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Flying Operations

KC-10 AIRCREW EVALUATION CRITERIA



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This volume implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes evaluation criteria for the operation of KC-10 aircraft to accomplish their worldwide mobility missions safely and successfully. It is used in conjunction with AFI 11-202V2, *Aircrew Standardization/ Evaluation Program*, and the appropriate MAJCOM supplement. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. This instruction is applicable to Air Forces Reserve Command (AFRC) associate reserve units and is not applicable to Air National Guard (ANG).

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Chapter 1

GENERAL INFORMATION

1.1. General. This AFI provides flight examiners and aircrews with procedures and evaluation criteria/tolerances to be used during flight evaluations as specified in AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. Specific areas for evaluation are prescribed to ensure an accurate assessment of the proficiency and capabilities of aircrews. AMC is designated Office of Primary Responsibility (OPR) for this instruction.

1.1.1. Evaluators use this AFI when conducting aircrew evaluations to gain qualification in the MDS. Instructors should use this AFI when preparing aircrews for qualification.

1.2. Applicability. This AFI is applicable to all individuals operating KC-10 aircraft. Copies should be available to all aircrew members.

1.3. Key Words and Definitions.

1.3.1. “Will” and “Shall” indicate a mandatory requirement.

1.3.2. “Should” is normally used to indicate a preferred, but not mandatory, method of accomplishment.

1.3.3. “May” indicates an acceptable or suggested means of accomplishment.

1.3.4. “Note” indicates operating procedures, techniques, etc., which are considered essential to emphasize.

1.4. Deviations and Waivers. Do not deviate from the policies and guidance in this AFI under normal circumstances, except for safety or when necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required. Report deviations or exceptions without waiver through channels to MAJCOM standardization/evaluation function who in turn, notifies lead command for follow-on action, if necessary.

1.4.1. Waiver authority for the contents of this document is lead command, which in turn, delegates MAJCOM/DO as waiver authority according to AFI 11-202V2, and the appropriate MAJCOM supplement.

1.4.2. MAJCOM/DOs forward a copy of approved long-term waivers to this instruction to lead command for follow-on action, if required.

1.5. Supplements and Local Procedures. This AFI is a basic directive. Each user MAJCOM may supplement this AFI according to AFD 11-2, *Aircraft Rules and Procedures*. Limit supplement information to unique requirements only. MAJCOMs may specify unique evaluation items in their appropriate supplement (units use **Chapter 5**). Supplements and local procedures will not be less restrictive than the provisions of this AFI or the appropriate flight manual.

1.5.1. Supplement Coordination Process. Forward MAJCOM/DO-approved supplements, with attached AF Form 673, **Request to Issue Publication**, to lead command (HQ AMC/DO) for review. HQ AMC/DO will provide a recommendation and forward to HQ USAF/XOOT for approval (according to AFD 11-2, *Aircraft Rules and Procedures*). Use the following OPR's address: HQ AMC/

DOV, 402 Scott Dr., Unit 3A1, Scott AFB IL, 62225-5302. When supplements are published, send a final copy to HQ USAF/XOOT and lead command (HQ AMC/DOV).

1.5.2. If necessary, request and include approved long-term waivers to this AFI (including, approval authority, date, and expiration date) in the appropriate MAJCOM supplement.

1.5.3. Local Procedures Coordination. Units send a copy of **Chapter 5** to the appropriate NAF (if applicable) for coordination and approval. If a NAF is not applicable, the unit will send a copy to the parent MAJCOM/DO for coordination and approval. When local procedures are published, notify or send a final copy to lead command, parent MAJCOM, and appropriate NAF, if applicable.

1.6. Requisition and Distribution Procedures . Order this AFI through the servicing publications distribution office (PDO). Unit commanders may provide copies for all aircrew members and associated support personnel.

1.7. Improvement Recommendations. Send comments and suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, through stan/eval channels to HQ AMC/DOV, 402 Scott Drive Unit 3A1, Scott AFB IL, 62225-5302 according to AFI 11-215, *Flight Manual Procedures*, and MAJCOM supplement.

1.8. Evaluations. This instruction establishes standardized instrument, qualification, mission, and instructor evaluation criteria. It also establishes the areas/subareas necessary for the successful completion of evaluations, and which required areas/subareas will be considered critical and/or non-critical.

1.9. Evaluation Requirements. Accomplish evaluations concurrently, whenever practical. Crew Resource Management (CRM) skills will be evaluated on all evaluations. KC-10 aircrew members will complete the following evaluations, at 17-month frequency according to AFI 11-202V2, and the appropriate MAJCOM supplement:

1.9.1. Instrument (INSTM) Evaluation. All KC-10 pilots will successfully complete a periodic instrument evaluation including the requisite instrument refresher course (IRC) and an open-book written instrument examination according to AFMAN 11-210, *Instrument Refresher Course Program*, and an aircrew training device (ATD) /flight evaluation.

1.9.2. Qualification (QUAL) Evaluation. All KC-10 aircrew members will successfully complete a periodic qualification evaluation including the requisite open-book, closed-book, Boldface written examinations, emergency procedures evaluation (EPE), and an ATD/flight evaluation.

1.9.2.1. The KC-10 simulator (SIM) and BoomOperator Trainer (BOT) will be used in conjunction with all qualification, EPE, and, if applicable, the instrument (INSTM) evaluations. Evaluations will only be performed in approved simulators and must be conducted by an Air Force Flight Examiner (not contractors). Evaluations will consist of all areas/subareas that can be realistically accomplished and are ATD-creditable per AFI 11-2KC-10V1, *KC-10 Aircrew Training*.

1.9.3. Mission (MSN) Evaluations. All KC-10 crew members will complete a mission evaluation. Pilots and flight engineers complete all tasks required in the performance of normal operational and training sorties upon successfully completing a QUAL/MSN evaluation. Boom operators will successfully complete a periodic mission evaluation (cargo).

1.9.4. Instructor (INSTR) Evaluations. To initially qualify as an instructor in the KC-10, crew members will successfully complete an initial instructor qualification course and evaluation. Subsequently, aircrew members designated as instructors will be evaluated on their ability to instruct during all periodic evaluations. Crewmembers may use the initial instructor evaluation to satisfy the requirements of the periodic QUAL/MSN evaluation. Refer to the specific aircrew chapter for requirements.

1.9.5. SPOT Evaluations. A SPOT evaluation is an evaluation not intended to satisfy the requirements of a periodic (i.e., INSTM, QUAL, MSN, or INSTR) evaluation. SPOT evaluations have no specific requisites or requirements unless specified in MAJCOM supplements or this AFI. See AFI 11-202V2 for options available to convert a SPOT evaluation to meet requirements of a periodic evaluation.

1.9.6. Emergency Procedures Evaluations (EPE). See AFI 11-202V2 and the following: Evaluate an aircrew member's knowledge of emergency procedures and systems knowledge for all qualification evaluations. The KC-10 SIM and BOT will be used to accomplish the EPE.

1.9.6.1. Units will develop and periodically maintain a list of EPE program requirements (topics, special interest, etc.) in **Chapter 5**. The EPE will include areas commensurate with the examinee's graduated training (e.g. initial, line, instructor, evaluator) or as specified in AFI 11-202V2 and MAJCOM Supplement.

1.9.6.2. Examinees may use publications that are normally available in-flight. The examinee must be able to recite all Boldface items from memory and provide the initial steps of selected emergency procedures that would not allow time for reference.

1.9.6.3. Examinees receiving an overall EPE grade of unqualified will be placed in supervised status until recommended additional training and re-evaluation are completed. Examinees receiving an overall EPE grade of unqualified because of unsatisfactory Boldface procedures will not be permitted to fly in their aircrew position until a successful re-evaluation is accomplished. Accomplish additional training IAW AFI 11-202V2.

1.9.7. Evaluation Prefixes. Use AFI 11-202V2 evaluation prefixes for AF Form 8, **Certificate of Aircrew Qualification**, and AF Form 942, **Record of Evaluation**.

1.9.7.1. Identify unique mission-type evaluation descriptions, (e.g., CARGO-Qualified) on AF Form 8, Examiner's Remarks, A. Mission Description, first entry.

1.9.7.2. Difference Evaluations. The phrase "difference" is used to describe the evaluation of one or more areas to meet qualification requirements. Normally, a difference evaluation will include areas that are different between aircraft models, systems, or operations not previously qualified to operate (e.g., FMS). A difference evaluation does not have expiration date established because the evaluation does not satisfy the requirements for the "full" periodic evaluation. See crewmember's chapters for difference evaluation requirements.

1.9.7.2.1. For administrative purposes, annotate AF Form 8, flight phase as a SPOT evaluation (according to AFI 11-202V2) and paragraph **1.9.5** above.

1.10. Grading Policies.

1.10.1. The overall qualification level awarded an evaluation is based on performance during both the flight and ground phases. This grade should be awarded only after all evaluation requirements have been completed and given due consideration.

1.10.2. To receive a qualified grade on an evaluation, the aircrew member must satisfy the criteria set forth for that evaluation and demonstrate ability to operate the aircraft and/or equipment safely and effectively during all phases of the evaluation.

1.10.3. Use the grading criteria in this instruction to grade areas/subareas accomplished during an evaluation.

1.10.3.1. The flight examiner must grade the areas/subareas listed as “required” in the general and specific evaluation sections of this instruction.

1.10.3.2. The flight examiner may grade any area/subarea accomplished during an evaluation if performance in that area/subarea impacts the specific evaluation accomplished or flight safety.

1.10.4. When in-flight evaluation of a required area is not possible, the area may be verbally evaluated or evaluated in an ATD. Flight examiners will make every effort to evaluate all required areas in-flight before resorting to this provision. See the appropriate chapter for areas prohibited from verbal/ATD evaluation.

1.10.5. Grading criteria tolerances assume smooth air and stable aircraft conditions. Minor momentary deviations are acceptable, provided the pilot applies prompt corrective action and such deviations do not jeopardize flight safety. Consider cumulative deviations when determining the overall grade.

1.10.5.1. For pilots only, if the flight manual recommends a specific airspeed range for performance of a maneuver, the flight examiner will apply the grading criteria to the upper and lower limits of that range.

1.10.5.2. Flight examiners will use sound judgement in the application of the grading criteria in this instruction to determine the final grade.

1.11. Grading System. *NOTE:* This paragraph for reference only and duplicates information in AFI 11-202V2, *Aircrew Standardization/Evaluation Program* to allow the evaluator a single source instruction to conduct an evaluation. When a conflict occurs, use AFI 11-202V2.

1.11.1. Overall Qualification Levels.

1.11.1.1. Qualification Level 1 (Q-1). The aircrew member demonstrated desired performance and knowledge of procedures, equipment, and directives within tolerances specified in this instruction. Qualification Level 1 will be awarded when no discrepancies were noted and may be awarded when discrepancies are noted if:

1.11.1.1.1. The discrepancies resulted in no lower than a “Q-” grade being given in any area(s)/subarea(s).

1.11.1.1.2. In the judgment of the flight examiner, none of the discrepancies preclude awarding of an overall Q-1.

1.11.1.1.3. All discrepancies noted during the evaluation were cleared during the debrief of that evaluation.

1.11.1.2. Qualification Level 2 (Q-2). The aircrew member demonstrated the ability to perform duties safely, but:

1.11.1.2.1. There was one or more area(s)/subarea(s) where additional training was assigned.

1.11.1.2.2. A non-critical area/subarea grade of “U” was awarded.

1.11.1.2.3. In the judgment of the flight examiner, there is justification based on performance in one or more areas/subareas.

1.11.1.3. Qualification Level 3 (Q-3). The aircrew member demonstrated an unacceptable level of safety, performance or knowledge.

1.11.1.3.1. An area grade of “U” awarded in a critical area requires an overall “Q-3” for the evaluation.

1.11.1.3.2. An overall “Q-3” can be awarded if, in the judgment of the flight examiner, there is justification based on performance in one or more areas/subareas.

1.11.1.4. The flight examiner will indicate all appropriate restriction(s) and additional training on the AF Form 8.

1.11.2. Area/Subarea Grades. Areas/subareas will have a two-level (Q/U) or three-level (Q/Q-/U) grading system. The overall area grade will be the lowest of any subarea grade awarded.

1.11.2.1. A “Q” is the desired level of performance. The examinee demonstrated a satisfactory knowledge of all required information, performed aircrew duties within the prescribed tolerances and accomplished the assigned mission.

1.11.2.2. A “Q-” indicates the examinee is qualified to perform the assigned area tasks, but requires debriefing or additional training as determined by the flight examiner. Deviations from established standards must not exceed the prescribed “Q-” tolerances or jeopardize flight safety.

1.11.2.3. Assign a “U” area grade for any breach of flight discipline, performance outside allowable parameters or deviations from prescribed procedures/tolerances that adversely affected mission accomplishment or compromised flight safety. An examinee receiving an area grade of “U” normally requires additional training. When, in the judgment of the flight examiner, additional training will not constructively improve examinee’s performance, it is not required. In this case, the flight examiner must thoroughly debrief the examinee.

1.11.3. Boldface. Grade Boldface either “Q” or “U.”

1.11.4. Critical Areas. Critical areas require adequate accomplishment by the aircrew member in order to successfully achieve the mission objectives. If an aircrew member receives an unqualified grade in any critical area, the overall grade for the evaluation will also be unqualified. Critical areas are identified by “**(Critical)**” in the area title and shading of Q- block on the AF Form 3862, **Flight Evaluation Worksheet** (examples at [Attachment 2](#), [Attachment 3](#), or [Attachment 4](#)).

1.12. Unsatisfactory Performance. *NOTE:* This paragraph for reference only and duplicates information in AFI 11-202V2, allowing the evaluator a single-source instruction for critical phases of the evaluation. When a conflict occurs, use AFI 11-202V2.

1.12.1. Conduct a thorough pre-mission briefing and post-mission debriefing to the examinee and applicable aircrew members on all aspects of the evaluation.

1.12.2. Immediately correct breaches of flying safety or flight discipline. When an examinee jeopardizes safety of flight, the evaluator may assume the duties of that aircrew member. This does not mean the flight examiner must assume the examinee’s position any time unsatisfactory performance is observed.

- 1.12.3. Assign a qualification level of “Q-3” for unsatisfactory performance in any critical area/sub area or if the flight examiner assumes the examinee’s duties.
- 1.12.4. Immediately notify the examinee’s squadron commander/operations officer and flight commander, if available, when less than Q-1 performance is observed.
- 1.12.5. Unsatisfactory performance in a non-critical area/sub area will result in no higher than a qualification level “Q-2.”
- 1.12.6. Flight examiners observing unsatisfactory performance by a crewmember other than the examinee (including one in a different crew position) will comply with the requirements in AFI 11-202V2.

1.13. Conduct of Evaluations.

- 1.13.1. Flight examiners will pre-brief the examinee on the conduct, purpose, requirements of the evaluation, and all applicable evaluation criteria. Flight examiners will then evaluate the examinee in each graded area/subarea.
 - 1.13.1.1. Flight examiners will normally not evaluate personnel they have primarily trained, recommended for upgrade evaluation, or who render their effectiveness reports.
- 1.13.2. Unless otherwise specified, flight examiners may conduct the evaluation in any crew position/seat which will best enable the flight examiner to observe the examinee’s performance.
- 1.13.3. Note discrepancies and deviations from prescribed tolerances and performance criteria during the evaluation. Compare the examinee’s performance with the tolerances provided in the grading criteria and assign an appropriate grade for each area.
 - 1.13.3.1. An evaluation will not be changed to a training mission to avoid documenting substandard performance, nor will a training mission be changed to an evaluation.
 - 1.13.3.2. The judgment of the flight examiner, guidance provided in AFI 11-202V2, and this instruction will be the determining factors in assigning an overall grade. The flight examiner will thoroughly critique all aspects of the flight. During the critique, the flight examiner will review the examinee’s overall rating, specific deviations, area/subarea grades assigned, and any additional training required.
 - 1.13.3.3. In the event of unsatisfactory performance, the flight examiner will determine additional training requirements. Normally, additional training should not be accomplished on the same flight.

EXCEPTION: Additional training on the same flight is allowed when, in the evaluator’s judgment, unique situations presenting valuable training opportunities (e.g., thunderstorm avoidance, crosswind landings) exist. This option requires utmost flight examiner discretion and judicious application. When used, the examinee must be informed of when the additional training begins and ends.
 - 1.13.3.4. When evaluations are less than Q-1 performance, the flight examiner will debrief the examinee and examinee’s commander (supervisor). Notify the squadron commander/operations officer and flight commander/chief, if available.

1.13.4. The SIM/BOT may be used to accomplish additional training and re-checks. Areas for additional training and re-checks should be limited to those areas/subareas that can be realistically accomplished in the SIM/BOT.

1.13.5. Rechecks will normally be administered by a flight examiner other than the one who administered the original evaluation.

1.14. Use of AF Form 3862, Flight Evaluation Worksheet. Units (normally OGV) will overprint AF Form 3862, using the examples at [Attachment 2](#), [Attachment 3](#), or [Attachment 4](#) to use as an evaluation worksheet. Copy each title, area number and text (in the order illustrated), and shading to the appropriate blocks. Units may add special interest items and/or local evaluation requirements. In-flight, use the worksheet to ensure all required areas are evaluated. Record positive and negative trend information and aircrew member's performance. File the worksheet or draft copy of the AF Form 8 in the aircrew member's Flight Evaluation Folder (FEF) immediately after the flight evaluation as a temporary record of the evaluation results. Maintain until the finished AF Form 8 is added to the FEF, then discard.

1.15. Aircrew Testing. See specific testing requirements in AFI 11-202V2 and include the following:

1.15.1. Open-book Exam (Open-Book). The open-book examination should normally be administered before the initial flight evaluation and subsequently with periodic flight evaluations. The open-book examination will consist of 60-100 questions. The examination questions will come from a Secure Question Bank (SQB) created and managed by each OGV. A portion of the open-book examination administered to flight instructors will include instructor (scenario-based) questions. A separate (unique) INSTR open-book examination is not required for periodic evaluations.

1.15.2. Initial Instructor Open-Book (INIT INSTR Open-Book). Administer an initial instructor open-book one time before the initial instructor flight evaluation. The instructor open-book examination is requisite for INIT and RQ INSTR flight evaluations only. The examination will have a minimum of 20 questions from directives including AFMAN 36-2236, *Guidebook for Air Force Instructors*, AFI 11-2KC-10V1, V2, and V3 (including MAJCOM supplements) and other common flight or instructor related sources. Questions should include scenario-driven instructor related questions.

1.15.3. Closed-Book (Closed-Book). The close-book examination should normally be administered before the initial flight evaluation and subsequently with periodic flight evaluations. The closed book exam will consist of a minimum 20 questions derived from the Master Question File (MQF). Complete a Boldface exam in conjunction with the closed book examination.

1.15.4. Instrument Exam. See AFI 11-202V2 requirements.

1.16. Typical KC-10 Evaluation Profile.

1.16.1. Units will ensure that SIM/BOT evaluation profiles include all areas/subareas that are ATD creditable.

1.16.2. As a minimum, flight evaluation profiles will include all areas not ATD creditable. SIM/BOT evaluation profiles will be comprehensive enough to limit verbally evaluating subareas.

Chapter 2

PILOT EVALUATIONS

2.1. General. This chapter standardizes initial, periodic, and re-qualification evaluations, including the requirements for instrument, qualification, mission, and instructor evaluations.

2.2. Instrument Evaluations. KC-10 instrument evaluations may be accomplished in the simulator; however, evaluate circling and PAR approach in-flight, if available, in conjunction with the qualification evaluation.

2.3. Qualification/Mission Evaluations. Dual log the mission evaluation with qualification/re-qualification requirements (e.g. INSTM/QUAL/MSN).

2.3.1. For initial, periodic or re-qualification evaluation, include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUMENT.

2.3.2. Evaluate dual-seat qualified aircraft commanders on at least one instrument approach and landing in both left and right seats.

2.3.3. Evaluate copilots only when they are sitting in the right seat (only one precision approach is required).

2.3.4. Include one non-precision approach, in addition to a GPS approach (if available) for Flight Management System (FMS) qualified pilots.

2.3.5. Simulator Evaluations. Conduct a simulator evaluation in conjunction with all initial, periodic and re-qualification evaluations. Use a contractor-developed scenario or a unit Standardization/Evaluation approved and flight examiner-provided scenario. Unit/flight examiner-provided scenarios must be coordinated with the contractor a minimum of one day before the evaluation to ensure compatibility with ATD software. Only items listed as ATD creditable training events in AFI 11-2KC-10V1 may be evaluated. Evaluate all areas that can be evaluated realistically in simulation. Use the following:

2.3.5.1. Evaluate pilots in a random selection of abnormal and emergency procedures and Bold-face.

2.3.5.2. Evaluate aircraft commanders (AC) and above on 2-engine approach and missed approach.

2.3.5.3. Evaluate all pilots in abort procedures and Engine Failure Takeoff Continued (EFTOC).

2.3.5.4. Evaluate copilots only when they are sitting in the right seat.

2.3.6. Tanker Air Refueling (A/R). Rendezvous is required. Conduct a portion of the evaluation with the autopilot off. Evaluate ACs in left seat. Evaluate instructors in either seat. Initial qualification pilots are required to perform a Tanker Rendezvous and A/R in the simulator as well as the flight evaluation. For Upgrade, Periodic and Requalification evaluations, accomplishment of the event in the simulator or inflight will satisfy evaluation requirements.

NOTE:

Evaluate copilots only when they are sitting in the right seat.

2.3.7. Receiver A/R. Rendezvous or closure from a minimum of 1 NM is required. Initial and re-qualification pilots will demonstrate 15 minutes of contact time within a 30-minute period of arriving in the pre-contact position. Evaluate ACs in left seat. Evaluate instructors in either seat. During periodic evaluations, 10 minutes of contact time within a 20-minute period of arriving in the pre-contact position is required. Conduct a portion of the evaluation with tanker autopilot off.

NOTE:

Evaluate copilots only on copilot duties, and only when they are sitting in the right seat.

2.3.8. Senior Staff Evaluations. All Senior Staff Officer initial, periodic and re-qualification evaluations include (as a minimum) the following required areas:

2.3.8.1. All areas under GENERAL.

2.3.8.2. All areas under QUALIFICATION/MISSION, except Subarea 16D, Right Seat Landing, area 19, Engine Out Operations, area 22, Other Emergency Procedures, area 24, Tanker A/R, and area 25, Receiver A/R.

2.3.8.3. All areas under "INSTRUMENT."

2.3.8.4. Evaluate Senior Staff Officers in a random selection of Boldface, abort procedures, and Engine Failure Take off Continued (EFTOC).

NOTE:

Since Senior Staff Officers do not maintain a "qualification" in these areas, they may not occupy a pilot's seat during Tanker A/R or Receiver A/R with passengers aboard. Annotate the appropriate restriction on AF Form 8, Examiners Remarks.

2.4. Mission Evaluations. See paragraph [2.3](#).

2.5. Instructor Evaluation (Initial, Periodic, or Requalification). Flight examiners will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective, corrective action. As a minimum, demonstrate and instruct a variety of instrument/visual approaches. Conduct initial or re-qualification instructor evaluations with a qualified pilot occupying the other seat. The examinee will normally occupy the right seat.

2.5.1. Initial: Include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUCTOR.

2.5.2. Evaluate these maneuvers in the simulator only: Low altitude stall recovery, slow speed tanker, A/R/stick shaker, or an abnormal configuration approach demonstration. These items may be evaluated verbally.

NOTES:

1. Pilots, who desire to realign their qualification/mission evaluation during the initial instructor evaluation must also demonstrate all required areas/subareas in "INSTRUMENT" and complete all required requisite written examinations.
2. During initial/re-qualification evaluations, 10-minutes of contact time within a 20-minute period of arriving in the pre-contact position is required. Conduct a portion of the evaluation with tanker autopilot off. Limited inadvertent disconnects are permissible during a boom limits demonstration and therefore will not be counted against the examinee.
- 2.5.3. Periodic instructor evaluations will be administered in conjunction with required instrument and qualification evaluations and require all areas in GENERAL, QUALIFICATION/MISSION, INSTRUMENT, and INSTRUCTOR.

NOTE:

During Receiver A/R, limited inadvertent disconnects are permissible during a boom limits demonstration and should not detract from the examinees' performance.

2.6. Emergency Procedures Evaluation (EPE). Evaluate a pilot's knowledge of emergency procedures and systems knowledge in the simulator portion of all INSTM/QUAL/MSN evaluations (see paragraph [1.9.6](#)).

2.7. Additional Information.

- 2.7.1. Pilots may conduct evaluations when scheduled as primary aircrew members.
- 2.7.2. Instructor and flight examiner pilots receiving periodic evaluations may be evaluated in either seat, but are not required to be evaluated in both.

2.8. Pilot Grading Criteria.**2.9. GENERAL.****Area 1, Directives and Publications.**

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply both to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Unsure of some directives but could locate information in appropriate publications. Publications were current but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

Area 2, Mission Preparation/Planning/Performance.

- Q Checked all factors applicable to flight such as: weather, NOTAMS, alternate airfields, airfield suitability, fuel requirements, charts, etc. Displayed a high level of knowledge of performance capabilities and operating data. Evaluated data intended for use during takeoff/landing after final adjustments and corrections were made:
V1, Vr, V2, flap retract, slat retract, Vmm: +/-3 KIAS
N1 setting: +/-0.3%
Critical Field Length (CFL): +/-500 feet and suitable for takeoff/landing
Landing speeds: +/-3 KIAS
- Q- Made minor errors or omissions in checking all factors that could have detracted from mission effectiveness. Marginal knowledge of performance capabilities and/or operating data. Performance calculations exceeded Q limits but did not exceed:
V1, Vr, V2, flap retract, slat retract, Vmm: +/-5 KIAS
N1 setting: +/-0.6 %
Critical Field Length (CFL): +/-800 feet and suitable for takeoff/landing
Landing speeds: +/-5 KIAS
- U Made major errors or omissions which would have prevented a safe or effective mission. Unsatisfactory knowledge of performance capabilities and/or operating data. Performance calculations exceeded Q- limits.

Area 3, Use of Checklists.

- Q Consistently used and called for the correct checklist and gave the correct response at the appropriate time throughout the mission.
- Q- Checklist responses were untimely and/or crewmember required continual prompting for correct response.
- U Used or called for incorrect checklist or consistently omitted checklist items. Unable to identify the correct checklist to use for a given situation. Did not complete checklist prior to event.

Area 4, Safety Consciousness (Critical).

- Q Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Attempted to operate aircraft in a dangerous manner.

Area 5, Judgment/Compliance (Critical).

- Q Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.
- U Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

Area 6, Crew Coordination/Crew Resource Management (CRM). See AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and use AF Form 4031, **Skills Training Evaluation Form**, as a reference.

- Q Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated operational knowledge of other crewmembers' duties and responsibilities. Effectively applied CRM skills throughout the mission.
- Q- Crew coordination adequate to accomplish mission. Demonstrated limited knowledge of other crewmembers' duties and responsibilities.
- U Poor crew coordination or unsatisfactory knowledge of other crewmembers' duties and responsibilities negatively affected mission accomplishment or safety of flight.

Area 7, Communication Procedures.

- Q Complete knowledge of and compliance with correct communications procedures. Transmissions concise with proper terminology. Complied with and acknowledged all required instructions. Familiar with and correctly operated, HAVE QUICK, IFF, and secure voice equipment.
- Q- Occasional deviations from procedures that required re-transmissions or resetting codes. Slow in initiating or missed several required radio calls. Transmissions contained extraneous matter, were not in proper sequence, or used non-standard terminology. Displayed limited knowledge of HAVE QUICK, IFF, and secure voice equipment.
- U Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous radio calls. Displayed inadequate knowledge of or inability to operate HAVE QUICK, IFF, and secure voice equipment.

Area 8, Life Support Systems/Egress.

- Q Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, slide rafts, and escape ropes.
- Q- Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.
- U Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices or egress the aircraft.

Area 9, Knowledge/Completion of Forms.

- Q All required forms and/or flight plans were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (intelligence, maintenance, etc.).
- Q- Minor errors on forms and/or flight plans did not affect conduct of the mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.
- U Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

Area 10, Airmanship/Situational Awareness.

- Q Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Conducted the flight with a sense of understanding and comprehension.

- Q- Untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U Decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

2.10. QUALIFICATION/MISSION. Use the criteria in **Table 2.1.** as general tolerances for airspeed, altitude, and heading/course.

Table 2.1. General Pilot Tolerances.

<i>NOTE 1:</i> Use the following criteria as general tolerances for airspeed, altitude, and heading/course:	
Q	<i>Airspeed: +10/-5 KIAS Altitude: +/-100 feet Heading/Course: +/-5 degrees</i>
Q-	<i>Exceeds Q criteria but does not exceed: Airspeed: +15/-5 Kts Altitude: +/-200 feet Heading/Course: +/-10 degrees</i>
U	<i>Exceeds Q- criteria.</i>
<i>NOTE 2:</i> Airspeed tolerances apply when a specific airspeed has been assigned by Air Traffic Control or prescribed in the flight manual. Airspeed “minus” tolerances are based on minimum maneuvering speed for aircraft configuration.	
<i>NOTE 3:</i> Add 50 feet (when practical) and 2 degrees to “all engines operating” criteria for “operations with an engine out” criteria.	

Area 11, Ground Operations/Taxi.

- Q Established and adhered to station, start engine, taxi, and take-off time to ensure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight. Completed all systems pre-flight/post-flight inspections IAW flight manual. Conducted taxi operations according to flight manuals, AFI 11-218, *Aircraft Operations and Movement on the Ground*, and local procedures.
- Q- Same as above except for minor procedural deviations that did not detract from mission effectiveness.
- U Crew errors directly contributed to a late takeoff that degraded the mission. Failed to accurately determine readiness for flight. Failed to preflight/post-flight a critical component or could not conduct a satisfactory preflight/post-flight inspection.

Area 12, Takeoff.

- Q Maintained smooth, positive aircraft control throughout the takeoff. Performed the takeoff IAW flight manual and as published/directed.
- Q- Minor deviations from published procedures without affecting safety of flight. Control was rough or erratic. Hesitant in application of procedures/corrections.
- U Takeoff was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight manual procedures.

Area 13, Radar Operations/Weather Avoidance/Windshear.

- Q Effectively demonstrated procedures for operating weather radar. Updated weather radar/analysis throughout the mission. Highly knowledgeable of windshear detection and avoidance equipment. Used all available sources to determine if and/or to what degree severe weather conditions exist. Complied with all weather separation and wind-shear avoidance procedures.
- Q- Minor deviations observed when operating weather radar. Did not update radar/weather analysis during worsening weather conditions. Limited knowledge of windshear detection and avoidance equipment.
- U Unable to demonstrate proper use of weather radar. Failed to update radar/weather analysis during the mission. Displayed unsatisfactory knowledge of windshear detection and avoidance equipment. Failed to comply with weather separation or windshear avoidance directives that could have jeopardized safety or mission success.

Area 14, Fuel Conservation.

- Q Possessed a high level of knowledge of all applicable aircraft publications and directives and understood how to apply both to enhance fuel conservation and fuel planning. Successfully applied fuel conservation procedures in all areas of the mission.
- Q- Possessed some knowledge of applicable aircraft publications and directives and understood how to apply both to enhance fuel conservation and fuel planning. Successfully applied some fuel conservation procedures, but failed to apply fuel conservation procedures in all areas of the mission.
- U Unaware of fuel conservation procedures. Unable to fuel plan. Failed to apply any fuel conservation procedures in the mission.

Area 15, VFR Pattern.

- Q Performed traffic pattern and turn to final/final approach IAW published procedures. Aircraft control was smooth and positive. Constantly cleared area of intended flight.
- Q- Performed traffic pattern and turn to final/final approach with minor deviations to procedures as published/directed. Aircraft control was safe but not consistently smooth and positive. Over/under shot final approach, but was able to intercept normal glide path. Adequately cleared area of intended flight.
- U Did not perform traffic pattern and/or turn to final/final approach IAW published procedures. Displayed erratic aircraft control. Did not clear area of intended flight.

Area 16, Landings. (Includes subareas Full Flap, Partial Flap, Touch and Go, and Right Seat).

NOTES:

1. Specific items to evaluate include threshold altitude/airspeed, runway alignment, flare, touchdown, and landing in crab.
 2. Airspeed tolerances apply to computed threshold speed.
 3. Add 5 KIAS to all engines operating criteria for operations with an engine out criteria.
- Q** Performed landings as published/directed IAW flight manual and met the following criteria:
Airspeed: +10/-0 KIAS
Touchdown zone: 1000-3000 feet
Centerline: +/-15 feet left or right
TCH: +25/-0 feet
- Q-** Performed landings with minor deviation to procedures as published/directed. Landed in a slight crab. Exceeded Q criteria but not the following:
Airspeed: +10/-5 KIAS
Touchdown zone: 500-3000 feet
Centerline: +/-25 feet left or right
TCH: +50/-5 feet
- U** Landing not performed as published/directed. Exceeded Q- criteria.

Area 17, Landing Roll/Braking/Reverse Thrust.

- Q** Performed as published/directed IAW flight manual. Braking action and reverse thrust actuation prompt and smooth.
- Q-** Performed landings with minor deviation to procedures as published/directed. Braking action and reverse thrust actuation unnecessarily delayed or not smooth.
- U** Landing not performed as published/directed. Braking or reverse thrust actuated prior to touchdown. Exceeded Q- criteria

Area 18, All Engine Go-Around (GA). Required in-flight, only if a GA or engine-out GA was not evaluated in the simulator (not required if area 20 is accomplished).

- Q** Initiated and performed GA promptly and according to flight manual and directives. Applied smooth control inputs. Acquired and maintained a positive climb.
- Q-** Slow or hesitant to initiate GA. Slightly over-controlled the aircraft. Minor deviations did not affect mission accomplishment or compromise safety.
- U** Did not initiate GA when appropriate or directed. Major deviations or misapplication of procedures could have led to an unsafe condition.

Area 19, Engine Out Operations. Use approach criteria for the type of approach being flown and the following:

- Q** Proper control inputs were used to correct asymmetric condition. Aircraft was properly trimmed. Proper consideration was given to maneuvering the aircraft with regard to the "dead" engine. Maintained criteria in [Table 2.1](#). (Note 3).

- Q- Minor deviations in aircraft control allowed the aircraft to occasionally fly uncoordinated flight. Momentarily deviated from criteria in **Table 2.1.** (Note 3).
- U Aircraft was not properly trimmed. Aircraft control was erratic and consistently resulted in uncoordinated flight. Maneuvering the aircraft with regard to the engine out condition was potentially unsafe. Exceeded Q-criteria in **Table 2.1.** (Note 3).

Area 20, Engine Out GA/Engine Fail Takeoff Continued.

- Q Performed all required procedures IAW the flight manual and directives. Applied smooth, positive, and coordinated control inputs. Rudder and aileron inputs were in correct direction.
- Q- Procedural errors were made which did not affect safety. Aircraft control was not consistently smooth and positive. Rudder and aileron inputs were in correct direction but some over/under control.
- U Rudder and/or aileron inputs were incorrect.

Area 21, Boldface Emergency Procedures (Critical).

- Q Correct, immediate responses. Maintained aircraft control. Coordinated proper crew actions.
- U Incorrect sequence, unsatisfactory response, or unsatisfactory performance of corrective actions.

Area 22, Other Observed Emergency Procedures.

- Q Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available aircrew aids and checklists.
- Q- Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use and/or experienced delays, omissions, or deviations in use of checklist and/or available aids.
- U Attempted to exceed limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklists or available aids effectively.

Area 23, Systems Operations/ Knowledge/Limitations.

- Q Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems.
- Q- Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedure and was unaware of differences.
- U Unsatisfactory systems knowledge. Unable to demonstrate/explain the procedures for aircraft system operations.

Area 24, Tanker A/R. Includes subareas' rendezvous, platform control, breakaway, and overrun procedures.

- Q Aircraft control was smooth and positive. Performed all checklists and complied with procedures outline in the flight manual and other governing directives. Met the following criteria:
Airspeed: +10/-5 KIAS
Altitude: +/-200 feet
Heading/Course: +/-5 degrees

- Q-** Aircraft control was not always smooth and positive, but was adequate. Accomplished procedures required by the flight manual, checklists, and other governing directives with deviation/omissions which did not affect safety of flight. Exceeded Q criteria but does not exceed:
Airspeed: +15/-5
Altitude: +/-300 feet
Heading/Course: +/-10 degrees

U Had deviations/omissions that affected flight safety and/or the successful completion of A/R. Exceeded Q- limits.

NOTE: When refueling with autopilot off, add 100 feet, 5 KIAS, and 5 degrees to all tolerances.

Area 25, Receiver A/R. Includes Subareas rendezvous, closure, A/R position/control, breakaway, over-run procedures, and right seat A/R limit demonstration.

- Q** Established and maintained proper refueling position. Aircraft control was positive and smooth. Demonstrated a complete knowledge of rendezvous and closure procedures. Performed all procedures in accordance with applicable checklists and other governing directives. Met the following criteria:

Airspeed: +10/-5 KIAS

Altitude: +/-200 feet

Inadvertent Disconnects: 2 or less (N/A IP Limit Demo)

- Q-** Slow to recognize and apply needed corrections to establish and maintain proper refueling position. Aircraft control was not always positive and smooth, but was adequate. Accomplished rendezvous and closure with deviations and/or omissions which did not affect safety of flight or the successful completion of A/R. Performed all procedures in accordance with applicable checklists and other governing directives with only minor omissions or deviations. Exceeded Q criteria but did not exceed:

Airspeed: +15/-5 KIAS

Altitude: +/-300 feet

Inadvertent Disconnects: 3 or less (N/A IP Limit Demo)

- U** Erratic or dangerous in the pre-contact/refueling position. Had deviations/omissions that affected safety of flight and/or successful completion of A/R. Did not perform all procedures in accordance with applicable checklists and other governing directives or omitted major items. Exceeded Q- limits.

2.11. INSTRUMENT. Use the following criteria as general tolerances for airspeed, level-off altitude, and heading/course with all engines operating:

Q *Airspeed: +10/-5 KIAS Level-off Altitude: +/-100 feet Heading/Course: +/-5 degrees*

Q- *Exceeds Q criteria but does not exceed: Airspeed: +15/-5 Level-off Altitude: +/-200 feet Heading/Course: +/-10 degrees*

U Exceeds Q- criteria.

NOTES:

1. Airspeed tolerances apply when a specific airspeed has been assigned by Air Traffic Control or prescribed in the flight manual. Airspeed "minus" tolerances are based on minimum maneuvering speed for aircraft configuration.
2. Add 5 KIAS, 50 feet (when practical), and 2 degrees to all engines operating criteria for operations with an engine out criteria.

Area 26, Instrument Departure/SID.

- Q Complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly. Demonstrated smooth, positive control.
- Q- Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.
- U Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

Area 27, En Route Navigation/FMS.

- Q Satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace
.Fix-to-Fix: +/-3 NM
TACAN/VOR-DME Arc: +/-2 NM
- Q- Minor errors in procedures/use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course. Exceeded Q criteria but not:
Fix-to-Fix: +/-5 NM
TACAN/VOR-DME Arc: +/-4 NM
- 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 Q- criteria.

Area 28, Holding.

- Q Performed entry and holding IAW published procedures and directives.
Timing: +/-15 seconds
DME: +/-2 DME
EAC: +/- 2 minutes (if assigned)
- Q- Performed entry and holding procedures with minor deviations. Exceeded Q criteria but within instrument tolerances).
Timing: +/-20 seconds
DME: +/-3 DME
- U Holding was not IAW flight manual, directives, or published procedures. Exceeded Q- criteria.

Area 29, Use of NAVAIDs.

- Q Ensured NAVAIDs were properly tuned, identified, and monitored.
- Q- Some deviations in tuning, identifying, and monitoring NAVAIDs.
- U Did not ensure NAVAIDs were tuned, identified, and monitored.

Area 30, Descent/Arrival.

- Q Performed descent as directed. Complied with all flight manual, controlled-issued, or STAR restrictions in a proficient manner. Accomplished all required checks.

- Q- Performed descent as directed with minor deviations that did not compromise mission safety. Slow to accomplish required checks.
- U Performed descent with major deviations. Did not accomplish required checks. Erratic corrections. Exceeded flight manual limitations.

Area 31, Precision Approaches. Includes subareas PAR and ILS. Use the following criteria as general tolerances for airspeed, altitude, heading, glide slope, and azimuth:

- Q *Airspeed: +10/-5 KIAS*
Altitude: Initiated missed approach at decision height +50/-0 feet
Heading: +/-5 degrees of controller's instructions (PAR)
Glide Slope: Within one dot (ILS)
Azimuth: Within one dot (ILS)
- Q- *Exceeds Q criteria but does not exceed:*
Airspeed: +15/-5
Altitude: Initiated missed approach at decision height +100/-0 feet
Heading: +/-10 degrees of controller's instructions (PAR)
Glide Slope: Within one dot low, two dots high (ILS)
Azimuth: Within two dots (ILS)
- U Exceeded Q- criteria.

NOTES:

1. Airspeed tolerances are based on computed approach speed.
2. Add 5 KIAS, 50 feet (when practical), and 2 degrees to all engine operating criteria for operations with an engine out criteria.

Subarea 31A, PAR. If Available, Else Verbally Evaluate.

- Q Approach was IAW published procedures. Smooth and timely response to controller's instructions. Established initial glide path and maintained with only minor deviations. Complied with decision height. Position would have permitted a safe landing. Elevation did not consistently exceed slightly above or slightly below glide path.
- Q- Performed approach with minor deviations. Slow to respond to controller's instructions and make corrections. Improper glide path control. Complied with decision height. Position would have permitted a safe landing. Elevation did not exceed well above or well below glide path.
- U Approach not IAW flight manual, directives, or published procedures. Erratic corrections. Did not respond to controller's instructions. Did not comply with decision height and/or position would not have permitted a safe landing. Erratic glide path control. Exceeded Q- criteria.

Subarea 31B, ILS.

- Q Approach was IAW published procedures. Smooth and timely corrections to azimuth and glide slope. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.
- Q- Performed approach with minor deviations. Slow to make corrections. Slow to comply with decision height. Position would have permitted a safe landing. Improper glide path control.

- U Approach not IAW flight manual, directives, or published procedures. Erratic corrections. Did not comply with decision height and/or position at decision height would not have permitted a safe landing. Exceeded Q- criteria.

Area 32, Non Precision Approaches. Includes subareas NDB, Localizer/VOR, ASR, TACAN, GPS. Use the following description and criteria as general tolerances for airspeed, altitude at MDA, heading, course, timing, and distance with all engines operating.

- Q Approach was IAW published procedures. Used appropriate descent rate to arrive at MDA at or before VDP. Position would have permitted a safe landing. Smooth and timely response to controller's instructions (ASR).
Airspeed: +10/-5 KIAS
MDA: +100/-0 feet
Course: +/-5 degrees at MAP (NDB, VOR, TACAN), less than one dot deflection (LOC, GPS)
Timing: Computed/adjusted timing to determine MAP within 20 seconds (when required).
Distance: Determined MAP within +/-0.5 Miles
- 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 respond to controller's instructions and make corrections (ASR). Exceeded Q criteria but does not exceed:
Airspeed: +15/-5
MDA: +150/-50 feet
Course: +/-10 degrees at MAP (NDB, VOR, TACAN), less than one dot deflection but less than two dot deflection (LOC, GPS)
Timing: Computed/adjusted timing to determine MAP within 30 seconds (when required).
Distance: Determined MAP within +/-0.5 Miles
- U Approach not IAW published procedures. Maintained steady-state flight below the MDA, even though the -50 foot limit was not exceeded. Position would not have permitted a safe landing. Failed to compute or adjust timing to determine MAP (when required). Exceeded Q- criteria.

NOTES:

1. Airspeed tolerances are based on computed approach speed.
2. Add 5 KIAS, 50 feet (when practical), and 2 degrees to all engines operating criteria for operations with an engine out criteria.

Area 33, Circling Approach.

- Q Properly identified aircraft category for the approach and remained within the lateral limits for that category. Complied with controller's instructions. Attained runway alignment without excessive bank angles. Did not descend from the MDA until in a position to place the aircraft on a normal glide path or execute a normal landing.
- Q- Slow to identify aircraft category for the approach and remained within the lateral limits for that category. Slow to comply with controller's instructions. Attained runway alignment but occasionally required excessive bank angles or maneuvering.
- U Did not properly identify aircraft category or exceeded the lateral limits of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Descended from the MDA before the aircraft was in a position for a normal glide path or landing. Exceeded Q- criteria.

Area 34, Missed Approach.

- Q Executed missed approach IAW published procedures. Complied with controller's instructions. Applied smooth control inputs.
- Q- Executed missed approach with minor deviations to published procedures. Slow to comply with controller's instructions. Slightly over controlled the aircraft.
- U Did not execute missed approach IAW flight manual, directives, or published procedures. Did not comply with controller's instructions. Deviation or misapplications of procedures could have led to an unsafe condition.

2.12. INSTRUCTOR.

Area 35, Instructor Ability (Critical).

- Q Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe maneuvers/situations.
- U Unable to effectively communicate or provide timely feedback to the student. Gave instruction that was unsafe or contradicted published directives. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify an unsafe maneuvers/situations in a timely manner. Made no attempt to instruct.

Subarea 35A, Demonstration of Maneuvers (Critical).

- Q Effectively demonstrated correct procedures systems operation, or flight maneuver. Thorough knowledge of applicable aircraft systems, procedures, publications, and directives.
- U Ineffective or incorrect demonstration of procedures, systems operation, or flight maneuvers. Insufficient depth of knowledge about applicable aircraft systems, procedures, and/or proper source material.

Subarea 35B, Student Briefing/Critique (Critical).

- Q Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. During the critique, demonstrated an effective ability to reconstruct the flight, offer mission analysis, and provide guidance, where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U Briefings were marginal or non-existent. Did not review student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

2.13. MISCELLANEOUS (If Observed).

Area 36, Formation. Includes subareas: Lead, Departure, Join-up, En route, Breakup, and Position Changes.

- Q Established and maintained proper position. Aircraft control was positive and smooth. Demonstrated a complete knowledge of procedures. Performed all procedures in accordance with applicable checklists and other governing directives. Met the following criteria:
Altitude: ±200 feet
Position: ±0.3 NM

- Q- Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but was adequate. Performed all procedures in accordance with applicable checklists and other governing directives with only minor omissions or deviations. Exceeded Q criteria but did not exceed:
Altitude: ± 300 feet
Position: ± 0.5 NM
- U Erratic or dangerous. Had deviations/omissions that affected safety of flight. Did not perform all procedures in accordance with applicable checklists and other governing directives or omitted major items. Exceeded Q- limits.

Area 37, Tactical Maneuvers (TAA/D), if Observed

- Q Performed maneuver IAW published procedures. Aircraft control was smooth and positive. Constantly cleared area of intended flight.
- Q- Performed maneuver with minor deviations to published procedures. Aircraft control was safe but not consistently smooth and positive. Adequately cleared area of intended flight.
- U Did not perform maneuver according to published procedures. Displayed erratic aircraft control. Did not clear area of intended flight.

2.14. UNIT. Units will include MAJCOM-specific and local evaluation areas in [Chapter 5](#). Include the evaluation areas on AF Form 3862 (see paragraph [1.14](#)).

Chapter 3

FLIGHT ENGINEER EVALUATIONS

3.1. General. This chapter standardizes initial, periodic, and requalification evaluations, including the requirements for qualification, mission, and instructor evaluations.

3.2. Qualification/Mission Evaluations. Dual log the mission evaluation with qualification/re-qualification requirements (e.g. QUAL/MSN). For initial, periodic or re-qualification evaluation, include all areas under GENERAL and QUALIFICATION/MISSION.

NOTE:

Evaluate Tanker and Receiver A/R in-flight for all qualification evaluations.

3.2.1. Simulator Evaluations. Conduct a simulator evaluation in conjunction with all initial, periodic and re-qualification evaluations. Use a contractor-developed scenario or a unit Stan/Eval approved and flight examiner-provided scenario. Unit/flight examiner-provided scenarios must be coordinated with the contractor a minimum of one day before the evaluation to ensure compatibility with ATD software. Only items listed as ATD creditable training events in AFI 11-2KC-10V1 may be evaluated. Evaluate all areas that can be evaluated realistically. Use the following:

- 3.2.1.1. Evaluate all flight engineers in a random selection of abnormal and emergency procedures and Boldface.
- 3.2.1.2. Evaluate all flight engineers in abort procedures.
- 3.2.1.3. Evaluate all flight engineers in Tanker and Receiver A/R.

3.3. Mission Evaluations. See paragraph 3.2.

3.4. Instructor Evaluations (Initial, Periodic, and Requalification). Flight examiners will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective, corrective action. For all instructor evaluations include all areas in GENERAL, QUALIFICATION/MISSION, and INSTRUCTOR.

NOTES:

- 1. Flight Engineers who may desire to realign the qualification evaluation during the initial instructor evaluation must "demonstrate" all items under QUALIFICATION/MISSION and complete all required requisite written examinations.
- 2. In addition, as a minimum, a 4-hour simulator period is required. During the 4-hour simulator period, 2 hours will be for primary duties. To ensure basic and instructor duties are observed, the flight evaluations must be completed on two separate sorties.

3.5. Emergency Procedures Evaluations (EPE). Evaluate an aircrew member's knowledge of emergency procedures and systems knowledge during the simulator portion of all qualification evaluations.

3.6. Additional Information.

3.6.1. Flight engineer evaluators will not conduct evaluations when scheduled as primary aircrew members.

3.7. Flight Engineer Grading Criteria.

3.8. GENERAL.

Area 1, Directives and Publications.

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply both to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Unsure of some directives but could locate information in appropriate publications. Publications were current but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

Area 2, Mission Preparation/Planning

- Q** Completed all applicable forms. Checked all factors concerning take-off and landing data. Attended all required briefings. Complied with all directives prior to flight. Calculated mission fuel deviation equal to or less than 5000 lbs.
- Q-** Made minor deviations completing forms. Minor omissions checking factors concerning take-off and landing data which did not detract from safety or mission effectiveness. Did not fully comply with directives, but did not detract from safety or mission effectiveness. Calculated required mission fuel more than 5000 lbs, but less than 7000 lbs.
- U** Major omissions completing applicable forms. Failed to check major factors affecting take-off and landing data. Did not comply with directives that would effect mission effectiveness. Calculated required mission fuel exceeded Q- tolerances.

Area 3, Use of Checklists.

- Q** Consistently ensured all appropriate checklists were used and completed in a timely manner without omission.
- Q-** Completed in an untimely manner or with minor omissions which did not detract from safety or mission effectiveness.
- U** Used incorrect checklist or omitted checklist items which detracted from safety or mission effectiveness. Did not complete checklist prior to event.

Area 4, Safety Consciousness (Critical).

- Q** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U** Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated aircraft in a dangerous manner.

Area 5, Judgment/Compliance (Critical).

- Q Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.
- U Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

Area 6, Crew Coordination/Crew Resource Management (CRM). Use AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and AF Form 4031, **Skills Training Evaluation Form**, as a reference.

- Q Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated operational knowledge of other crewmembers' duties and responsibilities. Effectively applied CRM skills throughout the mission.
- Q- Crew coordination adequate to accomplish mission. Demonstrated limited knowledge of other crewmembers' duties and responsibilities.
- U Poor crew coordination or unsatisfactory knowledge of other crewmembers' duties and responsibilities negatively affected mission accomplishment or safety of flight.

Area 7, Communication Procedures.

- Q Demonstrated a thorough knowledge of communication procedures. Accomplished required calls and acknowledgments with standard terminology. Consistently backed up pilots for all ATC calls. Demonstrated satisfactory use of UHF, VHF, HF, and L-Band SATCOM radios.
- Q- Occasional deviation or omissions from required procedures, calls or acknowledgments. Occasional backup for ATC calls. Limited knowledge of communication equipment.
- U Incorrect procedures or poor performance caused confusion. Did not back up pilots for ATC calls. Displayed poor operational knowledge of communication equipment.

Area 8, Life Support Systems/Egress.

- Q Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, slide/life rafts, and escape ropes.
- Q- Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.
- U Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices.

Area 9, Knowledge/Completion of Forms.

- Q All required forms and/or flight plans were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (Intelligence, Maintenance, etc.).
- Q- Minor errors on forms and/or flight plans did not affect conduct of the mission. Incorrect or incomplete reporting of information due to minor errors, omissions, and/or deviations.

- U Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

Area 10, Airmanship/Situational Awareness.

- Q Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Conducted the flight with a sense of understanding and comprehension.
- Q- Untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U Decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

3.9. QUALIFICATION/MISSION.

Area 11, Preflight.

- Q Timely completion of all pre-flight checks and procedures without omissions. Proper coordination with maintenance and crew when required. Ensured readiness of aircraft for flight.
- Q- Same as above except for minor omissions or deviations which did not detract from safety or directly contribute to a late take-off
- U Failed to pre-flight a critical component or system. Errors, omissions or deviations directly contributed to a late take-off or detracted from safety or mission effectiveness.

Area 12, Ground Operations.

- Q Timely completion of all checklists and procedures from Cockpit Preparation through before take-off and after landing through leaving aircraft without omissions.
- Q- Same as above except for minor procedural deviations that did not detract from mission effectiveness.
- U Errors directly contributed to a late takeoff that degraded the mission. Failed to complete checklists and procedures in a timely manner. Omitted major checklist items which detracted from safety.

Area 13, Performance.

- Q Deviations less than Q- tolerances. Demonstrated a high level of knowledge of performance procedures.
- Q- *Take-Off Gross Weight (TOGW): > 3000 lbs, but < 5000 lbs.*
Computed MTOGW: > 5000, but < 7000.
Take-Off NI Setting: > 0.5%, but < 1.0%.
Assumed Temperature: > 4 degrees, but < 5 Degrees.
CG: > 1.0%, but < 2%.
Flap Setting: > 1 degree, but < 2 degrees.
Take-Off Speeds: > 4KTS, but < 6KTS.
Landing Speeds: >3KTS, but < 4KTS.
Landing Distances: > 400FT, but < 600FT.
- U Deviations outside the tolerances above. Demonstrated unsatisfactory knowledge.

Area 14, Takeoff and Departure Monitor.

- Q Monitored engine instruments and INS winds. Applied smooth take-off power to within $\pm 2.0\%$ of TRC or manual N1 setting. Monitored aircraft departure, able to locate position on appropriate SID. Monitored all appropriate radios. Performed all other duties IAW the flight manual.
- Q- Same as above except take-off N1 exceeded 2.0%, but $< 3.0\%$. Had difficulty determining position using instruments and the SID.
- U Did not monitor INS winds. Take-Off N1 exceeded $\pm 3.0\%$. Unable to determine aircraft position on appropriate SID. Did not monitor appropriate radios.

Area 15, In-flight Duties and Responsibilities.

- Q Timely completion of all checklists, from after take-off to before landing without omission. Computed required performance data for cruise and flight maneuvers (when required). Monitored systems indicators. Informed pilot of malfunctions/abnormalities. Monitored and adjusted engine throttles when required. Maintained aircraft CG within limits. Monitored, recorded and informed the pilot of fuel burn and fuel remaining. Monitored appropriate radios and backed up pilots as required. Timely back up of altitudes and airspeeds. Accurately completed all required in-flight documentation.
- Q- Same as above, except for minor procedural deviations. Occasionally recorded fuel burn. Occasional back up for radio calls, altitudes and airspeeds. Minor documentation errors.
- U Errors directly degraded mission effectiveness or caused delays. Failed to complete checklists and procedures in a timely manner. Omitted major checklist items. Failed to monitor or detect system malfunction/abnormal indication. Did not monitor and record fuel burn. Did not complete required in-flight documentation. Did not back up pilots for radio calls or altitudes/airspeeds.

Area 16, General Navigation and INS/FMS Operation.

- Q Able to determine aircraft position using appropriate instruments, charts, flight plan, and/or INS/FMS as required. Able to extract coordinates accurately. Demonstrated a satisfactory knowledge of remote ranging along the flight plan, remote loading, and in-flight fuel planning, etc.
- Q- Same as above except minor procedural errors. Untimely completion of procedures, but did not detract from mission effectiveness. Could not complete INS procedures without reference to the flight manual.
- U Unable to extract coordinates and/ or determine aircraft position. Demonstrated a lack of knowledge of general navigation procedures/INS operation and did not refer to appropriate flight manual procedures.

Area 17, Fuel Conservation.

- Q Possessed a high level of knowledge of all applicable aircraft publications and other governing directives and understood how to apply both to enhance fuel conservation. Maintained the most fuel efficient CG in all areas of the mission where operational constraints allowed. Informed the pilot of all aircraft performance factors concerning fuel conservation in all areas of the mission.
- Q- Possessed some knowledge of applicable aircraft publications and other governing directives and understood how to apply both to enhance fuel conservation. Occasionally maintained the most fuel efficient CG. Informed the pilot of fuel conservation performance factors in most areas of the mission.
- U Unaware of fuel conservation procedures. Failed to apply any fuel conservation procedures in any area of the mission.

Area 18, Approach Monitor/Landing.

- Q Satisfactory knowledge of symbols and other information on appropriate approach plate. Can determine aircraft position during approach. Made all appropriate altitude calls. When required, backed up pilot for ATC radio calls. Performed all other duties according to the flight manual (including Touch & Go).
- Q- Same as above except had marginal knowledge of information on the approach plate. Had difficulty determining aircraft position during the approach. Minor omissions or deviations from flight manual procedures, but did not detract from safety.
- U Unable to interpret information on the approach plate. Unable to determine aircraft position. Major omissions or deviations from the flight manual procedures.

Area 19, Systems Operations/ Knowledge/Limitations.

- Q Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems with minimal reference to flight manual/available aids.
- Q- Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedure. Required moderate references to flight manual/available aids to differentiate between procedure and technique.
- U Unsatisfactory systems knowledge. Unable to demonstrate/explain the procedures for aircraft system operations.

Area 20, Boldface Emergency Procedures (Critical).

- Q Correct, immediate responses. Proper crew coordinated actions.
- U Incorrect sequence, unsatisfactory response, or unsatisfactory performance of corrective actions.

Area 21, Other Emergency Procedures.

- Q Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used checklists and/or available aids.
- Q- Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use and/or experienced delays, omissions, or deviations in use of checklist and/or available aids.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

Area 22, Tanker A/R.

- Q Maintained aircraft CG and fuel system limitations during all phases of A/R. Timely completion of tanker A/R checklists without omission or deviation. Planned/pre-positioned offload fuel in a timely manner. Correctly computed airspeeds. Monitored appropriate radios. Ensured proper coordination with boom operator during all refueling operations. Backed up pilots as directed.
- Q- Same as above except minor deviations from checklist and A/R procedures that are not detract from safety or major delay in A/R operations.
- U Unsatisfactory knowledge of fuel system limitations. Did not maintain aircraft CG or fuel system limitation. Incorrectly computed required airspeeds. Untimely completion of procedures which caused a major delay in A/R operations.

Area 23, Receiver A/R.

- Q** Maintained aircraft CG and fuel system limitations during all phases of A/R. Timely completion of receiver A/R checklists without omission or deviation. Planned/pre-positioned fuel in a timely manner. Correctly computed airspeeds. Monitored appropriate radios. Backed up pilots as directed.
- Q-** Same as above except minor deviations from checklist/A/R procedures that did not detract from safety or major delay in air refueling operations.
- U** Unsatisfactory knowledge of fuel system limitations. Did not maintain aircraft CG or fuel system limitation. Incorrectly computed required airspeeds. Untimely completion of procedures which caused a major delay in A/R operations.

3.10. INSTRUCTOR.**Area 24, Instructor Ability (Critical).**

- Q** Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe maneuvers/situations.
- U** Unable to effectively communicate or provide timely feedback to the student. Gave instruction that was unsafe or contradicted published directives. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify an unsafe maneuvers/situations in a timely manner. Made no attempt to instruct.

Area 25, Student Briefing/Critique (Critical).

- Q** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. During the critique, demonstrated an effective ability to reconstruct the flight, offer mission analysis, and provide guidance, where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U** Briefings were marginal or non-existent. Did not review student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

3.11. UNIT. Units will include MAJCOM-specific and local evaluation areas in **Chapter 5**. Include the evaluation areas on AF Form 3862 (see paragraph **1.14.**).

Chapter 4

BOOM OPERATOR EVALUATIONS

4.1. General. This chapter standardizes initial, periodic, and re-qualification evaluations, including the requirements for qualification, mission, and instructor evaluations.

4.2. Qualification/Mission Evaluations. Dual log the mission evaluation with qualification/re-qualification requirements (e.g. QUAL/MSN). All cargo evaluations will be administered under actual conditions (e.g., AMC channel, Dual-role, SAAM, JA/ATT, etc.).

4.2.1. Initial: Evaluate all areas under GENERAL and QUALIFICATION/MISSION except areas 19 and 20. Upon successful completion of the initial qualification evaluation, the AF Form 8 will indicate Crew Position as "FB." The examinee is qualified for unsupervised crew duties with a restriction for supervised cargo loading/unloading duties.

4.2.2. Periodic: Evaluate all areas under GENERAL and QUALIFICATION/MISSION. Use one AF Form 8, and separate line entry for each evaluation. Expiration date is based on the first in-flight evaluation according to AFI 11-202V2.

4.2.3. Boom Operator Trainer (BOT) evaluations. Conduct a BOT evaluation in conjunction with all qualification/mission evaluation. Use a contractor-developed Air Force-approved scenario. Evaluate the following as a minimum:

4.2.3.1. Boom elevator, rudder, or telescope failure.

4.2.3.2. Flight control stick failure.

4.2.3.3. A/R signal system failure.

4.2.3.4. Tanker breakaway.

4.2.4. A minimum of one boom contact must be accomplished for the qualification/mission evaluation.

4.3. Additional Mission Evaluations. An initial mission evaluation is administered to boom operators before performing unsupervised cargo loading/unloading duties. Annotate an AF Form 8 as a MSN evaluation, copy the initial QUAL/MSN evaluation expiration date, and add remarks, "CARGO-Qualified".

4.3.1. Evaluate all areas under GENERAL and QUALIFICATION/MISSION areas 19 and 20.

4.3.2. Complete a cargo closed book exam (minimum 20-questions).

4.3.3. Upon successful completion of the initial mission (cargo) evaluation, complete an AF Form 8 as a SPOT evaluation with crew position block indicating "MB". Include an expiration date as reference only (qualification is based on the QUAL/MSN expiration date).

4.4. Instructor Evaluations . The flight examiners will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective, corrective action.

4.4.1. Initial: Conduct the evaluation with the examinee instructing a student boom operator. Initial instructor evaluations will include areas under GENERAL, QUALIFICATION/MISSION Area 18 (BOT), Cargo areas 19 and 20, and INSTRUCTOR.

NOTE:

Boom Operators who desire to realign the mission evaluation during the initial instructor evaluation must demonstrate all items under GENERAL, QUALIFICATION/ MISSION, and INSTRUCTOR, complete requisite written examinations.

4.4.2. Periodic: Instructor Boom Operators will be evaluated on their ability to instruct on all periodic evaluations. Evaluate all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUCTOR.

4.5. Emergency Procedures Evaluations (EPE). Evaluate an aircrew member's knowledge of emergency procedures and systems knowledge during the BOT portion of all qualification evaluations.

4.6. Additional Information.

4.6.1. The BOT may be used for additional training and recheck evaluations in area(s) involving normal, abnormal, or emergency procedures. The BOT will not be used for additional training or re-qualification involving actual contacts or maneuvering of the boom. If a breakaway cannot be evaluated in the BOT because of equipment malfunction, it must be evaluated in-flight or rescheduled.

4.6.2. Boom operator flight examiners will not conduct evaluations when scheduled as primary aircrew members.

4.7. Boom Operator Grading Criteria.**4.8. GENERAL.****Area 1, Directives and Publications.**

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply this knowledge to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Unsure of some directives but could locate information in appropriate publications. Publications were current but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

Area 2, Mission Preparation/Planning.

- Q** Read and initialed for all items in FCIF. Completed/obtained all applicable forms. Complied with all local directives. Attended all required briefings.
- Q-** Same as above except for minor deviations or omissions which did not impair mission effectiveness. Did not fully comply with local directives, but did not detract from safety.
- U** FCIF was not reviewed or initialed. Failed to attend required briefings. Failed to obtain/complete all applicable forms, or made major errors or omissions. Did not obtain adequate mission information. Failed to comply with local directives.

Area 3, Use of Checklist.

- Q Procedures and checklist items required by flight manual and applicable directives were accomplished in a thorough and proficient manner.
- Q- Procedures and checklist items required by flight manuals and applicable directives were accomplished with omission, deviation, or error, which detracted from the overall efficient conduct of the mission. Performance was the minimum acceptable.
- U Procedures or checklist items required by flight manual and applicable directives were accomplished with omission, deviation, or error which did, or could adversely affect the successful accomplishment of the mission or task.

Area 4, Safety Consciousness (Critical).

- Q Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated aircraft or equipment in a dangerous manner.

Area 5, Judgment/Compliance (Critical).

- Q Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions.
- U Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

Area 6, Crew Coordination/Crew Resource Management (CRM). Use AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and AF Form 4031, **Skills Training Evaluation Form**, as a reference.

- Q Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated operational knowledge of other crewmembers' duties and responsibilities. Effectively applied CRM skills throughout the mission.
- Q- Crew coordination adequate to accomplish mission. Demonstrated limited knowledge of other crewmembers' duties and responsibilities.
- U Poor crew coordination or unsatisfactory knowledge of other crewmembers' duties and responsibilities negatively affected mission accomplishment or safety of flight.

Area 7, Communication Procedures.

- Q Displayed a satisfactory knowledge of, and compliance with, correct communication procedures. Transmissions were concise and used proper terminology. Accomplished required calls and acknowledged transmissions in a manner which enhanced mission effectiveness.
- Q- Displayed adequate communication procedures, but was slow or not concise in making transmissions. Transmissions contained erroneous information or included non-standard terminology. Mission effectiveness was not jeopardized.
- U Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted required transmissions or transmitted erroneous information.

Area 8, Life Support Systems/Egress.

- Q Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, hatches, slide rafts, and escape ropes.
- Q- Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.
- U Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices.

Area 9, Knowledge/Completion of Forms.

- Q All required forms were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate description of significant events to applicable agencies (Safety, Maintenance, etc.).
- Q- Minor errors on forms that did not affect conduct of the mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.
- U Did not accomplish required forms. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

Area 10, Airmanship/Situational Awareness.

- Q Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Conducted the flight with a sense of understanding and comprehension.
- Q- Untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U Decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

4.9. QUALIFICATION/MISSION.

Area 11, Ground Operations.

- Q Complied with established station, start engine, taxi, and take-off times to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight. Completed all systems pre-flight/post-flight inspections IAW flight manual.
- Q- Same as above except for minor procedural deviations that did not detract from mission effectiveness.
- U Errors directly contributed to a late takeoff that degraded the mission. Failed to accurately determine readiness for flight. Failed to pre-flight/post-flight a critical component or could not conduct a satisfactory pre-flight/post-flight inspection.

Area 12, A/R (Boom).

- Q Demonstrated a satisfactory knowledge of procedures and equipment. Complied with directives. Coordinated with tanker and receiver pilots. Boom control was smooth and contacts were effective. Monitored receiver closely and gave corrections as necessary. Used proper procedures and techniques that would not jeopardize mission or safety.
- Q- Same as above except for minor deviations which did not or would not jeopardize safety or mission effectiveness. Boom control was slightly erratic resulting in contacts being delayed.

- U Failed to accomplish required checks. Boom control was erratic, and/or technique used in attempting contacts resulted in delays to such extent that fuel could not be offloaded within the time available. Inadequate knowledge, procedures, or techniques jeopardized safety of flight.

Area 13, A/R (Centerline Drogue).

- Q Demonstrated a satisfactory knowledge of procedures and equipment. Complied with directives. Coordinated with tanker and receiver pilots. Monitored receiver closely and gave corrections as necessary. Used proper procedures and techniques that would not jeopardize mission or safety.
- Q- Same as above except for minor deviations which did not or would not jeopardize safety or mission effectiveness.
- U Failed to accomplish required checks. Inadequate knowledge, procedures, or techniques jeopardized safety of flight.

Area 14, A/R (Wing A/R Pods).

- Q Demonstrated a satisfactory knowledge of procedures and equipment. Complied with directives. Coordinated with tanker and receiver pilots. Monitored receiver closely and gave corrections as necessary. Used proper procedures and techniques that would not jeopardize mission or safety.
- Q- Same as above except for minor deviations which did not or would not jeopardize safety or mission effectiveness.
- U Failed to accomplish required checks. Inadequate knowledge, procedures, or techniques jeopardized safety of flight.

Area 15, Systems Operations/ Knowledge/Limitations.

- Q Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems with minimal reference to flight manual/available aids.
- Q- Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedure. Required moderate references to flight manual/available aids to differentiate between procedure and technique.
- U Unsatisfactory systems knowledge. Unable to demonstrate/explain the procedures for aircraft system operations.

Area 16, Abnormal/Emergency Procedures.

- Q Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction or abnormal condition. Effectively used available aids.
- Q- Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use of checklist and/or available aids.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

Area 17, Weight and Balance.

- Q *Weight: Error not in excess of 3000 lbs. or less*
CG: Error not in excess of 1 percent MAC or less
- Q- *Weight: Error exceeded 3000 lbs, but less than 5000 lbs.*
CG: Error exceeded 1 percent, but less than 1.5 percent MAC

- U *Weight: Error of 5000lb or more*
CG: Error of 1.5 percent MAC or more

NOTE: Number of errors will be considered even if no tolerances have been exceeded.

Area 18, BOT.

- Q Consistently used the correct checklist. Performed proper corrective action for each type of malfunction or abnormal condition. Effectively coordinated with other crewmembers throughout mission.
- Q- Checklist responses were untimely, with omission, deviation, or error which detracted from overall efficient conduct of the mission. Crew coordination was adequate to accomplish the mission. Performance was the minimum acceptable.
- U Used incorrect checklist. Unable to identify the correct checklist to use in a given situation. Procedures or checklist items were accomplished with omission, deviation, or error, which did, or could adversely affect the successful accomplishment of the mission or task. Demonstrated poor crew coordination, which negatively affected mission accomplishment.

NOTE: If a breakaway cannot be evaluated in the BOT it must be evaluated in-flight or rescheduled to evaluate the area.

Area 19, Cargo Loading/Unloading.

- Q Demonstrated a thorough knowledge of required procedures as outlined in the flight manual and applicable directives. Load planning was accomplished without errors or omissions. Required briefings were clear, concise and accurate. Coordinated with air terminal operation personnel (or equivalent) on cargo loading/unloading matters.
- Q- Demonstrated a limited knowledge of required procedures as outlined in the flight manual and applicable directives. Procedures were accomplished with errors or deviations which did/would not detract from the cargo loading/unloading operation or mission. Load planning contained minor errors or omissions without exceeding established limits. Required briefings contained minor errors or omissions.
- U Demonstrated an unsatisfactory knowledge of required procedures as outlined in the flight manuals and applicable manuals. Procedures were not complied with which jeopardized mission accomplishment or the safety of the cargo loading/unloading operation. Required briefings were unclear and/or ineffective causing confusion. Failed to coordinate with air terminal operation personnel (or equivalent) on cargo loading/unloading matters. Load planning contained major errors or omissions and/or exceeded established limits.

Area 20, Passenger Handling.

- Q Demonstrated a thorough knowledge of required passenger handling normal/emergency procedures and equipment as outlined in applicable guidance. Passengers briefing were clear, concise, and accurate.
- Q- Demonstrated a limited knowledge of required passenger handling, and related emergency procedures and equipment as outlined in applicable guidance. Minor errors or omissions were made in procedures which did/could detract from the overall efficient conduct of the mission or the comfort and control of the passenger. Passenger briefing was accomplished with minor omission or errors.
- U Demonstrated an unsatisfactory knowledge of required passenger handling or related emergency procedures and equipment as outlined in applicable guidance. Procedures were not complied with which jeopardized passenger safety or control. Passenger briefing was unclear and/or ineffective.

4.10. INSTRUCTOR.

Area 21, Instructor Ability (Critical).

- Q** Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe maneuvers/situations.
- U** Unable to effectively communicate or provide timely feedback to the student. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe maneuvers/situations in a timely manner. Made no attempt to instruct.

Area 22, Demonstration of Knowledge (Critical).

- Q** Effectively demonstrated procedures and techniques. Thorough knowledge of applicable aircraft systems, procedures, publications, and directives.
- U** Did not demonstrate correct procedure or techniques. Insufficient depth of knowledge about applicable aircraft systems, procedures, and/or proper source material.

Area 23, Student Briefing/Critique (Critical).

- Q** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. During the critique, demonstrated an effective ability to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U** Briefings were marginal or non-existent. Did not review student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of the student's next mission, if required.

4.11. UNIT. Units will include MAJCOM-specific and local evaluation areas in **Chapter 5**. Include the evaluation areas on AF Form 3862 (see paragraph **1.14**).

Chapter 5**LOCAL PROCEDURES**

5.1. General. Use this chapter to define local evaluation criteria, as required.

5.2. Forms Prescribed. AF Form 3862, **Aircrew Evaluation Worksheet.**

MARVIN R. ESMOND, Lt General, USAF
DCS, Air and Space Operations

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

AFPD 11-2, *Aircraft Rules and Procedures*
AFI 11-202V1, *Aircrew Training Program*
AFI 11-202V2, *Aircrew Standardization/Evaluation Program*
AFI 11-2KC-10V1, *KC-10 Aircrew Training*
AFI 11-2KC-10V3, *KC-10 Operations Procedures*
AFI 11-215, *Flight Manuals Program*
AFI 11-218, *Aircraft Operations and Movement on the Ground*
AFI 11-290, *Cockpit/Crew Resource Management Training Program*
AFMAN 11-210, *Instrument Refresher Course (IRC) Program*
AFMAN 36-2236, *Guidebook for Air Force Instructors*
AFMAN 37-139, *Records Disposition Schedule*

Abbreviations and Acronyms

A/R—Air Refueling
ATD—Aircrew Training Device
BOT—Boom Operator Trainer
CG—Center of Gravity
EPE—Emergency Procedures Evaluation
EFTOC—Engine Failure Takeoff Continued
FCIF—Flight Crew Information File
FEF—Flight Evaluation File
GA—Go Around
GPS—Global Positioning System
MQF—Master Question File
PAR—Precision Approach Radar
RQ—Requalification

Attachment 2

FLIGHT EVALUATION WORKSHEET EXAMPLE #1

Figure A2.1. KC-10 Pilot Flight Evaluation Worksheet.

AREA/SUBAREAS	O	Q	U	T	REMARKS	AREA/SUBAREAS	O	Q	U	T	REMARKS
GENERAL	■	■	■	X		32. Non-precision Approach					
1. Directives and Publications						32A. NDB					
2. Mission Prep./Planning/Performance						32B. Localizer/VOR					
3. Use of Checklists						32C. ASR					
4. Safety Consciousness		■				32D. TACAN					
5. Judgment/Compliance		■				32E. GPS					
6. Crew Coordination/CRM						33. Circling Approach					
7. Communication Procedures						34. Missed Approach					
8. Life Support Systems/Egress						INSTRUCTOR	■	■	■	X	
9. Knowledge/Completion of Forms						35. Instructor Ability					
10. Airmanship/Situational Awareness						35A. Demonstration of Maneuvers					
QUALIFICATION/MISSION	■	■	■	X		35B. Student Briefing/Critique					
11. Ground Operations/Taxi						MISCELLANEOUS (If Observed)	■	■	■	X	
12. Takeoff						36. Formation					
13. Rdr Ops/Wtr Avoidance/Windshear						36A. Lead					
14. Fuel Conservation						36B. Departure					
15. VFR Pattern						36C. Join-up					
16. Landings						36D. Enroute					
16A. Full Flap						36E. Breakup					
16B. Partial Flap						36F. Position Changes					
16C. Touch and Go						37. Tactical Maneuvers (TAA/D)					
16D. Right Seat						UNIT					
17. Landing Roll/Braking/Rev. Thrust											
18. All Engine Go-Around (GA)											
19. Engine Out Operations											
20. Engine Out GA/EFTOC											
21. Boldface Emerg. Procedures		■									
22. Other Observed Emerg. Procedures											
23. Systems Ops/Knowledge/Limitations											
24. Tanker A/R											
24A. Rendezvous											
24B. Platform Control											
24C. Breakaway Procedures											
24D. Overrun Procedures											
25. Receiver A/R											
INSTRUMENT	■	■	■	X							
26. Instrument Departure/SID											
27. Enroute Navigation/FMS											
28. Holding											
29. Use of NAVAIDs											
30. Descent/Arrival											
31. Precision Approach											
31A. PAR (If available, else Verbal)											
31B. ILS											

