

1 JULY 2004

Flying Operations

**T-43 AIRCREW EVALUATION CRITERIA**



**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**NOTICE:** This publication is available digitally on the AFDPO WWW site at:  
<http://www.e-publishing.af.mil>

---

OPR: HQ AETC/DOFV (Maj Mike Kilbourn)

Certified by: HQ USAF/XOO  
(Brig Gen Teresa M. Peterson)

Supersedes AFI 11-2T-43, Volume 2, 1 July 2000

Pages: 29

Distribution: F

---

This instruction implements AFD 11-2, *Aircraft Rules and Procedures*, and AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*. It establishes procedures and criteria for evaluation of all aircrews performing duties in the T-43 aircraft. This publication does not apply to the Air National Guard (ANG) or Air Force Reserve Command (AFRC).

Major commands (MAJCOM) will forward proposed MAJCOM-level supplements to HQ USAF/XOOT through HQ AETC/DOFV for approval prior to publication (AFPD 11-2). After approval and publishing, the issuing MAJCOM will send one copy each of MAJCOM-level supplement to HQ USAF/XOOT, HQ AETC/DOFV, and user-MAJCOM OPRs. Field units below MAJCOM level will forward one copy of each supplement to their parent MAJCOM OPR for post-publication review. See paragraph 2. of this AFI for guidance on submitting comments and suggesting improvements to this publication.

**Attachment 1** contains a glossary of references and supporting information. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, Management of Records, and are disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <http://webrims.amc.af.mil>.

**SUMMARY OF REVISIONS**

This instruction has been extensively rewritten and reformatted and requires a thorough review. **Section B** and **Section C** have been extensively revised to include crew/cockpit resource management (CRM) into the evaluation criteria and tables. Situational awareness is now a critical item for instructor navigators (IN), and course control is a critical item for proficiency checks of navigators.

Section A	General Information	3
1.	Conducting Evaluations. ....	3
2.	Recommended Changes and Waivers: .....	3

3.	Procedures: .....	3
4.	Grading Instructions: .....	3
5.	Emergency Procedures Evaluation (EPE): .....	4
6.	Completion of AF IMT 8, Certificate of Aircrew Qualification. ....	4
Section B	Evaluation Requirements	4
7.	Guidelines: .....	4
8.	Pilot Evaluations: .....	4
Table 1.	Pilot Evaluations. ....	6
9.	Navigator Evaluations: .....	8
Table 2.	Navigator Evaluations. ....	9
Section C	Evaluation Criteria	10
10.	General Grading Standards: .....	10
Table 3.	General Evaluation Criteria. ....	10
11.	Evaluations: .....	10
Table 4.	Pilot Evaluation Criteria. ....	11
Table 5.	Navigator Evaluation Criteria. ....	23
12.	IMTs Adopted. ....	28
<b>Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION</b>		<b>29</b>

## *Section A—General Information*

**1. Conducting Evaluations.** Conduct all evaluations in accordance with the provisions of AFI 11-202, Volume 2, and this AFI.

### **2. Recommended Changes and Waivers:**

2.1. Submit suggested improvements to this instruction on AF IMT 847, **Recommendation for Change of Publication**, to the parent MAJCOM through standardization/evaluation (stan/eval) channels. Parent MAJCOMs will forward approved recommendations through HQ AETC/DOF to HQ USAF/XO.

2.2. HQ AETC/DO is waiver authority for this AFI. Submit waiver requests in message, e-mail, or official memorandum format. File a copy of approved waivers with this AFI.

### **3. Procedures:**

3.1. Flight examiners (FE) will use the evaluation criteria contained in **Section C** for conducting flight and emergency procedures evaluations (EPE). To ensure standard and objective evaluations, FEs must be thoroughly familiar with the prescribed evaluation criteria.

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

3.3. Prior to the flight, the FE will brief the examinee on the purpose of the evaluation and how it will be conducted. The examinee will accomplish required flight planning in accordance with the flight position during the evaluation. Higher headquarters FEs (and unit FEs, as determined locally) will be furnished a copy of necessary mission data, material, and charts.

3.4. The FE will thoroughly debrief all aspects of the flight. This debrief will include the examinee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training. If the overall flight evaluation grade is Q-2 or Q-3, a squadron supervisor must attend the debrief.

### **4. Grading Instructions:**

4.1. Tolerances for in-flight parameters are based on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances if the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. Do consider cumulative deviations when determining the overall grade.

4.2. FEs will use the grading criteria in this AFI to determine individual area grades. They will derive the overall flight evaluation grade (Q-1, Q-2, or Q-3) from the area grades, based on a composite for the observed events and tasks according to AFI 11-202, Volume 2, and this AFI. The FE will exercise judgment when the wording of areas is subjective and specific situations are not covered. His or her judgment will be the determining factor in arriving at the overall grade.

4.3. If the examinee receives an unqualified area grade in any of the critical areas identified by this AFI, an overall unqualified grade (Q-3) will be assigned.

4.4. An examinee who receives a grade of Q-3 will be placed in supervised status until recommended additional training is completed and/or a reevaluation is successfully accomplished. Additional training and reevaluations will be accomplished according to AFI 11-202, Volume 2.

4.5. Only those items actually performed or instructed by the examinee will be graded.

## 5. Emergency Procedures Evaluation (EPE):

5.1. The EPE may be given in the aircraft during noncritical phases of flight, in an aircrew training device (ATD), or orally. This evaluation will include areas commensurate with examinee's qualification level.

5.2. The following items will be included on all EPEs:

5.2.1. Aircraft general knowledge.

5.2.2. Emergency procedures. Evaluate all recall items and a minimum of two emergency procedures.

5.3. Examinees receiving an overall unqualified grade (Q-3) because of an unsatisfactory EPE will not be permitted to fly in any aircrew position until a successful reevaluation is accomplished. For EPEs graded "qualified with additional training required," the FE will indicate whether the additional training must be accomplished before the next flight.

**6. Completion of AF IMT 8, Certificate of Aircrew Qualification.** Record and certify aircrew member qualification using the AF IMT 8 in accordance with AFI 11-202, Volume 2. With the exception of restrictions and exceptionally qualified designation (if used), place all comments on the reverse side of the AF IMT 8.

## *Section B—Evaluation Requirements*

### 7. Guidelines:

7.1. All evaluations will follow the guidelines set in AFI 11-202, Volume 2, Chapter 5. However, specific evaluation requirements are listed in paragraph 8. (for pilots) and paragraph 9. (for navigators) of this AFI.

7.2. In the tables, areas indicated with an "R" are required items. A required area is a specific area that must be evaluated to complete the evaluation. All required areas must be included in the flight evaluation profile. If it is impossible to accomplish a required area in flight, the FE may elect to evaluate the areas by an alternate method (for example, ATD, orally, etc.) in order to complete the evaluation. If the FE determines the required item cannot be adequately evaluated by an alternate method, the examinee must complete an additional flight to complete the evaluation. The alternate evaluation will be documented in the Examiner's Remarks in the Comments block of the AF IMT 8.

7.3. Areas denoted as critical are graded Q or U only.

### 8. Pilot Evaluations: (*NOTE:* See [Table 1.](#))

8.1. **Instrument/Qualification.** To the maximum extent possible, this evaluation will include approaches at airfields other than home field. The examinee will complete the requirements in AFI 11-202, Volume 2.

8.2. **Pilot Mission Evaluation.** Scenarios that represent unit tasking will satisfy the requirements of this evaluation. The FE may perform copilot duties during this evaluation. EPE for recurring mission evaluations may be accomplished in the aircraft during noncritical phases of flight, in an ATD, or orally.

**Table 1. Pilot Evaluations.**

I T E M	A	B	C		
	Area	Title	Type of Evaluation (See Legend)		
			1	2	3
<b>GENERAL</b>					
1	1	Mission Planning	R	R	R
2	2	Performance Data	R	R	R
3	3	Publications	R	R	R
4	4	Crew/Passenger Briefings		R	R
5	5	Checklist Usage	R	R	R
6	6	Crew Coordination	R	R	R
7	7	Engine-Start Procedures			
8	8	Taxi			
9	9	Takeoff	R	R	
10	10	Basic Instruments	R	R	R
11	11	Use of Autopilot/Flight Director			
12	12	Communications/Radio Procedures	R	R	R
13	13	Clearing	R	R	R
14	14	Risk Management/Decision Making	R	R	R
15	15	Task Management	R	R	R
16	16	Airmanship <b>(Critical)</b>	R	R	R
17	17	Situational Awareness <b>(Critical)</b>	R	R	R
18	18	General Knowledge	R	R	R
19	19	Emergency Procedures Knowledge	R	R	R
20	20	Crew Debriefing		R	R
21	21	Instructional Ability (note 2)		R	R
<b>QUALIFICATION</b>					
22	22	Visual Pattern	R	R	
23	23	Landings	R	R	
24	24	Simulated Engine-Out Visual			
25	25	Simulated Engine-Out Landing	R	R	
26	26	Normal Go-Around	R	R	

I T E M	A	B	C		
	Area	Title	Type of Evaluation (See Legend)		
			1	2	3
27	27	Simulated Engine-Out Go-Around	R	R	
28	28	Partial Flap Landing/No-Flap Low Approach			
29	29	Approach to Stalls (note 1)		R	
30	30	Simulated Engine Failure After Takeoff	R	R	
31	31	Touch-and-Go Procedures (note 2)		R	
<b>INSTRUMENTS</b>					
32	32	Departure			
33	33	Steep Turns (note 2)			
34	34	Unusual Attitudes			
35	35	Fix to Fix			
36	36	Holding/Procedure Turns	R	R	
37	37	Penetration			
38	38	En Route Descent			
39	39	Nonprecision Approach (may include TACAN/VOR-DME, VOR, NDB/VOR [RMI only], and LOC/ASR)	R	R	
40	40	Precision Approach (may include ILS and PAR)	R	R	
41	41	Circling Approach			
42	42	Missed Approach	R	R	
43	43	Transition to Landing	R	R	

**LEGEND:**

- 1 - First pilot or copilot instrument/qualification evaluation
- 2 - MP or IP qualification/instrument evaluation
- 3 - MP or IP mission evaluation
- R - Required area

**NOTES:**

1. Examinee must accomplish two of the three stall scenarios.
2. Instructor evaluations only.

**9. Navigator Evaluations:** (*NOTE:* See [Table 2.](#))

9.1. **Ground Evaluation.** FEs will administer a ground evaluation in conjunction with each flight evaluation. A portion of the ground evaluation will be an EPE. FEs will emphasize ground egress, navigator proficiency procedures, emergency procedures, aircraft systems, local mission knowledge, and life support equipment.

9.2. **Requirements.** The examinee will complete the requirements in AFI 11-202, Volume 2.

9.3. **Initial Qualification.** Initial qualification evaluations will be conducted in the T-43A aircraft.

9.4. **Initial and Periodic Instructor Mission Evaluation.** This checkride is used for qualification to instructor and periodic qualification or mission evaluation checkrides. For periodic evaluations, this checkride will be a combined qualification and mission evaluation on an instructional flight.

Table 2. Navigator Evaluations.

I T E M	A	B	C	
	Area	Title	Type of Evaluation (See Legend)	
			1	2
<b>GENERAL</b>				
1	1	Publications and Equipment	R	R
2	2	Mission Planning	R	R
3	3	Risk Management/Decision Making	R	R
4	4	Briefing	R	R
5	5	Checklist Procedures	R	R
6	6	Ground Operations/Post Mission	R	R
7	7	Departure/Climb	R	R
8	8	En Route Requirements	R	R
9	9	Descent and Approach	R	R
10	10	Communication	R	R
11	11	Crew Coordination	R	R
12	12	Mission (Task) Management	R	R
13	13	Situational Awareness ( <b>Critical</b> )	R	R
14	14	Equipment Knowledge/Operations	R	R
15	15	Emergency Procedures	R	R
16	16	General Knowledge	R	R
<b>INSTRUCTOR</b>				
17	17	Instruction		R
18	18	Subject Matter Knowledge		R
19	19	Grading		R
20	20	Critique		R
<b>PROFICIENCY</b>				
21	21	VOR/TACAN	R	
22	22	Radar	R	
23	23	Navigation Log	R	
24	24	Chart Procedures	R	
25	25	Course Control ( <b>Critical</b> )	R	R
26	26	Debrief	R	R

**LEGEND:**

- 1 - Initial qualification evaluation
- 2 - Initial or periodic instrument and qualification/mission evaluation
- R - Required area

**Section C—Evaluation Criteria****10. General Grading Standards:**

10.1. On pilot evaluations, the criteria in **Table 3.** will be used during all phases of flight (except as noted for specific events and instrument final approaches).

**Table 3. General Evaluation Criteria.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>
	<b>Grade</b>		
	<b>Q</b>	<b>Q-</b>	<b>U</b>
<b>1</b>	Altitude $\pm$ 200 feet	Altitude $\pm$ 300 feet	Exceeded Q- limits
<b>2</b>	Airspeed $\pm$ 5 percent	Airspeed $\pm$ 10 percent	
<b>3</b>	Course $\pm$ 5 degrees/3 nm, whichever is greater	Course $\pm$ 10 degrees or 5 nm, whichever is greater	

10.2. FEs will use evaluation criteria in **Table 4.** (pilot) and **Table 5.** (navigator) to grade all areas during evaluations.

**11. Evaluations:**

11.1. **Instructor Pilot (IP) Evaluations.** IP evaluations will be accomplished in conjunction with an instrument/qualification evaluation. The FE will determine the items to be instructed. Instruction should include both demonstrations and error analysis. When possible, the examinee should demonstrate the ability to accurately apply grading standards. His or her ability to analyze deficiencies and impart constructive criticism is an integral part of this evaluation.

11.2. **Administration of Individual Evaluations.** Normally, 19 AF/DOU administers flight evaluations for HQ AETC personnel as well as 19 AF personnel on flying status. (Deviations must be coordinated with 19 AF/ADO.)

**Table 4. Pilot Evaluation Criteria.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>Grade</b>			
	<b>Grading Area</b>	<b>Q</b>	<b>Q-</b>	<b>U</b>
<b>1</b>	Area 1. Mission Planning.	Planned basic preflight and in-flight mission requirements as directed in a timely manner. Applicable Air Force and command forms (or IMTs) completed correctly and in compliance with all appropriate directives.	Errors in basic mission planning resulted in minor detractions to mission accomplishment. Forms (or IMTs) incomplete, but did not detract significantly from mission accomplishment.	Made major errors or omissions that would have prevented a safe or effective mission. Displayed faulty knowledge of operating data or procedures.
<b>2</b>	Area 2. Performance Data.	Required performance data was computed in accordance with flight manual and applicable directives.	Minor errors in computing performance data resulted in incomplete or erroneous data that did not detract from safety of flight.	Errors in computing performance data resulted in erroneous data that would have detracted from safety of flight.
<b>3</b>	Area 3. Publications.	Flight manuals and required directives were current with latest changes correctly posted.	Latest changes were not posted correctly.	Flight manuals and other required directives (including changes) were outdated, missing, or not posted.
<b>4</b>	Area 4. Crew/ Passenger Briefings.	Briefings required by the flight manual and/or associated directives clearly defined mission objectives. Provided specific information on what needed to be done. Solicited feedback to check understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas. Checked understanding of possible contingencies. Effectively used training aids.	Briefings were not complete or erroneous data were briefed, but did not detract from safety of flight. Did not make effective use of available training aids. Dwelled on nonessential mission items. Omitted some minor training events. Limited discussion of techniques.	Briefings were incomplete or erroneous data were briefed that would have detracted from safety of flight. Did not use training aids. Briefing was redundant throughout. Lost interest of flight members. Presentation created doubts or confusion. Did not establish objectives for the mission. Omitted major training events or did not discuss techniques.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
5	Area 5. Checklist Usage.	All checklists were completed in the prescribed order at a point in the mission as designated by the aircraft flight manual and appropriate directives. Accurately determined aircraft status and accepted or rejected the aircraft, as appropriate.	Required checklist items were missed or completed in the wrong order, but did not significantly impact systems operation, crew coordination, or safety of flight. Failed to accurately access the status of the aircraft, but did not accept a grounded aircraft for flight.	Missed critical checklist items that would have impacted systems operation, crew coordination, or safety of flight. Accepted an aircraft that was not airworthy.
6	Area 6. Crew Coordination.	Ensured clearance of ground personnel and equipment, using appropriate signals and/or interphone prior to actuation of aircraft systems. Coordinated checklist items were completed as required.	Inadequate coordination with ground personnel detracted from preflight, engine start, before taxi, or taxi-in operations, but did not detract from safe ground operations. Lack of crew coordination or poor crew coordination resulted in minor mission deviations.	Inadequate coordination with ground personnel would have resulted in unsafe ground operations. Inadequate crew coordination would have detracted from safety of flight.
7	Area 7. Engine-Start Procedures.	Completed engine start as directed by the flight manual.	Minor deviations to start procedures prescribed in the flight manual detracted from the overall engine-start procedures, but did not compromise personnel safety or damage equipment.	Deviations to flight manual procedures would have compromised safety or resulted in equipment damage.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
8	Area 8. Taxi.	Followed ground crew directions when departing and arriving parking area. Followed prescribed taxi route at safe taxi speeds.	Did not follow ground crew directions when taxiing aircraft, but did not detract from safe ground operations. Significantly deviated from prescribed taxi route or taxis at inappropriate speeds, but did not detract from safe ground operations.	Significant deviation and excessive speed would have resulted in unsafe ground operations.
9	Area 9. Takeoff.	Maintained runway alignment $\pm 10$ feet during takeoff ground roll. Rotated the aircraft at a rate of approximately 3 degrees per second to 15 degrees nose high. Retracted gear and flaps (at appropriate airspeeds) when safely airborne and flew the climb profile in accordance with the flight manual.	Maintained runway alignment $\pm 25$ feet during takeoff ground roll. Rotated the aircraft at an improper rate or under- or over-rotated more than 5 degrees. Retracted gear and flaps at inappropriate airspeeds or altitudes or failed to follow flight manual cleanup and acceleration schedule, but did not exceed any flight manual gear or flap limitation.	Exceeded runway alignment of $\pm 25$ feet during takeoff ground roll. Attempted to rotate at an unsafe rate. Attempted to rotate to an unsafe attitude. Attempted to exceed the flight manual limiting speeds for the landing gear or flaps.
10	Area 10. Basic Instruments.	Performed instrument procedures in accordance with flight manual and applicable directives.	Made minor errors performing instrument procedures, but did not detract from maneuver accomplishment or safe flight operations.	Errors performing instrument procedures would have resulted in unsafe flight.
11	Area 11. Use of Autopilot/Flight Director.	Autopilot and flight director were used in accordance with flight manual and associated directives.	Made minor deviations in use of autopilot and (or) flight director, but did not degrade safety of flight or exceed flight manual limitations.	Significant deviations would have resulted in unsafe flight or exceeded flight manual limitations.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
12	Area 12. Communications/ Radio Procedures.	Used concise, standard terminology. Acknowledged all communications. Asked for or provided clarification when necessary. Stated opinions or ideas. Asked questions when uncertain. Advocated specific courses of action. Did not let rank differences affect mission safety.	Consistently missed required radio calls or did not respond correctly. Air traffic clearances were communicated correctly and flight safety was not compromised.	Missed radio calls and incorrect responses would have resulted in unsafe flight. Allowed rank differences affect mission safety.
13	Area 13. Clearing.	Effectively used visual and radio clearing techniques to avoid traffic conflicts. Recognized actual or potential conflicts and managed situation to deconflict.	Had a limited ability to effectively use visual and/or radio clearing techniques to avoid conflicts. Had a limited ability to recognize potential conflicts; relied heavily on air traffic control.	Improper or lack of clearing techniques consistently resulted in missed traffic and potential conflicts. Was unable to recognize potential conflicts.
14	Area 14. Management/ Decision-Making.	Effectively identified contingencies and alternatives. Gathered and cross-checked available data before deciding. Clearly stated decisions and ensured they were understood.	Made minor errors identifying contingencies, gathering data, or communicating decisions that did not affect safe or effective mission accomplishment.	Improperly or ineffectively identified contingencies, gathered data, or communicated decisions that seriously degraded mission accomplishment.
15	Area 15. Task Management.	Correctly prioritized and managed tasks based on existing and new information which assured mission success.	Made minor errors in prioritization or management of task that did not affect safe or effective mission accomplishment.	Incorrectly prioritized or managed tasks that seriously degraded mission accomplishment or safety of flight.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
16	Area 16. Airmanship <b>(Critical)</b> .	Executed assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension.	(NOTE: Because this area is critical, Q- is not applicable.)	Decisions or lack thereof would have resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that safety could have been compromised.
17	Area 17. Situational Awareness <b>(Critical)</b> .	Accurately analyzed flight conditions. Planned and acted in a timely manner to ensure safe mission accomplishment. Prioritization of flight requirements assured mission success.	(NOTE: Because this area is critical, Q- is not applicable.)	Misanalysis of flight conditions and failure to prioritize would have compromised safety or mission accomplishment.
18	Area 18. General Knowledge.	Knowledge level of aircraft systems and normal procedures ensured correct analysis of systems malfunctions. Was able to use systems knowledge to correctly operate aircraft systems in normal or abnormal operations.	Had a limited knowledge of aircraft systems and normal procedures. Was slow to correctly analyze systems malfunctions. Limited systems knowledge led to incorrect or incomplete operation of aircraft systems in normal or abnormal operations.	Demonstrated unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
19	Area 19. Emergency Procedures Knowledge.	Was able to accomplish required recall steps without reference to the checklist or flight manual. Took proper steps to resolve abnormal situations. Used checklist and in-flight guide effectively.	Was slow to accomplish required recall steps. Was slow or required some assistance to take proper steps to resolve the abnormal or emergency situation. Was slow to effectively use the checklist and in-flight guide to solve problems.	Was unable to accomplish recall steps. Was unable to analyze problems or take corrective action. Did not use checklist or lacked acceptable familiarity with its arrangement or contents.
20	Area 20. Crew Debriefing.	Debriefed all aspects of the mission to ensure a thorough understanding of events.	Debrief was incomplete or confusing.	Debrief was insufficient to allow crewmembers to correct deficiencies in future missions.
21	Area 21. Instructional Ability.	Provided instruction appropriate to the student and deferred complex instruction to after flight, if necessary. Was able to discern procedure from technique. Was proficient at accomplishing demonstration maneuvers. Maintained a safe and effective training environment at all times.	Failed to identify student's shortcomings and provided only minimal instruction to the student. On some occasions, confused procedure with technique. Was only marginally proficient at accomplishing demonstration maneuvers. Maintained a safe flying environment at all times.	Was unable to adequately instruct maneuvers. Was unable to successfully demonstrate maneuvers.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
22	Area 22. Visual Pattern.	Pattern speed: + 15/- 5 KIAS of selected flap maneuvering airspeed when attempting to maintain constant airspeed. Final approach speed: $V_{TARGET} + 10/- 0$ KIAS. Pattern altitude: $\pm 100$ feet. Maintained correct glidepath until threshold.	Pattern speed: flap placard speed to - 10 KIAS of selected flap maneuvering airspeed when attempting to maintain constant airspeed. Final approach speed: $V_{TARGET} + 20/- 10$ KIAS. Pattern altitude: $\pm 200$ feet. Minor glidepath deviations were corrected before crossing threshold.	Pattern and final approach speed exceeded the Q- limits. Altitude deviations were more than 200 feet. An erratic glidepath resulted in a go-around.
23	Area 23. Landings.	Runway center line: $\pm 10$ feet, 1,000-2,000 feet down runway. Threshold speed: $V_{TARGET} + 10/- 0$ KIAS.	Runway center line: $\pm 25$ feet, 3,000 feet down runway. Threshold speed: $V_{TARGET} + 15/- 5$ KIAS.	Runway alignment, landing distance, or speed exceeded Q-limits.
24	Area 24. Simulated Engine-Out Visual.	Same as visual pattern (Area 22).	Same as visual pattern (Area 22).	Same as visual pattern (Area 22).
25	Area 25. Simulated Engine-Out Landing.	Same as landings (Area 23).	Same as landings (Area 23).	Same as landings (Area 23).
26	Area 26. Normal Go-Around.	Accomplished flight manual procedures including pitch and configuration changes and acceleration profile in a timely manner.	Safely executed maneuver, but was slow to accomplish required procedures or changes to improper pitch or configuration.	Attempted to exceed flight manual airspeed limitation or safe pitch attitudes.
27	Area 27. Simulated Engine-Out Go-Around.	Same as normal go-around (Area 26).	Same as normal go-around (Area 26).	Same as normal go-around (Area 26).

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
28	Area 28. Partial Flap Landing/ No-Flap Low Approach	Runway center line: $\pm 20$ feet, 1,000-2,000 feet down runway $\pm 300$ feet. Threshold speed: $V_{TARGET} + 10/ - 0$ KIAS.	Accomplished flight manual procedures in a slow or incomplete manner. Runway center line: $\pm 25$ feet, 3,000 feet down runway. Threshold speed: $V_{TARGET} + 15/ - 5$ KIAS.	Improper procedures resulted in unsafe configuration. Touchdown point exceeded Q- limits.
29	Area 29. Approach to Stalls.	Initiated go-around thrust at approach to stall indication. Recovered to level flight with minimum altitude loss. Did not overspeed gear and/or flaps. Recognized secondary stall, if entered, and recovered properly.	Failed to initiate recovery at first indication of a stall. Recovered from stall without help, but lost excessive altitude. Approached flap and/or gear limits. Was slow to recognize secondary stall.	Failed to recognize approach to stall indications. Lost excessive altitude during recovery. Attempted to exceed flap and gear airspeed limits.
30	Area 30. Simulated Engine Failure After Takeoff.	Made timely application of flight manual procedures.	Was slow to identify situation and/or improper application of flight controls, but was able to control aircraft within safe flying parameters without help.	Attempted to place aircraft in an unsafe condition by misapplication of flight controls.
31	Area 31. Touch-and-Go Procedures.	Briefed and accomplished required touch-and-go procedures in accordance with the flight manual.	Was slow to accomplish correct procedures during touch-and-go procedures, enabling a safe but less than fully effective procedure.	Attempted to place aircraft in unsafe condition by misapplication of flight manual procedures.
32	Area 32. Departure.	Maintained assigned altitude $\pm 100$ feet, desired airspeed $\pm 10$ KIAS/.02M, and assigned heading $\pm 5$ degrees.	Maintained: assigned altitude $\pm 200$ feet, desired airspeed $\pm 20$ KIAS/.04M, and assigned heading $\pm 10$ degrees.	Exceeds Q- limits.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
33	Area 33. Steep Turns.	Maintained desired bank angle $\pm 10$ degrees, altitude $\pm 200$ feet, and airspeed $\pm 15$ KIAS. Performed rollout $\pm 10$ degrees of desired heading.	Maintained desired bank angle $\pm 15$ degrees, altitude $\pm 500$ feet, and airspeed $\pm 30$ KIAS. Performed rollout $\pm 30$ degrees of desired heading.	Exceeds Q- limits.
34	Area 34. Unusual Attitudes.	Used correct instrument flight references and AFMAN 11-217, Volume 1, procedures to recover to level flight expeditiously without stalling or exceeding aircraft limitations and with minimum altitude loss.	Was slow to recognize unusual attitude and apply correct AFMAN 11-217, Volume 1, procedures to recover to level flight, but did not induce an accelerated stall during the recovery or allow the aircraft to exceed any speed limitation.	Failed to recognize unusual attitude or apply correct AFM 11-217, Volume 1, procedures to recover. Attempted to exceed aircraft speed limitations.
35	Area 35. Fix to Fix.	Arrived within 3 nm of desired fix.	Arrived within 5 nm of desired fix.	Exceeded Q- limits.
36	Area 36. Holding/ Procedure Turns.	Performed prescribed entry procedures and maintained designated track according to AFMAN 11-217, Volume 1, and other appropriate directives.	Made minor deviations from prescribed procedures, but maintained safe accomplishment of the procedure.	Improper procedures would have resulted in unsafe flight.
37	Area 37. Penetration.	Complied with published approach procedures and appropriate directives.	Made minor deviations from prescribed procedures, but maintained safe accomplishment of the procedure.	Improper procedures would have resulted in unsafe flight.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
38	Area 38. En Route Descent.	Accurately planned, executed, and updated descent, resulting in an effective en route descent within the required descent restrictions.	An inaccurately planned descent resulted in high speed descent with drag devices, but was still able to meet altitude restrictions.	Errors in descent planning and execution required additional airspace to complete required descent and revision of descent restriction due to improper planning or execution of en route descent, but did not exceed aircraft limits.
39	Area 39. Nonprecision Approach (may include TACAN/VOR-DME, VOR, NDB/VOR [RMI only], and LOC/ASR).	Maintained desired altitude $\pm 100$ feet, flap maneuver speed (when attempting to maintain constant airspeed) $+ 15/- 5$ KIAS, and assigned heading $\pm 5$ degrees. Maintained arc $\pm 2$ nm. Inside FAF, maintained airspeed at $V_{TARGET} + 10/- 0$ KIAS. Reached and maintained MDA $+ 100/- 0$ feet at or prior to VDP. Maintained course $\pm 1$ dot on the CDI or $\pm 5$ degrees (RMI only). Identified the missed approach point before passing 0.5 nm past (with DME) or 10 sec past (without DME). Aircraft could be safely landed from the approach.	Maintained desired altitude $\pm 200$ feet, flap placard to $-10$ KIAS of flap maneuver speed when attempting to maintain constant airspeed, and assigned heading $\pm 10$ degrees. Maintained arc $\pm 4$ nm. Inside FAF, maintained airspeed at $V_{TARGET} + 20/- 10$ KIAS. Reached and maintained MDA $+ 150/- 0$ feet at or prior to VDP. Maintained course $\pm 2$ dot on the CDI or $\pm 10$ degrees (RMI only). Identified the missed approach point before passing 1.0 nm past (with DME) or 20 sec past (without DME). Aircraft could be safely landed from the approach only by reverting to a visual approach before reaching the MDA.	Exceeded Q- limits. Aircraft could not land safely from the approach.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
<b>40</b>	Area 40. Precision Approach (may include ILS and PAR).	Complied with the applicable criteria for nonprecision approach (Area 39). Did not exceed “well above” or “well below” glidepath on a PAR. Maintained ILS glidepath and localizer course within 1 dot.	Complied with the applicable criteria for nonprecision approach (Area 39). Consistently exceeded “well above” or “well below” glidepath on a PAR, but did not get so far off course or glideslope to have approach terminated by the controller. Maintained ILS glidepath and localizer course within 2 dots.	Exceeded Q- limits for nonprecision (Area 39). Had to execute a missed approach due to course or glidepath deviations. Could not safely land from the approach.
<b>41</b>	Area 41. Circling Approach.	Planned and executed approach in accordance with guidelines in AFMAN 11-217, Volume 1. See criteria for visual pattern (Area 22).	Made minor errors during planning and execution, resulting in a safe but less than fully effective maneuver. See criteria for visual pattern (Area 22).	Exceeded Q- limits for visual pattern (Area 22). Was unable to safely land from a circling maneuver.
<b>42</b>	Area 42. Missed Approach.	Complied with missed approach/climbout instructions and flight manual procedures.	Was slow to comply with missed approach/climbout instructions and flight manual procedures.	Failed to comply with instruction and flight manual procedures.
<b>43</b>	Area 43. Transition to Landing.	Transitioned to visual cues so a normal glidepath could be flown to landing.	Minor deviations resulted in a steep final or “duck under” final approach, but did not exceed safe flight parameters.	Failed to pick up visual cues early enough to make a safe landing.

**Table 5. Navigator Evaluation Criteria.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>Grade</b>			
	<b>Grading Area</b>	<b>Q</b>	<b>Q-</b>	<b>U</b>
<b>1</b>	Area 1. Publications and Equipment.	All equipment, publications, and supplements were posted and carried according to current directives.	Changes to required publications were annotated incorrectly.	Required publications (including changes) were missing, outdated, and/or incorrectly posted.
<b>2</b>	Area 2. Mission Planning.	Clearly defined the mission overview. Provided specific information on what needed to be done. Clearly defined mission goals. Solicited feedback. Identified potential problem areas. Ensured understanding of possible contingencies.	Deviation resulted from a lack of complete mission preparation, which detracted from performance.	Deviations and omissions would have detracted from safety of flight.
<b>3</b>	Area 3. Risk Management/ Decision-Making.	Throughout the mission identified contingencies and alternatives. Gather and cross-checked all available data before deciding. Investigated doubts and concerns of other flight members. Clearly stated decisions and received acknowledgement. Provided rationale for decisions.	Situation occurred that were a result of improper risk management or decision making which detracted from performance.	Deviations and omissions would have detracted from safety of flight.
<b>4</b>	Area 4. Briefing.	Briefing covered required items smoothly, timely, and appropriately and promoted student learning.	Omissions, cursory coverage, or poor time management detracted from student learning.	Required items were not briefed, which would have detracted from safety of flight and mission accomplishment.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
5	Area 5. Checklist Procedures.	Ensured all checklists were accomplished timely accurately and properly.	Made minor errors, omissions, or deviations from proper checklist procedures, but did not detract from safety of flight.	Omission or deviations would have detracted from safety of flight.
6	Area 6. Ground Operations/ Post-Mission.	Ensured ground operations/post-mission requirements were timely and complete and required information was accurate.	Errors or omissions detracted from mission accomplishment, but did not detract from safety of flight.	Omission or deviations would have detracted from safety of flight.
7	Area 7. Departure/ Climb.	Ensured adherence to accurate navigation.	Was slow to recognize or correct minor navigation errors.	Failed to recognize or correct navigation errors.
8	Area 8. En Route Requirements.	Ensured adherence to accurate navigation.	Was slow to recognize or correct minor navigation errors.	Failed to recognize or correct navigation errors.
9	Area 9. Descent and Approach.	Ensured adherence to accurate navigation.	Was slow to recognize or correct minor navigation errors.	Failed to recognize or correct navigation errors.
10	Area 10. Communication.	Used accurate and correct terminology throughout mission. Timely crew coordination enhanced learning environment.	Poor coordination of information impacted mission accomplishment.	Poor coordination resulted in confusion and potentially unsafe flight conditions.
11	Area 11. Crew Coordination.	Accomplished coordinated checklist items as required.	Inadequate coordination did not detract from safe operations. Lack of crew coordination or poor crew coordination resulted in minor mission deviations.	Inadequate crew coordination would have detracted from safety of flight.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
12	Area 12. Mission (Task) Management.	Smoothly integrated instruction, grading, and accomplishment of mission requirements. Effectively executed flight profile.	Fell behind with instruction, grading, and accomplishment of mission requirements. Student training was impacted.	Was unable to accomplish instruction and grading and mission requirements.
13	Area 13. Situational Awareness ( <b>Critical</b> ).	Recognized the need for action. Aware of performance of self and other flight members. Aware of ongoing mission status. Recognized, verbalized, and acted upon unexpected events.	( <b>NOTE:</b> Because this area is critical, Q- is not applicable.)	Misanalysis of flight conditions and failure to prioritize would have compromised safety or mission accomplishment.
14	Area 14. Equipment Knowledge/Operations.	Had a thorough, indepth knowledge of all equipment operations. Used systems knowledge to correctly operate aircraft equipment in normal or abnormal operations.	A limited knowledge of equipment led to incorrect or incomplete operation of aircraft equipment in normal or abnormal operations, but did not detract from safety of flight.	A lack of knowledge of equipment detracted from mission and resulted in potential unsafe flight conditions.
15	Area 15. Emergency Procedures.	Had a thorough, indepth knowledge of all emergency procedures. Ensured proper steps were taken to resolve abnormal situations. Used checklist effectively during emergency situation.	Was slow or required some assistance to take proper steps to resolve emergency situation. Did not use checklist effectively during emergency situation.	Was unable to analyze problems or take corrective action. Did not use checklist or lacked acceptable familiarity with its arrangement or contents.
16	Area 16. General Knowledge.	Had a thorough, indepth knowledge of associated instructions and local governing directives.	Had a limited knowledge of associated instructions and local governing directives.	Lacked acceptable knowledge of associated instructions and local governing directives.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
17	Area 17. Instruction.	Provided timely proactive instruction throughout the entire mission. Ensured student learning of correct procedures.	Limited proactive instruction resulted in excessive evaluation. Instruction provided did not focus on application of correct procedures.	Lacked sufficient proactive instruction. Instruction provided or caused student confusion or incorrect application of procedures.
18	Area 18. Subject Matter Knowledge.	Had a thorough, indepth knowledge of all training courseware and mission procedures.	Had a limited knowledge of training courseware and mission procedures.	Lacked sufficient knowledge of training courseware and mission procedures.
19	Area 19. Grading.	Subarea grading was accurate and in accordance with grading policies. Overall grade was supported by subarea grades. Majority of errors committed were documented on gradesheet with associated root cause.	Subarea grading occasionally was not in accordance with grading policies. Student errors were documented, but root cause was not listed on gradesheet.	Subarea grades were not in accordance with grading policies. Numerous errors were unnoticed or not accurately documented. Overall grade was not supported by subarea grades.
20	Area 20. Critique.	A thorough student-centered debrief covered aspects of the mission that required reemphasis and clarification. Adhered to time constraints.	Provided cursory coverage of mission events. Items were marginally debriefed, resulting in student confusion. Deviated from time constraints, but did not detract from debrief.	Failed to debrief significant mission events. Items debriefed were insufficient to allow students to correct deficiencies on future missions. Failed to complete critique in allotted time.
21	Area 21. VOR/TACAN.	Majority of fixes were accurate to within 5 nm.	Majority of fixes were accurate to within 7 nm.	Exceeded Q-limits.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
22	Area 22. Radar.	Majority of fixes were accurate to within 5 nm.	Majority of fixes were accurate to within 7 nm.	Exceeded Q-limits.
23	Area 23. Navigation Log.	Log computations supported accurate DR or fixes, center line navigation, and mission reconstruction. En route ETAs were $\pm 2$ minutes. True airspeed check was accurate to $\pm 5$ knots. Revised ETA was accurate to $\pm 1$ min. Inertial navigation system TH check was accurate to within 2 degrees of actual.	Occasional log computation errors and omissions were made, but had a minimal effect on DR or fixes, center line navigation, and mission reconstruction. En route ETAs were $\pm 4$ minutes. True airspeed check was accurate to $\pm 10$ knots. Revised ETA was accurate to $\pm 3$ minutes. Inertial navigation system TH check was accurate to within 3 degrees of actual.	Log computation errors and omissions contributed to inaccurate DR or fixes, center line navigation, and mission reconstruction. Exceeded Q-limits.
24	Area 24. Chart Procedures.	Chart procedures supported accurate DR or fixes, computers, and centerline navigation.	Occasional chart errors and omits were made, but had minimal effect on DR or fixes and center line navigation.	Numerous chart errors and omits contributed to inaccurate DR or fixes and center line navigation.
25	Area 25. Course Control <b>(Critical)</b> .	Remained within 10 nm throughout en route portion.	<b>(NOTE:</b> Because this area is critical, Q- is not applicable.)	Exceeded Q limits.

I T E M	A	B	C	D
	Grade			
	Grading Area	Q	Q-	U
26	Area 26. Debrief.	Provided positive and negative, specific, objective and nonthreatening feedback. Provided team and individual performance feedback (including self). Provided specific ways to correct errors. Asked for action and inputs from others. Recapped key points and compared mission results with objectives.	Minor errors and omissions were made, but had minimal effect on debrief.	Omitted major occurrences that required debriefing with others.

**12. IMTs Adopted.** AF IMTs 8, **Certificate of Aircrew Qualifications**; and 847, **Recommendation for Change of Publication.**

RONALD E. KEYS, Lt General, USAF  
DCS, Air & Space Operations

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

AFPD 11-2, *Aircraft Rules and Procedures*  
AFI 11-2T-43, Volume 1, *T-43 Aircrew Training*  
AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*  
AFMAN 11-217, Volume 1, *Instrument Flight Procedures*  
AFPD 37-1, *Information Management*  
AFMAN 37-123, *Management of Records*  
Air Force Records Disposition Schedule (RDS)

***Abbreviations and Acronyms***

**ASR**—aircraft surveillance radar  
**ATD**—aircrew training service  
**CDI**—course deviation indicator  
**CRM**—crew resource management  
**DME**—distance measuring equipment  
**DR**—dead reckoning  
**EPE**—emergency procedures evaluation  
**ETA**—estimated time of arrival  
**FAF**—final approach fix  
**FE**—flight examiner  
**ILS**—instrument landing system  
**IN**—instructor navigator  
**IP**—instructor pilot  
**IRC**—instrument refresher course  
**KIAS**—knots indicated airspeed  
**LOC**—localizer  
**MAJCOM**—major command  
**MDA**—minimum descent altitude  
**NDB**—nondirectional beacon  
**nm**—nautical mile

**PAR**—precision approach radar

**RMI**—radio magnetic indicator

**TACAN**—tactical air navigation

**TH**—true heading

**VOR**—very high frequency omnidirectional range station