED EPU/HYDRAZINE LEAK		
692		ASYMMETRIC STORES (LANDING)		
714		NLG WOW SWITCH FAILURE		
402		NWS FAILURE/HARDOVER		
592		CONTROLLABILITY CHECK		
678		FLAMEOUT LANDING		
ARRESTMENTS				
715		CABLE ARRESTMENT, NET ARRESTMENT		
BRAKE SYSTEM				
720		ANTISKID MALFUNCTION (LANDING)		
404		BRAKE FAILURE		
405		HOT BRAKES		
GENERAL				
29		KNOWLEDGE	R	R
614		UNUSUAL ATTITUDE RECOVERIES	R	R
615		AFMAN 11-202V3, <i>FLIGHT OPERATIONS</i> / HUD OUT APPROACH / USE OF STBY INSTRUMENTS	R	
616		ALTERNATE/DIVERT AIRFIELDS	R	


Notes:

1. Areas annotated with an “R1” require evaluation of at least one of the items under the associated Section and category for that evaluation.
2. Areas indicated with an “R2” require evaluation of at least two of the items under the associated Section for that evaluation.

Table 2.3. Remote Pilot EPE Grading Areas.

AREA	NOTES	AREA TITLE	QUAL ^{1,2}	MSN ^{1,2}
REMOTE PILOT CRITICAL ACTION PROCEDURES				
GROUND EMERGENCIES				
362		FIRE/OVERHEAT FUEL LEAK (GROUND)	R	R
TAKEOFF EMERGENCIES				
463		ABORT	R	R
315		LOSS/NO INDICATED AIRSPEED ON T/O	R	R
316		LOSS OF DIRECTIONAL CONTROL ON T/O	R	R
317		ATO FAILURE	R	R
464		AB MALFUNCTION ON T/O	R	R
465		ENGINE FAILURE ON T/O	R	R
466		ENGINE FIRE/OVERHEAT ON T/O	R	R
IN-FLIGHT EMERGENCIES				
614		UNUSUAL ATTITUDE RECOVERY	R	R
320		LOSS OF DOWNLINK / CMD/TEL EMERGENCY PROCEDURES	R	R
323		AFCC FAIL OR UNCOMMANDED AFCC SWITCH	R	R
593		DESTRUCT PROCEDURE	R	R
319		ENGINE FAILURE/AIRSTART (PW200)	R	R
319		ENGINE FAILURE/MANUAL AIRSTART (GE100)	R	R
NON-CAP MALFUNCTIONS				
GENERAL				

301		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (GENERAL)		
302		CHECKLIST USAGE	R	R
GROUND EMERGENCIES			R1	R1
364		ENGINE AUTO ACCELERATION (GROUND)		
403		ANTI-SKID MALFUNCTION (GROUND)		
404		BRAKE FAILURE		
405		HOT BRAKES		
333		A MAIN GENERATOR FAILURE (GROUND)		
332		C SINGLE GENERATOR FAILURE (GROUND)		
333		C MAIN & STBY GENERATOR (GROUND)		
402		NWS FAILURE / HARDOVER		
TAKEOFF EMERGENCIES			R1	R1
702		RUNWAY DEPARTURE		
464		ENGINE MALFUNCTION ON TAKEOFF		
467		PW200D LOW THRUST AT LOW ALTITUDE (NON-AB)		
467		GE100 LOW THRUST AT LOW ALTITUDE (NON-AB)		
504		LG FAILS TO RETRACT		
505		BLOWN TIRE ON TAKEOFF		
IN-FLIGHT EMERGENCIES			R2	R2
556		CANOPY DAMAGE / LOSS IN-FLIGHT		
A. ELECTRICAL SYSTEM FAILURES				
532		FLCS PMG FAILURE		
535		A MAIN GENERATOR FAILURE (IN-FLIGHT)		
535		C SINGLE GENERATOR FAILURES (IN-FLIGHT)		
535		C MAIN AND STANDBY GENERATOR FAILURE (IN-FLIGHT)		
591		FLCS BATTERY DISCHARGE		

532		PARTIAL ELECTRICAL POWER LOSS		
432		 ELECTRICAL POWER CYCLING		
536		AIRCRAFT BATTERY FAILURE		
PW200D ENGINE MALFUNCTIONS				
303		FIRE WARNING LIGHT		
567		OVERHEAT CAUTION LIGHT		
569		OIL SYSTEM MALFUNCTION		
368		EEC CAUTION LIGHT		
369		FTIT INDICATOR FAILURE		
674		ZERO RPM / ERRONEOUS RPM INDICATION		
370		ABNORMAL OR NO ENGINE RESPONSE		
673		STUCK THROTTLE		
464		AB BLOWOUT / FAILURE TO LIGHT		
677		ENGINE STALLS (AB AND NON-AB)		
677		ENGINE STAGNATION		
677		ENGINE STALL RECOVERY		
324		TOWER SHAFT FAILURE		
GE100 ENGINE MALFUNCTIONS				
303		FIRE WARNING LIGHT		
567		OVERHEAT CAUTION LIGHT		
569		OIL SYSTEM MALFUNCTION		
367		ENGINE FAULT		
368		SEC CAUTION LIGHT		
369		FTIT INDICATOR FAILURE		
674		ZERO RPM / ERRONEOUS RPM INDICATION		
370		ABNORMAL OR NO ENGINE RESPONSE		
673		STUCK THROTTLE		

464		AB BLOWOUT / FAILURE TO LIGHT		
677		ENGINE STALLS (AB AND NON-AB)		
677		ENGINE STALL RECOVERY		
325		ENGINE OVERSPEED		
JETTISON				
584		JETTISON		
584		EMERGENCY JETTISON		
FLCS FAILURES				
591		SINGLE FLCS BRANCH D POWER FAILURE		
435		ADC / AIR DATA MALFUNCTIONS		
499		PW200D CADC MALFUNCTION		
499		GE100 CADC MALFUNCTION		
500		P, R, AND/OR Y MALFUNCTIONS		
704		SERVO MALFUNCTION		
495		LEF MALFUNCTION (SYMMETRIC)		
495		LEF MALFUNCTION (ASYMMETRIC)		
326		TEF MALFUNCTIONS		
327		STICK INTERFERENCE		
453		AOA PROBE ICING		
FUEL MALFUNCTIONS				
362		FUEL LEAK		
653		FUEL LOW		
645		HOT FUEL OR GRAVITY FEED		
549		FUEL IMBALANCE		
548		TRAPPED EXTERNAL FUEL		
HYDRAULIC MALFUNCTIONS				
523		SINGLE HYDRAULIC FAILURE		

523		SYSTEM A FAILURE		
523		SYSTEM B FAILURE		
523		DUAL HYDRAULIC FAILURE		
535		SYSTEM B AND A MAIN GENERATOR, G GENERATOR FAILURE (PTO SHAFT)		
LANDING EMERGENCIES			R1	R1
592		CONTROLLABILITY CHECK		
715		CABLE ARRESTMENT		
714		LANDING WITH A BLOWN TIRE		
714		LANDING WITH A BLOWN MAIN GEAR TIRE		
714		LANDING WITH A BLOWN NOSE GEAR TIRE		
714		LG EXTENSION MALFUNCTIONS / ABNORMAL INDICATIONS		
714		LG FAILS TO EXTEND / ABNORMAL INDICATIONS		
603		ALTERNATE LG EXTENSION		
714		LANDING WITH LG UNSAFE		
720		ANTI-SKID MALFUNCTION (LANDING)		
714		NLG WOW SWITCH FAILURE		
328		ARM WARNING LIGHT ON		
329		DAMAGED AIRCRAFT PROCEDURES / FIRE ON RUNWAY (DESTRUCT PACKAGE INSTALLED)		
<p>1. Areas annotated with an “R1” require evaluation of at least one of the items under the associated Section and category for that evaluation.</p> <p>2. Areas indicated with an “R2” require evaluation of at least two of the items under the associated Section for that evaluation.</p>				

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 Remote Operations.

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

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

3.1.3.1. FEs recommend whether or not such an examinee is allowed to fly before the additional training or re-evaluation is successfully completed.

3.1.3.2. Squadron commanders determine 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. General Aircrew Evaluation Criteria.

3.2.1. Area 1--Mission Planning:

3.2.1.1. Mission Preparation:

3.2.1.1.1. **Q.** Clearly defined the mission overview and mission goals. Effectively accomplished directed mission planning tasks. Developed a sound plan to accomplish the mission. Provided specific information on what needed to be done. Solicited feedback from others to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all flight members understood possible contingencies. Checked all factors applicable to flight IAW applicable directives. 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.

3.2.1.1.2. **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.

3.2.1.1.3. **U.** Did not define the mission overview and goals. Did not accomplish directed mission planning tasks. 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.

3.2.1.2. Publications:

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

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

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

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

3.2.2.1. Organization:

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

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

3.2.2.1.3. **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.

3.2.2.2. Presentation:

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

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

3.2.2.2.3. **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.

3.2.2.3. Mission Coverage:

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

3.2.2.3.2. **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.

3.2.2.3.3. **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.

3.2.2.4. Flight Member Consideration:

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

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

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

3.2.3. Area 3—Pre-Takeoff:

3.2.3.1. **Q.** Established and adhered to step, start, taxi and take-off times to assure thorough preflight, check of personal equipment, etc. Accurately determined readiness of aircraft for flight. Performed all checks and procedures prior to takeoff IAW approved checklists and applicable directives.

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

3.2.3.3. **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.

3.2.4. Area 4--Takeoff:

3.2.4.1. **Q.** Maintained smooth aircraft control throughout takeoff. Performed takeoff IAW Technical Order (TO) and applicable AFTTP 3-3.F-16, *Combat Fundamentals F-16*, procedures.

3.2.4.2. **Q-.** Minor procedural deviations. Control was inconsistent, rough or erratic.

3.2.4.3. **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.

3.2.5. Area 5—Formation Takeoff:

3.2.5.1. Lead:

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

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

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

3.2.5.2. Wingman:

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

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

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

3.2.6. Area 6--Departure:

3.2.6.1. Instrument/Visual Flight Rules (VFR):

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

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

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

3.2.6.2. Trail Departure/Rejoin:

3.2.6.2.1. **Q.** Effective trail departure/rejoin accomplished using proper procedures and techniques. Provided efficient commentary throughout departure and/or rejoin.

3.2.6.2.2. **Q-.** Minor deviations from established or appropriate procedures due to poor technique. Delayed rejoin due to poor technique or inefficient commentary.

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

3.2.7. Area 7--Level Off:

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

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

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

3.2.8. Area 8--Cruise/Navigation:

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

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

3.2.8.3. **U.** Major errors in procedures/use of navigation equipment. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded parameters for Q-.

3.2.9. Area 9--Formation:

3.2.9.1. Flight Lead:

3.2.9.1.1. **Q.** Established and maintained appropriate formations utilizing published and briefed procedures. 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.

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

3.2.9.1.3. **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.

3.2.9.2. Wingman:

3.2.9.2.1. **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.

3.2.9.2.2. **Q-**. Made minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Over-controlled. Slow to rejoin. Made minor mistakes reducing mutual support. Minor errors in performing assigned flight tasks.

3.2.9.2.3. **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.

3.2.10. Area 10--In-Flight Checks:

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

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

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

3.2.11. Area 11--Fuel Management:

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

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

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

3.2.12. Area 12—Communications/Navigation/IFF (CNI) Usage:

3.2.12.1. **Q**. Complete knowledge of and compliance with correct communication and IFF procedures. Transmissions concise, accurate and utilized proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with communications security requirements.

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

3.2.12.3. **U**. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Inaccurate or confusing

terminology significantly detracted from situational awareness, threat warning or mission accomplishment. Displayed inadequate knowledge of communications security requirements.

3.2.13. Area 14--Airwork/BFM/AHC:

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

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

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

3.2.14. Area 15--Unusual Attitude Recoveries:

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

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

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

3.2.15. Area 17--Air Refueling:

3.2.15.1. Air Refueling Rendezvous:

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

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

3.2.15.1.3. **U.** Displayed lack of knowledge or familiarity with procedures to the extent that air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Gross overshoot, spent excessive time in trail or safety of flight jeopardized due to poor judgment.

3.2.15.2. Air Refueling Procedures/Techniques:

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

3.2.15.2.2. **Q-.** Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published/directed procedures with deviations or omissions that did not affect the successful completion of air refueling.

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

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

3.2.16. Area 18—Descent:

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

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

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

3.2.17. Area 19--Go-Around:

3.2.17.1. **Q.** Initiated and performed go-around promptly IAW flight manual and operational procedures and directives.

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

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

3.2.18. Area 20--Recovery:

3.2.18.1. **Q.** Performed recovery IAW applicable procedures using proper techniques. Provided efficient commentary throughout recovery.

3.2.18.2. **Q-.** Performed recovery with minor deviations from established or appropriate procedures. Inefficient commentary.

3.2.18.3. **U.** Recovery not performed IAW applicable procedures.

3.2.19. Area 21—SFO/Emergency Traffic Patterns (Prior to configuration):

3.2.19.1. **Q.** Complied with all TO, applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Maintained safe maneuvering airspeed/AOA. Flew approach compatible with the situation. Adjusted approach for type of emergency.

3.2.19.2. **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.

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

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

3.2.20.1. **Q.** Used sound judgment and 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 TO and other guidance and/or permitted safe stopping on available runway. Arrestment gear was safely used (if applicable).

3.2.20.2. **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.

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

3.2.21. Area 23--VFR Pattern/Approach:

3.2.21.1. **Q.** Performed patterns/approaches IAW TO and applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper/briefed airspeed/AOA. Airspeed - 5/+10 knots.

3.2.21.2. **Q-.** Performed patterns/approaches with minor deviations to TO and applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper/briefed airspeed/AOA. Airspeed -5/+15 knots.

3.2.21.3. **U.** Approaches not performed IAW TO and applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Erratic aircraft control. Large deviations in runway alignment. Exceeded Q- parameters.

3.2.22. Area 24--Formation Approach/Landing:

3.2.22.1. Flight Lead:

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

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

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

3.2.22.2. Wingman:

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

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

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

3.2.23. Area 25—Landing. Listed criteria only applicable to normal VFR approaches. Where runway configuration, arresting cable placement or applicable guidance requires 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.

3.2.23.1. **Q.** Performed landings IAW TO and applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Touchdown Point 150' to 1000' from the runway threshold (VFR pattern/non-precision approach) or runway glideslope intercept point (precision approach).

3.2.23.2. **Q-.** Performed landings with minor deviations to TO and applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Touchdown Point 0-149' or 1000-1500' from the runway threshold (VFR pattern/non-precision approach) or runway glideslope intercept point (precision approach [PAR]).

3.2.23.3. **U.** Landing not performed IAW TO and applicable AFTTP 3-3.F-16 procedures, techniques, and local directives. Touchdown Point exceeded Q- criteria or departed the prepared surface.

3.2.24. Area 26--After Landing:

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

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

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

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

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

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

3.2.25.3. **U.** Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions were unsafe and/or jeopardized mission accomplishment. Failed to maintain briefed formation roles and responsibilities. Did not provide direction/information when needed. Did not adapt to meet new situational demands. Did not know the assigned tasks of other flight members. Did not ask for inputs when

appropriate. 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.

3.2.26. Area 28--Debriefing/Critique:

3.2.26.1. **Q.** Thoroughly debriefed the mission (or applicable portions) in a timely manner. Correctly analyzed mission results with respect to established objectives. Provided specific, objective, non-threatening positive and negative feedback on team and individual performance. Debriefed deviations. Offered corrective guidance as appropriate. Thoroughly debriefed any breakdowns in 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.

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

3.2.26.3. **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.

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

3.2.27.1. Aircraft General:

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

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

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

3.2.27.2. Emergency Procedures:

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

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

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

3.2.27.3. Flight Rules/Procedures:

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

- 3.2.27.3.2. **Q-** Deficiencies in depth of knowledge.
- 3.2.27.3.3. **U.** Inadequate knowledge of flight rules and procedures.
- 3.2.27.4. Local Area Procedures:
 - 3.2.27.4.1. **Q.** Thorough knowledge of local procedures.
 - 3.2.27.4.2. **Q-** Limited knowledge of local procedures.
 - 3.2.27.4.3. **U.** Inadequate knowledge of local procedures.
- 3.2.28. Area 30—Airmanship/Situational Awareness (Critical):
 - 3.2.28.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Made appropriate decisions based on available information. Recognized the need for action. Aware of performance of self and other flight members. Aware of ongoing mission status. Recognized, verbalized and correctly acted on unexpected events.
 - 3.2.28.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Misanalysed 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 ongoing mission status. Failed to recognize, verbalize and act on unexpected events.
- 3.2.29. Area 31--Safety (Critical):
 - 3.2.29.1. **Q.** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
 - 3.2.29.2. **U.** Was not aware of or did not comply with all safety factors required for safe operation or mission accomplishment. Did not adequately clear aircraft flight path. Operated the aircraft in a dangerous manner.
- 3.2.30. Area 32--Flight Discipline (Critical):
 - 3.2.30.1. **Q.** Provided required direction/information. Correctly adapted to meet new situational demands. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.
 - 3.2.30.2. **U.** Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Failed to exhibit strict flight or pilot discipline. Violated or ignored rules or instructions.
- 3.2.31. Area 33--Instructor Performance (if applicable).
 - 3.2.31.1. Briefing/Debriefing:
 - 3.2.31.1.1. **Q.** Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made excellent use of training aids. Excellent analysis of all events/maneuvers. Clearly defined objectives. Gave positive and negative performance feedback at appropriate times—feedback was specific, objective, based on observable behavior, and given constructively. Re-capped key points/compared

mission's results with objectives. When appropriate, took the initiative and time to share operational knowledge and experience.

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

3.2.31.1.3. **U.** Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use training aids/reference material effectively. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives. Feedback not given or given poorly. Attempted to hide mistakes. Elected not to conduct flight debrief.

3.2.31.2. Instructor Knowledge:

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

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

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

3.2.31.3. Ability to Instruct:

3.2.31.3.1. **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. Maintained awareness of aircraft/mission situation at all times.

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

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

3.2.31.4. Training/Evaluation Forms Preparation:

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

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

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

3.2.32. Area 36--Task Prioritization:

3.2.32.1. **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.

3.2.32.2. **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.

3.2.32.3. **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.

3.2.33. Area 37—Cockpit/Crew Resource Management:

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

3.2.33.2. **Q-.** Inadequately employed available resources to mitigate identified and/or emerging risks during the mission.

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

3.3. Aircrew Evaluation Criteria—Instruments.

3.3.1. Area 61--Holding:

3.3.1.1. **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.

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

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

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

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

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

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

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

3.3.3.1. **Q**. Performed procedures as published or directed and IAW TO procedures. Smooth and timely response to controller instruction.

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

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

3.3.4. Area 64--Non-Precision Approach:

3.3.4.1. **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 (VDP)/Missed Approach Point (MAP). Position would have permitted a safe landing. Maintained proper/briefed AOA.

3.3.4.1.1. Airspeed +10/-5 knots.

3.3.4.1.2. Heading +/-5 degrees (Airport Surveillance Radar [ASR]).

3.3.4.1.3. Course +/-5 degrees at MAP.

3.3.4.1.4. Localizer less than one dot deflection.

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

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

3.3.4.2.1. Airspeed +15/-5 knots.

3.3.4.2.2. Heading +/-10 degrees (ASR).

3.3.4.2.3. Course +/-10 degrees at MAP.

3.3.4.2.4. Localizer within two dots deflection.

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

3.3.4.3. **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.

3.3.5. Area 65--Precision Approach (PAR)

3.3.5.1. **Q**. Performed procedures as directed and IAW TO 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.

3.3.5.1.1. Airspeed +10/-5 knots.

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

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

3.3.5.2. **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.

3.3.5.2.1. Airspeed +15/-5 knots.

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

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

3.3.5.3. **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.

3.3.6. Area 66--Precision Approach (Instrument Landing System [ILS])

3.3.6.1. **Q.** Performed procedures as published and IAW applicable flight manual. 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.

3.3.6.1.1. Airspeed +10/-5 kts.

3.3.6.1.2. Glide Slope/Azimuth within one dot.

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

3.3.6.2. **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.

3.3.6.2.1. Airspeed +15/-5 kts.

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

3.3.6.2.3. Azimuth within two dots.

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

3.3.6.3. **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.

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

3.3.7.1. **Q.** Executed missed approach/climbout as published/directed. Completed all actions IAW TO procedures.

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

3.3.7.3. **U.** Executed missed approach/climbout with major deviations or did not comply with applicable directives.

3.3.8. Area 68--Circling/Sidestep Approach:

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

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

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

3.3.9. Area 68--Instrument Cross-Check:

3.3.9.1. **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.

3.3.9.2. **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.

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

3.4. Aircrew Evaluation Criteria—Remote Operations.

3.4.1. Area 43—Auto Takeoff (ATO)

3.4.1.1. Safety Pilot:

3.4.1.1.1. **Q.** Ensured proper aircraft parameters throughout takeoff. Performed safety pilot actions in a timely manner to ensure auto takeoff IAW flight manual procedures.

3.4.1.1.2. **Q-.** Slow to recognize and/or take appropriate actions to minimize deviations from briefed parameters. Minor procedural deviations or lack of awareness led to minor deviations from flight manual procedures.

3.4.1.1.3. **U.** Committed/allowed major flight manual procedural deviations. Actions or inaction could have led to damage to aircraft/equipment.

3.4.1.2. Remote Pilot:

3.4.1.2.1. **Q.** Completed all ATO checklist items in a timely manner. Monitored aircraft performance and took appropriate action to steer, if required. Communicated effectively with safety pilot/chase. Performed ATO IAW flight manual procedures.

3.4.1.2.2. **Q-.** Minor flight manual procedural or technique deviations which did not detract from safe completion of the ATO. Inputs were slow, rough, or erratic. Slow to communicate with safety pilot/chase.

- 3.4.1.2.3. **U.** Takeoff potentially dangerous. Failed to perform ATO checklist items in a timely manner. Safety pilot (if onboard) had to take control of the aircraft to prevent a dangerous situation from developing.
- 3.4.2. Area 44—FCS Pattern:
- 3.4.2.1. Safety Pilot:
- 3.4.2.1.1. **Q.** Ensured patterns/approaches IAW procedures and techniques outlined by operational procedures and local directives. Ensured aircraft had accurate runway alignment and proper control parameters.
- 3.4.2.1.2. **Q-.** Slow to recognize and/or take appropriate actions to prevent significant deviations in procedures or local directives. Allowed significant deviations in runway alignment without notifying the remote pilot. Slow to notice deviations from briefed control parameters.
- 3.4.2.1.3. **U.** Allowed aircraft to fly approaches not IAW procedures and techniques outlined in operational and local directives. Allowed aircraft to have large deviations in runway alignment and control parameters making aircraft approach unsafe.
- 3.4.2.2. Remote Pilot:
- 3.4.2.2.1. **Q.** Flew patterns/approaches IAW procedures and techniques outlined by operational procedures and local directives. Ensured TCS system parameters set. Effectively communicated with safety pilot/chase.
- 3.4.2.2.2. **Q-.** Slow to recognize deviations in aircraft performance. Performance resulted in deviations from operational and local directives. Did not ensure TCS parameters set correctly. Allowed significant deviations from desired parameters.
- 3.4.2.2.3. **U.** Allowed aircraft to fly approaches not IAW procedures and techniques outlined in operational and local directives. Allowed aircraft to have large deviations in runway alignment and control parameters making aircraft approach potentially unsafe.
- 3.4.3. Area 45—Remote Approach/Landing
- 3.4.3.1. Safety Pilot:
- 3.4.3.1.1. **Q.** Monitored FSAT parameters and performance throughout the approach and landing, effectively communicating notable deviations to the remote pilot. Effectively cleared for visual traffic conflicts and communicated with tower controllers when required.
- 3.4.3.1.2. **Q-.** Slow to recognize deviations in FSAT parameters and/or performance. Slow to communicate the need for corrective action to the remote pilot. Slow to recognize/visually acquire traffic conflicts and/or communicate effectively with tower controllers.
- 3.4.3.1.3. **U.** Failed to recognize deviations in FSAT parameters and/or performance. Did not communicate the need for corrective action to the remote pilot. Failed to recognize/visually acquire traffic conflicts and/or communicate effectively with tower controllers.

3.4.3.2. Remote Pilot:

3.4.3.2.1. **Q.** Performed required checks and coordination with chase, tower, Yankee and Master Control Console (MCC) (as required). Effectively monitored FSAT performance and made timely corrections.

3.4.3.2.2. **Q-.** Slow to perform required checks and coordinate with chase, tower, Yankee and MCC (as required). Was slow to monitor FSAT performance, corrections were delayed, resulting in notable deviations from briefed parameters. Landed more than 10 knots above computed approach speed.

3.4.3.2.3. **U.** Failed to perform required checks and coordinate with chase, tower, Yankee and MCC (as required). Major deviations from recommended procedures, airspeed/AOA and altitudes. Required excessive maneuvering due to inadequate planning or judgement. Excessively fast/dangerously slow--Safety pilot (if applicable) had to take control to prevent a dangerous situation from developing.

3.4.4. Area 46—Safety Pilot/Remote Pilot Coordination

3.4.4.1. **Q.** Effectively communicated with safety pilot/remote pilot IAW FSAT manned remote ROE.

3.4.4.2. **Q-.** Slow to effectively communicate with safety pilot/remote pilot, resulting in minor deviations from briefed mission execution parameters. Flight safety was not compromised.

3.4.4.3. **U.** Failed to effectively communicate with safety pilot/remote pilot, resulting in significant deviations from briefed mission execution parameters. Potential for dangerous situation to develop.

3.4.5. Area 102—Remote Presentation / Maneuvers

3.4.5.1. Safety Pilot:

3.4.5.2. **Q.** Monitored and ensured remote pilot met all customer-defined parameters (altitude, airspeed, G, Electronic Attack (EA), chaff/flares, maneuvers, timing, power settings, etc.).

3.4.5.3. **Q-.** Slow to recognize and correct less than optimal maneuvering by remote pilot, resulted in minor deviations from customer-defined parameters (altitude, airspeed, G, EA, chaff/flares, maneuvers, timing, power settings, etc.). Performance did not detract from target meeting customer mission objectives.

3.4.5.4. **U.** Failed to recognize less than optimal maneuvering by remote pilot, resulted in significant deviations from customer-defined parameters (altitude, airspeed, G, EA, chaff/flares, maneuvers, timing, power settings, etc.). Performance resulted in target not meeting customer mission objectives.

3.4.5.4.1. Remote Pilot:

3.4.5.4.2. **Q.** Smoothly maneuvered the aircraft meeting all customer-defined parameters (altitude, airspeed, G, EA, chaff/flares, maneuvers, timing, power settings, etc.).

- 3.4.5.4.3. **Q-** Less than optimal maneuvering resulted in minor deviations from customer-defined parameters (altitude, airspeed, G, EA, chaff/flares, maneuvers, timing, power settings, etc.). Performance did not detract from target meeting customer mission objectives.
- 3.4.5.4.4. **U.** Less than optimal maneuvering resulted in significant deviations from customer-defined parameters (altitude, airspeed, G, EA, chaff/flares, maneuvers, timing, power settings, etc.). Performance resulted in target not meeting customer mission objectives.
- 3.4.6. Area 103—Remote Formation
- 3.4.6.1. **Q.** Smoothly maneuvered the aircraft into, and maintained, the briefed FCS auto formation position. Ensured standard separation criteria maintained when under manual control.
- 3.4.6.1.1. **Q-** Was slow to get into or allowed minor deviations from briefed FCS auto formation position. Deviations did not detract from target meeting customer mission objectives. Was slow to recognize and/or correct deviations from standard separation criteria when under manual control.
- 3.4.6.1.2. **U.** Failed to get into or allowed significant deviations from briefed FCS auto formation position. Deviations resulted in target not meeting customer mission objectives. Failed to recognize and/or correct deviations from standard separation criteria when under manual control.
- 3.4.7. Area 104—Remote Recovery / Chase Rejoin
- 3.4.7.1. Safety Pilot:
- 3.4.7.1.1. **Q.** As chase pilot, performed smooth and efficient FSAT rejoin under remote pilot direction. Effectively monitored FSAT performance during recovery and communicated any deviations from briefed recovery plan to the remote pilot. Communicated effectively to avoid significant weather.
- 3.4.7.1.2. **Q-** As chase pilot, was slow to follow remote pilot directions and delayed rejoin on FSAT. Did not effectively monitor FSAT performance and/or was slow to communicate deviations from briefed recovery plan to the remote pilot. Did not effectively communicate weather issues, resulting in unnecessary penetration of significant weather.
- 3.4.7.1.3. **U.** As chase pilot, failed to follow remote pilot directions and was unable to perform an effective FSAT rejoin. Failed to effectively monitor FSAT performance and/or failed to communicate deviations from briefed recovery plan to the remote pilot. Did not communicate weather issues, resulting in unnecessary penetration of significant weather.
- 3.4.7.2. Remote Pilot:
- 3.4.7.2.1. **Q.** Managed efficient join up of chase. Performed proper controllability check (if required). Performed descent/flew ground track to allow successful initiation of Auto Recovery.

3.4.7.2.2. **Q-** Chase join up confusing and took excessively long. Committed minor errors during controllability check. Aircraft not on parameters for a timely initiation of Auto Recovery.

3.4.7.2.3. **U.** Unable to complete chase join up. Failed to perform appropriate controllability check. Performed descent with major deviations. Failed to level off requiring safety pilot intervention (if applicable). Aircraft not on parameters for a timely initiation of Auto Recovery.

3.4.8. Area 105—Remote Go-Around

3.4.8.1. Safety Pilot:

3.4.8.1.1. **Q.** Initiated and performed go-around promptly IAW flight manual and operational procedures and directives.

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

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

3.4.8.2. Remote Pilot:

3.4.8.2.1. Initiated and performed go-around promptly IAW flight manual and operational procedures and directives.

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

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

3.4.9. Area 106—After Landing Procedures

3.4.9.1. **Q.** Promptly and correctly performed after landing and engine shutdown checklists.

3.4.9.2. **Q-** Performed after landing and engine shutdown checklists with minor errors.

3.4.9.3. **U.** Failed to follow after-landing and/or engine-shutdown checklists. Errors of omission or commission resulted in possible hazard to ground crew.

3.4.10. Area 107—Remote Crew Coordination / CRM

3.4.10.1. **Q.** Effectively coordinated with Yankee/ MCC operators and/or safety pilot/chase (as applicable) to ensure effective mission accomplishment.

3.4.10.2. **Q-** Coordination with Yankee/MCC operators and/or safety pilot/chase (as applicable) was not clear or concise and detracted from overall mission accomplishment.

3.4.10.3. **U.** Breakdown or lack of coordination with Yankee/MCC operators and/or safety pilot/chase (as applicable) precluded effective mission accomplishment or jeopardized safety.

3.4.11. Area 108—TCS Console Management

3.4.11.1. **Q.** Demonstrated efficient use of FCS console displays and communication panel. Awareness of display options contributed to successful mission accomplishment.

3.4.11.2. **Q-**. Slow to adjust FCS console displays resulting in decreased situational awareness and less than optimal target control.

3.4.11.3. **U**. Failed to adjust/utilize available FCS console displays resulting in poor situational awareness and significant deviations with target control.

3.5. EPE Criteria. General:

3.5.1. Areas 362, 412, 463, 464, 465, 466, 467, 563, 613—Pilot Critical Action Procedures:

3.5.1.1. **Q**. Displayed correct, immediate response to CAP.

3.5.1.2. **U**. Incorrect response for CAP

3.5.2. Areas 315, 316, 317, 318, 319, 320, 323, 362, 463, 464, 465, 466, 593, 614—Remote Pilot Critical Action Procedures:

3.5.2.1. **Q**. Displayed correct, immediate response to CAP.

3.5.2.2. **U**. Incorrect response for CAP

3.5.3. Areas 303-720--Non Critical Action Procedures:

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

3.5.3.2. **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.

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

3.5.4. Area 29—Aircraft General Knowledge:

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

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

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

3.5.5. Area 614—Unusual Attitude Recoveries:

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

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

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

3.5.6. Area 615-- Heads-Up Display (HUD)-Out Approach/Use of Standby Instruments.

3.5.6.1. **Q**. Procedures performed in accordance with directives, published procedures and techniques outlined in the flight manual. Complied with decision height and/or MDA;

used appropriate descent rate to arrive at MDA at or before VDP/MAP. Displayed effective instrument cross-check and smooth and positive aircraft control throughout.

3.5.6.2. **Q-**. Procedures performed with minor deviations to directives, published procedures and techniques outlined in the flight manual. Slow to make corrections or initiate procedures; arrived at MDA at or before the MAP, but past the VDP. Displayed slow instrument cross-check and aircraft control occasionally abrupt to compensate for recognition of errors.

3.5.6.3. **U**. Procedures not performed IAW directives, published procedures and techniques outlined in the flight manual. Did not comply with decision height and/or MDA. Displayed inadequate instrument cross-check and erratic aircraft control.

3.5.7. Area 616--Alternate/Divert Airfields.

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

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

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

DAVID G. SHOEMAKER, Maj Gen, USAF
Director of Operations

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

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

AFMAN 11-202 Volume 2, *Aircrew Standardization/Evaluation Program*, 30 August 2021

AFMAN 11-202 Volume 3, *Flight Operations*, 10 January 2022

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

AFTTP 3.3.F-16, *Combat Fundamentals F-16*, 26 August 2022

DAFMAN 90-161, *Publishing Processes and Procedures*, 15 April 2022

Prescribed Forms

None

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AB—Afterburner

ACC—Air Combat Command

ACBT—Air Combat Training

ACH—Advanced Handling Characteristics

ADC—Air Data Computer

AFCC—Automatic Flight Control Computer

AFTTP—Air Force Tactics, Techniques, and Procedures

AOA—Angle of Attack

ASR—Airport Surveillance Radar

ATC—Air Traffic Control

ATO—Auto Take Off

BFM—Basic Fighter Maneuver

CAP—Critical Action Procedure

CADC—Central Air Data Computer

CMD/TEL—Command Telemetry

CNI—Communication, Navigation, and IFF
CPT—Cockpit Procedure Trainer
CRM—Cockpit/Crew Resource Management
DACBT—Dissimilar Air Combat Training
DOC—Designed Operational Capability
DRU—Direct Reporting Unit
EA—Electronic Attack
EEC—Electronic Engine Control
EGI—Embedded Global Positioning and Internal Navigation System
EPE—Emergency Procedures Evaluation
EPU—Emergency Power Unit
FE—Flight Examiner
FLCS—Flight Control System
FLIP—Flight Information Publications
FOA—Field Operating Agency
FSAT—Full-Scale Aerial Target
FTIT—Fan Turbine Inlet Temperature
GPS—Global Positioning System
HUD—Head Up Display
IAW—In Accordance With
IFF—Identification, Friend or Foe
ILS—Instrument Landing System
INS—Inertial Navigation System
INSTM—Instrument
IP—Instructor Pilot
IR—Infrared
IU—Instructor Remote Pilot
LEF—Leading Edge Flap
LG—Landing Gear
MAJCOM—Major Command
MAP—Missed Approach Point
MCC—Master Control Console

MDA—Minimum Descent Altitude
MSN—Mission
MU—Mission Remote Pilot
NLG—Nose Landing Gear
NM—Nautical Mile(s)
NULLO—Not Under Live Local Operator
NWS—Nose Wheel Steering
OGV—Operations Group Standardization/Evaluation
PAR—Precision Approach Radar
PBG—Pressure Breathing for G
PMG—Permanent Magnetic Generator
PTO—Power Takeoff
QT—Qualification Training
QUAL—Qualification
ROE—Rules of Engagement
RPM—Revolutions Per Minute
SEC—Secondary Engine Control
SFO—Simulated Flame Out
SP—Safety Pilot
STBY—Standby
TACAN—Tactical Air Navigation
TCS—Target Control System
TEF—Trailing Edge Flap
TGT—Target
T/O—Take Off
VDP—Visual Descent Point
VFR—Visual Flight Rules
WEG—Weapons Evaluation Group
WOW—Weight on Wheels

Office Symbols

53 WEG/CC—53d Weapons Evaluation Group Commander

82 ATRS/CC—82d Aerial Targets Squadron Commander

82 ATRS/CCV—82d Squadron Standardization and Evaluations

ACC/A3—ACC Director of Operations

ACC/A3T—ACC Flight Operations Division

ACC/A3TV—ACC Standardization and Evaluations Branch

AFFSA/XOF—Air Force Flight Safety Agency Flight Directives Division