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Flying Operations

MC130 AIRCREW EVALUATION CRITERIA

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This instruction implements AFPD 11-2, *Aircrew Operations*, AFPD 11-4, *Aviation Service*, Air Force Instruction 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, and Air Force Instruction 11-202V2 *Aircrew Standardization/Evaluation Program.* This publication does not apply to the Air National Guard (ANG). This publication applies to Air Force Reserve Command (AFRC) Units. 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. The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. System of Records Notice (SORN) FO11 AF XO A, *Military Personnel Records System (ARMS)*, applies and is available at **http://privacy.defense.gov/notices/usaf/** . Ensure the applicable records prescribed in this publication adhere to the records disposition described in the SORN and that there are corresponding Tables and Rules in the AF Records Disposition Schedule. The authority for maintenance of ARMS is 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), DoDD 7730.57 (Aviation Career Incentive Act of 1974 and Required Annual Report, February 5, 1976, with Changes 1 and 2), and Executive Order 9397. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363 *Management of Records,* and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) maintained in the Air Force Records Information Management System (AFRIMS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. This revision reorganized the format of chapters and paragraphs for increased understanding with chapter two applicable to all crew positions, chapter three applicable to instructors, and following chapters applicable to individual crew positions. Grading criteria tables have been standardized across crew positions where applicable and expanded to include specific grading criteria. Evaluation methods are identified by notes in the crew specific tables as: in-flight only; in-flight and/or in simulator; and in-flight and/or alternate methods. Guidance was added allowing Weapon System Trainers (WST) to be used to accomplish evaluations or portions of evaluations if certified by AFSOC A3T and A3V. Guidance was clarified on the use of SPOT evaluations to document Special Qualification Evaluations. Multiple Qualification guidance was clarified. Emergency Procedures Evaluation (EPE), publications checks, and Cockpit/Crew Resource Management (CRM) guidance was added. In **Table 2.1**, aircrew discipline and airmanship/situational awareness (SA) have been added as critical sub-areas. In **Table 3.1**, all "Instructor" sub-areas have been modified to reflect the command standard and are no longer graded as critical.

Chapter 1

GENERAL INFORMATION

1.1. General. This instruction establishes requirements and grading criteria for ground and flight phases of initial, requalification, and periodic flight evaluations. Aircrew evaluations will be conducted in accordance with (IAW) this instruction and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, as supplemented. Specific areas for evaluation are prescribed to ensure an accurate assessment of the proficiency and capabilities of aircrews. Flight examiners use this AFI when conducting aircrew evaluations. Instructors use this AFI when preparing aircrews for qualification.

1.2. Applicability. This instruction applies to all individuals performing crew duties on SOF MC-130 and C-130 aircraft. For the purpose of this instruction, SOF C-130 aircraft encompasses AFSOC owned C-130E/H, C-130H1, C-130H2, flown as either primary or BAI airframes.

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 operations procedures, techniques, etc., considered essential to emphasize.

1.4. Waivers. Waiver authority for the contents of this document is AFSOC/A3, IAW AFI 11-202 V2. Waiver requests should be submitted thru Standardization and Evaluation (Stan/Eval) channels to the AFSOC/A3. AFRC units will submit waiver requests to AFRC/A3V for review. AFRC/A3V will then forward to AFSOC for AFSOC/A3 approval.

1.5. Supplements. Units are encouraged to supplement this instruction with standard evaluation profiles that best fit the unit's mission, equipment, and location. MAJCOMs will forward a copy of MAJCOM supplements to AF/A3O-AI, through HQ AFSOC/A3V, for approval prior to publication. Units below MAJCOM level will forward one copy of each supplement to their MAJCOM OPR for prepublication review.

1.6. Evaluation Procedures. Before the Aircraft Commander (AC) Briefing, the evaluator will inform the AC of any special requirements. Flight examiners will brief the examinee on the conduct, purpose, and requirements of the evaluation, as well as all applicable evaluation criteria, prior to flight. Any unique evaluator inputs to the planned profile should be communicated to the examinee no later than 24 hours prior to scheduled mission brief. The examinee will accomplish all required mission planning. If an Operations Planning Team or Deployment Planning Team accomplishes mission planning, the examinee is ultimately responsible for the accuracy and completeness of all mission planning paperwork. Flight examiners will be furnished a copy of necessary charts, flight logs, mission folders, and any additional items they deem necessary.

1.6.1. Flight examiners will ensure all required training and documentation is complete prior to initial or requalification evaluations.

1.6.2. Unless requested by examinee and approved by squadron supervision, the examinee will be current for all events evaluated during a periodic evaluation.

1.6.3. Flight examiners will not intentionally fail any equipment during flight evaluations, but may deny the use of systems not affecting safety of flight.

1.6.4. Under no circumstances will a pilot or flight engineer flight examiner allow the aircraft to slow to below one engine inoperative air minimum control speed (Vmca), regardless of airspeed tolerances listed for specific areas.

1.6.5. Flight examiners will thoroughly debrief/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.

1.6.6. In this document, Tanker Air Refueling applies to both "Helicopter Air-to-Air Refueling" (HAAR) and "Tilt-Rotor Air-to-Air Refueling" (TAAR). Receiver Air Refueling applies to "Air-to-Air Refueling" (AAR).

1.7. Grading Instructions. All evaluations will follow the guidelines set in AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, as supplemented and this volume. Examiners will use the criteria contained in this volume to accomplish all flight, ground, simulator, and EPE. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.7.1. **Area/Subarea Grades.** Areas/subareas will have a two-level (Q/U) or three-level (Q/Q-/U) grading system. Discrepancies will be documented against the listed subareas.

1.7.1.1. 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.

1.7.1.2. Q- indicates the examinee is qualified to perform the assigned area/subarea 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.

1.7.1.3. U indicates a 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/subarea 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.

1.7.2. **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 by shading of the Q- block on the appropriate AF Form 3862, *Air Crew Evaluation Worksheet.*

1.8. Evaluation Requirements. Evaluation profiles will reflect a sampling of the unit's missions. Evaluation tables are provided to summarize evaluation areas. Areas common to all crew members are contained in **Table 2.1** Instructor evaluation areas are in **Table 3.1**

Evaluation areas unique to each crew position are located in their respective chapter. Each crew specific chapter defines required events. Evaluation methods are identified by notes in the crew specific tables and include: in-flight only, in-flight and/or in simulator (see **paragraph 1.8.1**), and in-flight and/or alternate methods (see **paragraph 1.8.2**). For areas without a note, flight examiners may evaluate at their discretion if observed. If required events are not observed, then the evaluation is incomplete and will be accomplished on another flight.

1.8.1. **Simulator.** WST with a C or greater certification (or Training Value Code (TVC) of 3 or greater for all areas evaluated as determined by simulator certification (SIMCERT)) may be used to accomplish evaluations. SIMCERTs will be located at the AFSOC/A3T website. Do not conduct two consecutive evaluations in the simulator (***EXCEPTION***: Instrument (INSTM) evaluations). Initial, special mission and requalification evaluations must be accomplished in the aircraft.

1.8.1.1. If an area/subarea was not able to be evaluated in flight, and the event is certified for evaluation purposes in a WST, it can be evaluated in the simulator to complete the evaluation. Document in the comments section of AF Form 8/8a, *Certificate of Aircrew Qualification*, which portion of the evaluation was conducted in the WST.

1.8.2. Alternate Method. When it is impossible to evaluate an area in flight due to equipment malfunctions, operational requirements, scheduling restrictions, or weather, the area may be evaluated by an alternate method (i.e. procedural trainer or verbal examination). If, in the flight examiner's judgment, an item cannot be adequately evaluated by an alternate method, complete the evaluation on an additional flight.

1.8.3. Grading Criteria. To the maximum extent possible, flight examiners will use the grading criteria in this volume to determine individual area grades. Exercise judgment when the wording of areas is subjective and when specific areas are not covered. Flight examiner judgment will be the determining factor in arriving at the overall grade. Consider cumulative deviations when determining the overall grade.

1.8.3.1. Base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. In some cases, momentary deviations are allowable provided the examinee applies prompt corrective action and such deviations do not jeopardize safety.

1.9. Unsatisfactory Performance. If the flight examiner observes an aircrew counterpart jeopardizing safety, the examiner will assume the duties of that aircrew member (provided the examiner's flight duty period (FDP) does not exceed AFI 11-202V3 *General Flight Rules* maximum FDP for an un-augmented crew). This does not mean the examiner must assume the examinee's position any time unsatisfactory performance is observed. If the examiner feels the examinee can continue safely with supervision, the examiner is not required to assume the examinee's duties. However, if the flight examiner assumes the examinee's duties, assign a Qualification Level 3 (Q-3) as the overall grade.

1.9.1. Evaluators must report deviations/discrepancies from established procedures/directives in any area, regardless of the individual's crew specialty, to squadron/group commander, along with evaluator's recommendation for corrective action IAW AFI 11-202V2 and MAJCOM supplement.

1.10. Additional Training. Flight examiners are responsible for assigning additional training, at their discretion. Document additional training and completion IAW AFI 11-202V2 and

MAJCOM supplement. Any approved training device or medium may be used for additional training.

1.10.1. Additional training may be accomplished on the same flight as the evaluation, provided the unique situation presents a valuable training opportunity (i.e., crosswind landings), and the discrepancy requiring the additional training will not result in an overall Q-3 evaluation. This option requires flight examiner discretion and judicious application. The examinee must be informed when the additional training begins and ends.

1.11. Rechecks. Rechecks should be administered by a flight examiner other than the one who administered the original evaluation.

1.12. Special Qualifications (QUALs). Special qualification evaluations are administered for events that are not universal to all members in that crew position. Special QUAL evaluations may be conducted separately or in conjunction with the QUAL/Mission (MSN) evaluations. After qualification, areas can be graded as part of periodic MSN evaluations. There are no requisites for special QUAL evaluations unless specified. Refer to the appropriate crew position for any special QUAL evaluation requirements.

1.12.1. Special qualifications result in an AF Form 8/8a. Document IAW AFI 11-202V2 as SPOT evaluations. Although a unit may maintain 100 percent of its crew members qualified, this documentation is still required due to intrafly and permanent change of station (PCS) issues.

1.13. Multiple Qualifications.

1.13.1. QUAL Evaluation. Aircrew maintaining qualification in any MC-130 aircraft does not require an additional QUAL evaluation in the C-130. See AFI 11-2MC-130V1 *MC-130 Aircrew Training* for differences training and currency requirements for multi-qualified aircrew.

1.13.2. MSN Evaluation. MC-130 qualified aircrew require a separate MSN evaluation (both initial and periodic) in order to maintain mission qualification in the C-130 (exceptions to the mission qualification requirement for specific events are outlined in AFI 11-2MC-130V1).

Chapter 2

ALL EVALUATIONS

2.1. General. The general grading criteria contained in this chapter applies to all crew positions and all evaluations. The examinee must satisfactorily demonstrate the ability to perform required duties safely and effectively. This includes appropriate aircraft systems operation IAW applicable technical orders, instructions, and directives.

2.2. Requirements. Evaluate all crew members on areas listed in **Table 2.1**

2.2.1. **Examinations.** All crew members will complete open and closed book examinations as a requisite to periodic evaluations IAW AFI 11-202V2 and applicable supplements.

2.2.2. **EPE.** An EPE is a requisite for all QUAL and MSN evaluations (does not include special MSN evaluations. However, emergency procedures will be covered during special MSN evaluations). EPEs may be conducted verbally, in-flight, in a simulator, or by another method determined by the examiner or unit stan/eval. Group Stan/Eval (OGV) may develop EPE guides for each crew position for flight examiner use. EPEs should be scenario driven and tailored to the specific crew position. The EPE will include areas commensurate with the examinee's qualification and experience level. Flight examiners should include other general knowledge areas as well. For MSN evaluations, evaluate mission-specific equipment and situations. EPEs will include sufficient in-flight and ground emergencies to evaluate the examinee's knowledge of systems and procedures to the flight examiner's satisfaction.

2.2.2.1. Examinees may use publications that are normally available in flight. The examinee must recite all Boldface items from memory and should provide the initial steps of emergency procedures that, in the opinion of the flight examiner, would not allow time for reference.

2.2.2.2. Grading criteria for EPEs are outlined in area 5 of General Grading Areas.

2.2.3. **Publications Check.** Required for all QUAL or combined QUAL/MSN evaluations as outlined in area 12 of General Grading Areas.

2.2.4. **CRM.** IAW AFI 11-290, *Cockpit/Crew Resource Management Training Program*, CRM skills will be evaluated during initial and periodic evaluations. CRM skills are integral to all phases of flight; therefore, no specific area titled CRM exists. CRM skills are imbedded within specific grading criteria (mission planning, airmanship/situational awareness, crew coordination, communication, risk management/decision making, task management, and briefing/debriefing) and include all of the skills listed on the AF Form 4031, *CRM Skills Criteria Training/Evaluation Form*. Therefore, use of the AF Form 4031 is unnecessary for evaluations.

2.2.5. **Formal Course Evaluations.** All required areas must be evaluated for the type of evaluation flown, IAW guidance in this volume. Grade training objectives and related areas using the performance criteria in this volume.

2.2.6. **Air Education Training Command (AETC).** AETC instructors are considered qualified in both the HC/MC-130 Rescue Squadron (RQS) and MC-130P SOF missions once they have completed the 58 Special Operations Wing (SOW) differences training program.

Therefore, a QUAL and MSN evaluation in one aircraft counts as qualification in the other aircraft.

Table 2.1. General Grading Areas (all crew positions).

Area	Notes	Grading Areas
1	1	Safety - CRITICAL
2	1	Aircrew Discipline - CRITICAL
3	1	Airmanship/SA - CRITICAL
4	2, 3	Boldface - CRITICAL
5	2	Emergency Procedures Evaluation (EPE)
6	1	Crew Coordination
7	2	Mission Planning
8	2	Knowledge of Directives
9	1	Preflight
10	1	Use of Checklist
11	2	Forms/Reports/Logs
12	2	Personal/Professional Equipment/Flight Publications
13	2	Emergency and Life Support Equipment/Procedures
14	2	Briefings/Debriefings
15	2	Classified Material/Operations Security
16	2, 3	Antihijacking/Aircraft Security
17	1	Communication
18	2	Risk Management/Decision Making
19	1	Task Management
NOTES: 1. Required in-flight or simulator certified for this event 2. Required in-flight or alternate method 3. Only required for QUAL evaluation.		

2.3. General Grading Criteria.

2.3.1. **Area 1. Safety - (CRITICAL).**

2.3.1.1. Q. Was aware of and complied with all safety factors required for safe aircraft/equipment operation and mission accomplishment. Identified and assessed risk appropriately and properly considered consequences of decisions.

2.3.1.2. U. Not aware of or did not comply with all safety factors required for safe aircraft/equipment operation or mission accomplishment. Failed to properly identify and assess risk; failed to consider consequences of decisions; and/or operated the aircraft/equipment in a dangerous manner.

2.3.2. **Area 2. Aircrew Discipline - (CRITICAL).**

2.3.2.1. Q. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

2.3.2.2. U. Failed to exhibit strict flight and crew discipline and/or violated or ignored rules or instructions.

2.3.3. **Area 3. Airmanship/SA - (CRITICAL).**

2.3.3.1. Q. Executed the assigned mission in a timely, efficient manner; anticipated situations that would have adversely affected the mission and corrected them; made appropriate decisions based on available information; recognized the need for action; aware of performance of self and other flight members; aware of on-going mission status; recognized, verbalized and acted on unexpected events.

2.3.3.2. U. Decisions or lack thereof caused failure to accomplish assigned mission. Did not recognize the need for action; not aware of performance of self and other flight members. Not aware of on-going mission status. Failed to recognize, verbalize, and/or act on unexpected events.

2.3.4. **Area 4. Boldface – (CRITICAL).**

2.3.4.1. Q. Able to recite/write the proper emergency Boldface actions in the correct sequence with no discrepancies (not necessarily a verbatim response).

2.3.4.2. U. Failed to recite/write emergency Boldface items in the correct sequence. Discrepancies in the procedure.

2.3.5. **Area 5. Emergency Procedures Evaluation (EPE).**

2.3.5.1. Q-1. Satisfactory systems/procedural knowledge. Operated within prescribed limits and correctly diagnosed problems. Performed and/or explained proper corrective action, in the proper sequence, for each type of malfunction. Accomplished all required checklists and/or effectively used available aids; thoroughly described the location, use, and limitations of emergency equipment.

2.3.5.2. Q-2. Marginal systems/procedural knowledge. Slow to analyze problems or apply proper corrective actions. Did not effectively use checklist and/or available aids; minor omissions or deviations in describing the location, use, and limitations of emergency equipment.

2.3.5.3. Q-3. Unsatisfactory systems/procedural knowledge. Failed to analyze problem or take corrective action. Failed to accomplish required checklists and/or unable to locate information in available aids; major omissions or deviations in describing the location, use, and limitations of emergency equipment.

2.3.6. **Area 6. Crew Coordination.**

2.3.6.1. Q. Provided direction/information when needed. Adapted to meet new situational demands and focused attention on the task. Knew assigned task of other crew members; asked for inputs and made positive statements to motivate crew members.

2.3.6.2. Q-. Crew coordination was limited though adequate to accomplish the mission. Provided limited direction/information when needed; slow to adapt to meet new situational demands due to limited focus on task; did not consistently seek inputs from other crew members; limited effort to motivate crew members through positive statements.

2.3.6.3. U. Did not provide direction/information when needed. Did not adapt to meet new situational demands and focus attention on the task. Did not seek inputs or made no

effort to make positive statements to motivate crew members. Lack of crew coordination resulted in significant degradation of mission accomplishment.

2.3.7. **Area 7. Mission Planning.**

2.3.7.1. Q. Clearly defined the mission overview and mission goals; provided specific information on required tasks. Solicited feedback from other crew members to ensure understanding of mission requirements; thoroughly critiqued plans to identify potential problem areas and ensured all had understanding of possible contingencies; checked all factors applicable to flight such as Flight Information Publication (FLIP), weather, notice to airman system (NOTAMS), alternate airfields, flight logs, performance data, fuel requirements, and charts. When required, extracted necessary information from air tasking order (ATO)/frag/special instructions (SPINs); aware of the available alternatives if unable to complete the flight/mission as planned. Read and initialed all items in the flight crew information file (FCIF)/read files.

2.3.7.2. Q-. Did not adequately define the mission overview and mission goals; potential problem areas partially addressed or not at all. Did not adequately solicit feedback or critique the plans to ensure understanding of possible contingencies. Minor errors or omissions detracted from mission effectiveness, but did not affect mission accomplishment. Limited knowledge of performance capabilities or approved operating procedures/rules.

2.3.7.3. U. Did not define the mission overview and goals; lack of specific information on required tasks; did not solicit feedback from other crew members to ensure understanding; did not critique plans to identify potential problem areas. Major errors or omissions would have prevented a safe or effective mission; unsatisfactory knowledge of operating data or procedures.

2.3.8. **Area 8. Knowledge of Directives.**

2.3.8.1. Q. Prepared and completed mission in compliance with existing instructions and directives; demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.

2.3.8.2. Q-. Minor deviations to procedures; unsure of directives and/or had difficulty locating information in appropriate publications. Any instances of noncompliance did not jeopardize safety.

2.3.8.3. U. Unaware of 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.

2.3.9. **Area 9. Preflight.**

2.3.9.1. Q. Completed systems preflight/inspections IAW technical orders, checklists, and instructions. Individual technique complied with established procedures.

2.3.9.2. Q-. Minor deviations from established systems preflight/inspection; individual technique was safe, but detracted from established procedures. Used individual technique instead of established procedure and was unaware of differences.

2.3.9.3. U. Failed to preflight critical component or could not conduct a satisfactory preflight/ inspection; individual techniques unsafe and/or in violation of established procedures.

2.3.10. **Area 10. Use of Checklist.**

2.3.10.1. Q. Consistently used correct checklist, gave correct responses, and accomplished appropriate actions at the appropriate time throughout the mission.

2.3.10.2. Q-. Checklist responses were untimely and/or crew member required continual prompting for correct responses/action.

2.3.10.3. U. Used incorrect checklist or consistently omitted checklist items; was unable to identify the correct checklist to use for a given situation. Omitted or did not complete checklist(s) at the appropriate time.

2.3.11. **Area 11. Forms/Reports/Logs.**

2.3.11.1. Q. All required forms and/or flight plans were complete, accurate, readable, and accomplished on time IAW applicable directives. Relayed an accurate debrief of significant events to applicable agencies (Intel, Weather, Maintenance, AIRCAT, etc.).

2.3.11.2. Q-. Minor errors on forms and/or flight plans did not affect conduct of the flight/mission; incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.

2.3.11.3. U. Did not accomplish required forms and/or flight plans; omitted or incorrectly reported significant information due to major errors or omissions.

2.3.12. **Area 12. Personal/Professional Equipment/Flight Publications.** ***NOTE:*** Required flight publications are specified in AFI 11-2MC-130V3 *MC-130 Operations Procedures.*

2.3.12.1. Q. Had all required personal and professional equipment; displayed satisfactory knowledge of the care and use of such equipment and the contents of required publications. Required equipment inspections were current. Publications were current, contained all supplements/changes, and were properly posted.

2.3.12.2. Q-. Did not have all required personal/professional equipment or had limited knowledge of the use or the content of required publications. Publications contained deficiencies that would not impact flight safety or mission accomplishment.

2.3.12.3. U. Did not have required personal/professional equipment essential for the mission; unsatisfactory knowledge of the care and use of equipment or the content of required publications. Equipment inspections were overdue or equipment was unserviceable. Publications were out dated and/or contained deficiencies that would impact flight safety or mission accomplishment.

2.3.13. **Area 13. Emergency and Life Support Equipment/Procedures.**

2.3.13.1. Q. Satisfactory systems/procedural knowledge; displayed satisfactory knowledge of location and use of emergency and life support equipment; operated within prescribed limits and correctly diagnosed problems; performed/explained proper wear,

use, and corrective action for each type of equipment/malfunction; effectively used available aids.

2.3.13.2. Q-. Marginal systems/procedural knowledge; limited knowledge of location and use of emergency and life support equipment; operated within prescribed limits but was slow to analyze problems or apply proper corrective actions; did not effectively use, omitted, or deviated in use of checklist and/or available aids.

2.3.13.3. U. Unsatisfactory systems/procedural knowledge; displayed unsatisfactory knowledge of emergency and life support equipment; exceeded flight manual limitations; unable or failed to analyze problem or take proper corrective action; did not use checklist and/or available aids.

2.3.14. **Area 14. Briefings/Debriefings.**

2.3.14.1. Q. Ensured briefing contained all applicable information; prepared at briefing time. Briefings effectively organized and professionally presented in a logical sequence. Presented all objectives, training events, and special interest items and effectively used available briefing aids; debriefed mission using specific, non-threatening positive and negative feedback of team and individual performance; provided specific ways to correct errors; asked for inputs from others; recapped key points; and compared mission results with mission objectives.

2.3.14.2. Q-. Omitted items pertinent but not critical to the mission; had some difficulty communicating clearly; did not make effective use of available briefing aids; limited discussion of training events or special interest items; dwelled on nonessential items; not fully prepared for briefing; debriefed mission without specific, non-threatening positive and negative feedback on individual and team performance. Did not consistently seek input from others. Incomplete or inadequate recap of key points and comparison of mission results to mission objectives.

2.3.14.3. U. Failed to conduct/attend required briefings; failed to use appropriate briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment; demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence; presented erroneous information that would affect safe/effective mission accomplishment. Presentation created doubts or confusion. Failed to discuss training events or special interest items; late crew transport due to excessively long briefing; did not provide non-threatening positive and negative feedback during debriefing. Did not seek input from others; did not recap key mission points or compare mission results to mission objectives.

2.3.15. **Area 15. Classified Material/Operations Security.**

2.3.15.1. Q. Demonstrated thorough knowledge of communications/operations security (COMSEC)/(OPSEC) and courier procedures (if applicable); had positive control of classified documents and information used throughout the mission; properly stored, handled, and/or destroyed all classified/COMSEC material or information generated during the mission; practiced sound COMSEC/OPSEC during all phases of the mission; identified, requested, and obtained all cryptological (crypto) material required for the mission.

2.3.15.2. Q-. Demonstrated limited knowledge of COMSEC/OPSEC procedures and/or courier procedures (if applicable). Limited knowledge of proper storage, handling, and destruction procedures would not have resulted in compromise of classified material/COMSEC and did not impact mission accomplishment. Identified crypto material required for mission, but was slow in requesting/obtaining material or did so only after being prompted.

2.3.15.3. U. Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents, COMSEC or information would have been compromised as a result of improper control by examinee. Unfamiliarity with OPSEC procedures, had or could have had a negative impact on mission accomplishment; failed to identify, request, or obtain all crypto required for the mission.

2.3.16. **Area 16. Antihijacking/Aircraft Security.**

2.3.16.1. Q. Explained proper antihijacking/aircraft security procedures.

2.3.16.2. Q-. Difficulty explaining proper antihijacking/aircraft security procedures.

2.3.16.3. U. Could not explain proper antihijacking/aircraft security procedures.

2.3.17. **Area 17. Communication.**

2.3.17.1. Q. Communicated using precise, standard terminology, and acknowledged all communications; asked for/provided clarification when necessary; stated opinions/ideas; asked questions when uncertain; advocated specific courses of action; didn't let rank affect safety.

2.3.17.2. Q-. Unclear or incomplete communication led to repetition or misunderstanding. Slow to ask for or give constructive feedback/clarifications; inconsistent use of precise, standard terminology. Did not always state opinions/ideas, ask questions when uncertain or make positive statements to flight members.

2.3.17.3. U. Failed to communicate effectively; continuously interrupted others, mumbled, and/or conduct/attitude was detrimental to communication among crew members. Withheld information and failed to ask for/respond to constructive criticism; failed to use precise, standard terminology; repeatedly failed to acknowledge communications. Did not state opinions, ask questions when unsure or attempt to motivate flight members using positive statements.

2.3.18. **Area 18. Risk Management/Decision Making.**

2.3.18.1. Q. Identified contingencies and alternatives; gathered and cross-checked relevant data before deciding. Clearly stated problems and proposed solutions; investigated doubts and concerns of crew members; used facts to come up with solution. Involved and informed necessary crew members when appropriate. Coordinated mission activities to establish balance between command authority and crew participation and acted decisively when the situation required. Clearly stated decisions, received acknowledgement, and provided rationale for decisions.

2.3.18.2. Q-. Partially identified contingencies and alternatives; made little effort to gather and cross-check relevant data before deciding. Did not clearly state problems and propose solutions; did not consistently use facts to come up with solutions; did not

effectively inform crew members when appropriate. Did not effectively coordinate mission activities to establish a proper balance between command authority and crew member participation, and acted indecisively at times.

2.3.18.3. U. Failed to identify contingencies and alternatives; made no effort to gather and cross-check relevant data before deciding; did not inform necessary crew members when appropriate; did not use facts to come up with solution. Avoided or delayed necessary decisions which jeopardized mission effectiveness. Did not coordinate mission crew activities to establish proper balance between command authority and crew member participation; acted indecisively.

2.3.19. **Area 19. Task Management.**

2.3.19.1. Q. Correctly prioritized tasks; used available resources to manage workload; asked for assistance when overloaded; clearly stated problems and proposed solutions. Accepted better ideas when offered; used facts to come up with solution; clearly communicated and acknowledged workload and task distribution; demonstrated high level of vigilance in both high and low workload conditions; prepared for expected or contingency situations; avoided the creation of self-imposed workload/stress. Recognized and reported work overloads in self and others.

2.3.19.2. Q-. Did not consistently and correctly prioritize tasks; did not effectively use available resources to manage workload. Did not clearly communicate and acknowledge workload and task distribution; did not consistently demonstrate high level of vigilance in both high and low workload conditions. Slow to prepare for expected or contingency situations; created some self-imposed workload/stress due to lack of planning; slow to recognize and report work overloads in self and others.

2.3.19.3. U. Failed to correctly prioritize tasks; did not use available resources to manage workload. Did not communicate and acknowledge workload and task distribution; did not demonstrate high level of vigilance in both high and low workload conditions; extremely slow to prepare for expected or contingency situations; created self-imposed workload/stress due to lack of planning. Failed to recognize and report work overloads in self and others.

Chapter 3

INSTRUCTOR (INSTR) EVALUATIONS

3.1. General. The INSTR grading criteria apply to initial, requalification, and all periodic INSTR evaluations. The examinee must demonstrate the ability to instruct in a safe and effective manner.

3.2. Requirements. Evaluate instructors on areas listed in **Table 3.1** Instructor candidates must be qualified in all areas they will instruct. Initial INSTR evaluations may be a stand-alone evaluation or accomplished in conjunction with a periodic INSTM/QUAL or QUAL/MSN evaluation. Accomplish periodic INSTR evaluations in conjunction with periodic INSTM/QUAL and QUAL/MSN evaluations IAW AFI 11-202V2 AFSOC Sup. If able, evaluate instructor candidates instructing actual students. Otherwise, the flight examiner may act as the student. Requalification INSTR evaluations are required any time the instructor qualification is lost, to include commander-directed downgrades.

3.3. INSTM Evaluations. Instrument instructor evaluations may be accomplished in the MC-130 or C-130. ***EXCEPTION***: MC-130H pilots will be evaluated in the MC-130H.

3.3.1. **Initial/Requalification.** Evaluate instructor candidates on instructor performance during a representative sample of basic maneuvers, emergency, and instrument procedures. The examiner will act as student during maneuvers that are considered high risk. ***NOTE:*** For the CAA Squadron, individuals are considered qualified instructors as C-130 INSTM instructors under the evaluation criteria set forth in AFI 11-2C-130V2.

3.3.2. **Periodic.** Qualified instructors will be evaluated to instructor standards during all periodic evaluations.

3.4. QUAL Evaluations. May be accomplished in the MC-130 or C-130.

3.4.1. **Initial/Requalification.** Evaluate instructor candidates on instructor performance during a representative sample of basic maneuvers, emergency, and instrument procedures. The examiner will act as student during maneuvers that are considered high risk. ***NOTE:*** For the CAA Squadron, individuals are considered qualified instructors, following differences training as C-130 QUAL instructors under the evaluation criteria set forth in AFI 11-2C-130V2.

3.4.1.1. Instructor pilot candidates must demonstrate each type of landing applicable to the aircraft from the instructor position.

3.4.2. **Periodic.** Qualified instructors will be evaluated to instructor standards during all periodic evaluations.

3.5. MSN Evaluations. Instructor evaluations will be accomplished in the crew member's primary aircraft.

3.5.1. **Initial/Requalification.** Evaluate instructional ability during a representative sample of mission events and emergency procedures. The examiner will act as student during maneuvers that are considered high risk. ***NOTE:*** For the CAA Squadron, individuals are considered qualified following differences training, except in areas restricted by the crew

position specific chapters of this instruction as C-130 MSN instructors under the evaluation criteria set forth in AFI 11-2C-130V2.

3.5.2. **Periodic.** Qualified instructors will be evaluated to instructor standards during all periodic evaluations.

Table 3.1. Instructor Evaluation Grading Areas (All Crew Positions).

Area	Notes	Grading Areas
20	2	Mission Preparation
21	1	Instructional Ability
22	2	Instructor Knowledge
23	2	Briefings/Debriefings/Critique
24	1	Demonstration of Maneuvers/Procedures
25-29		Reserved for future use
NOTES: 1. Required in-flight or simulator certified for this event 2. Required in-flight or alternate method		

3.6. Instructor Grading Criteria.

3.6.1. **Area 20. Mission Preparation.**

3.6.1.1. Q. Thoroughly reviewed student's training documentation. Ascertained student's present level of training; assisted student in pre-mission planning and allowed student time for questions; correctly prioritized training events; gave student a clear idea of mission training objectives.

3.6.1.2. Q-. Did not thoroughly review student's training folder or correctly ascertain student's present level of training; caused student to hurry pre-mission planning; poorly prioritized training events. Training plan/scenario made poor use of time.

3.6.1.3. U. Did not review student's training folder; did not ascertain student's present level of training. Did not assist student with pre-mission planning or did not allow time for questions; did not prioritize training events; failed to give student a clear idea of mission training objectives, methods, and sequence of events.

3.6.2. **Area 21. Instructional Ability.**

3.6.2.1. Q. Demonstrated proper instructor ability and communicated effectively; provided appropriate guidance when necessary. Planned ahead and provided accurate, effective, and timely instruction. Identified and corrected potentially unsafe maneuvers/situations.

3.6.2.2. Q-. Problems in communication or analysis degraded effectiveness of instruction; accomplished the above tasks with minor discrepancies that did not affect safety or adversely affect student progress.

3.6.2.3. U. Failed to effectively communicate, provide timely feedback. Performed or taught improper procedures/techniques/tactics 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.

3.6.3. **Area 22. Instructor Knowledge.**

3.6.3.1. Q. Demonstrated a high level of knowledge of all applicable aircraft systems, techniques, procedures, missions, publications, and tactics to be performed; completed appropriate training records accurately. Comments were clear and pertinent.

3.6.3.2. Q-. Minor errors/deficiencies in knowledge of above areas did not affect safety or adversely affect student progress; minor errors or omissions in training records. Comments were incomplete or slightly unclear.

3.6.3.3. U. Lack of knowledge of publications or procedures seriously detracted from instructor effectiveness; could not apply knowledge of above areas; did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.6.4. **Area 23. Briefings/Debriefings/Critique.**

3.6.4.1. Q. Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Showed an excellent ability during the critique 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.

3.6.4.2. Q-. Minor errors or omissions in briefings and/or critique did not affect safety or adversely affect student progress.

3.6.4.3. U. Briefings/debriefings were marginal or non-existent; major errors or omissions in briefings/debriefings. Did not review student past performance. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies; incomplete pre-briefing of student's next mission, if required.

3.6.5. **Area 24. Demonstration of Maneuvers/Procedures.**

3.6.5.1. Q. Effectively demonstrated procedures and techniques; provided concise, meaningful, and timely in-flight commentary. Had thorough knowledge of applicable aircraft systems, procedures, publications, and instructions.

3.6.5.2. Q-. Performed required maneuvers/procedures with minor deviations from prescribed parameters; in-flight commentary was sometimes unclear or poorly timed, interfering with student performance. Discrepancies in the above areas did not adversely affect safety or student progress.

3.6.5.3. U. Failed to properly perform required maneuvers/procedures; made major procedural errors. Did not provide in-flight commentary and/or in-flight commentary was incorrect or unsafe; insufficient knowledge of aircraft systems, procedures, and/or proper source material.

3.6.6. **Areas 25 - 29. Reserved for future use.**

Chapter 4

PILOT/COPILOT EVALUATIONS

4.1. General. All pilots and copilots require an INSTM and QUAL evaluation. MSN qualified pilots/copilots require a separate MSN evaluation. Copilots will be evaluated to the same area standards as pilots unless specified otherwise. Copilot crew coordination will not include duties and responsibilities expected of an AC.

4.1.1. Pilots will fly evaluations in their primary C-130 Mission Design Series (MDS) unless stated otherwise.

4.2. Requirements. Evaluate all general areas outlined in **Table 2.1** on all evaluations. Also, evaluate all instructors on areas in **Table 3.1** on all evaluations.

4.3. INSTM Evaluations. See **Table 4.1** for required INSTM evaluation areas. Requisite (prerequisite for initial/requalification evaluations) is Instrument examination. The INSTM evaluation will be conducted in-flight or in a WST. MC-130H pilots will not receive an initial, requalification, or periodic evaluation in the C-130.

4.3.1. The evaluation profile will include: one precision and one non-precision approach, holding or procedure turn, circling pattern, missed approach, and simulated engine-out instrument approach. ***NOTE:*** CAA individuals considered qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered qualified in the C-130 as described in this instruction.

4.3.2. **Initial/Requalification.** Individuals qualified in the MC-130E/H/P are considered qualified in the C-130 after completion of differences training.

4.3.3. **Periodic.** Evaluations may be conducted in the C-130, if the examinee is qualified/differences trained in the C-130 (N/A MC-130H).

4.4. QUAL Evaluations. See **Table 4.1** for required QUAL evaluation areas. Requisites (prerequisites for initial/requalification evaluations) include QUAL Open and Closed Book examinations (or Formal School End of Course (EOC) examinations), EPE, and Boldface examination. This evaluation is normally accomplished in combination with an INSTM evaluation. The QUAL evaluation will be conducted in-flight or in a WST.

4.4.1. The evaluation profile will include: Visual Flight Rules (VFR) pattern, 100%, 50%, and 0% flap landings (only ACs/first pilots/instructors will accomplish 0% flap landings), touch-and-go procedures, simulated engine-out go-around, and simulated engine-out landing.

4.4.2. **Initial/Requalification.** Individuals qualified in the MC-130E/H/P are considered qualified in the C-130 after completion of differences training. ***NOTE:*** CAA individuals considered qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered qualified in the C-130 as described in this instruction.

4.4.3. **Periodic.** Evaluations may be conducted in the C-130, if the examinee is qualified/differences trained in the C-130. In addition, CAA pilots multi-qualified on the C-130 and MC-130E/P may conduct periodic evaluation in the MC-130 E/P.

4.4.3.1. **Copilot.** Evaluate appropriate areas from the right seat.

4.4.3.2. **First pilot.** Evaluate appropriate areas from the left seat.

4.4.3.3. **Aircraft commander.** Evaluate appropriate areas from the left seat.

4.5. MSN Evaluations. See **Table 4.2** for MSN evaluation areas and subparagraph below for requirements. Requisites (prerequisites for initial and requalification evaluations) include MSN Open and Closed Book examinations (or Formal School EOC examinations) and EPE. MC-130E/H/P MSN qualified crew members will not take periodic MSN evaluations in the C-130.

4.5.1. **Initial.** The evaluation profile will include a low-level (type specified below by MDS) to a time on target/arrival (TOT/TOA), tactical recovery/self contained approach (SCA), max effort takeoff and landing (see **paragraph 4.5.4**), Night Vision Goggle (NVG) takeoff and landing, threat reaction, Computed Air Release Point (CARP) airdrop (actual or Standard Airdrop Training Bundle (SATB)), and events in the appropriate subparagraph below. TOT/TOA will be to one of the events above or Tanker Air Refueling. Copilots will accomplish a NVG takeoff and landing using normal procedures (non-ME).

4.5.1.1. MC-130E/H. Will include Instrument Meteorological Condition (IMC) or night mountainous terrain following (TF) and mountainous NVG low-level.

4.5.1.2. MC-130P. Will include mountainous NVG low-level and Tanker Air Refueling (see para **4.5.5**).

4.5.1.3. C-130. Will include mountainous NVG low-level. ***NOTE:*** CAA individuals considered qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered mission qualified in the C-130 as described in this instruction following HQ AFSOC-approved differences training, with the exception of NVG low-level (area 50B) and NVG infil/exfil (area 58). These areas must be evaluated during the flight phase of either a SPOT evaluation or a subsequent periodic MSN check in order for the pilot to be considered fully MSN qualified.

4.5.2. **Requalification.** Pilots requiring requalification through an ETCA formal school flying training course will use the initial profile described above in paragraph 4.5.1. In instances where a periodic evaluation was not completed in the eligibility period or the individual was unqualified for any reason up to a period of no greater than 24 months, the requalification profile will be IAW the guidance for that periodic evaluation (i.e., mountainous TF, formation, etc.), plus any additional training as directed by the squadron commander.

4.5.3. **Periodic.** The evaluation profile will include a low-level (type specified below by MDS) to a TOT/TOA, ME takeoff and landing (see **paragraph 4.5.4**), NVG takeoff and landing, threat reaction, and events in the appropriate subparagraph below. TOT/TOA events may be a CARP airdrop, Tanker Air Refueling, or tactical recovery/SCA. Mountainous terrain is not mandatory, but highly desirable. Never conduct consecutive evaluations without mountainous TF or mountainous NVG low-level. State in the comment section of the AF Form 8/8a if the evaluation was conducted in mountainous terrain and/or if an actual receiver was used. Once NVG takeoff and landing certified, copilots will accomplish a NVG takeoff and landing using normal procedures (non-ME).

4.5.3.1. MC-130E/H. Evaluation will include IMC or night TF. As a minimum, NVG low-level will be evaluated every other evaluation. Document in the comments section of the AF Form 8/8a when accomplished.

4.5.3.2. MC-130P. Tanker Air Refueling and NVG low-level are required every evaluation. For formation qualified pilots, formation NVG low-level and/or formation Tanker Air Refueling are highly desirable on periodic evaluations. As a minimum, formation NVG low-level or formation Tanker Air Refueling will be evaluated on every other evaluation. Document in the comments section of the AF Form 8/8a when accomplished.

4.5.3.3. C-130. Evaluation will include NVG low-level. Never conduct consecutive evaluations without mountainous. Document in the comments section of the AF Form 8/8a when accomplished.

4.5.4. **ME Takeoff and Landing.** This event is normally accomplished as part of the mission evaluation. For MSN evaluations, first pilots/copilots accomplish the ME takeoff and landing evaluation by demonstrating the duties required in the copilot position. As a minimum, thoroughly debrief first pilots/copilots on ME procedures. NVG takeoff and landing may be credited if flown to ME standards. ***NOTE*:** One go-around is permitted, provided the aircraft does not touch down short of the zone.

4.5.5. **Tanker Air Refueling.**

4.5.5.1. Initial. The evaluation profile will include a rendezvous, join-up, contact with an actual receiver (helicopter or CV-22), and a lost contact/no visual contact procedure. Copilots may be evaluated performing only copilot duties during rendezvous and join-up and will demonstrate flying ability during contact.

4.5.5.2. Periodic/Requalification. The evaluation profile will include a rendezvous, join-up, and contact procedures. Copilots may be evaluated performing only copilot duties during rendezvous and join-up and will demonstrate flying ability during contact. An actual receiver (helicopter or CV-22) is required at least every other evaluation (N/A MC-130E/H).

4.6. Special Qualification. See **Table 4.2** for Special Qualification grading area.

4.6.1. **Tanker Air Refueling (MC-130E/H).**

4.6.1.1. **Initial/Requalification.** The SPOT evaluation will include a rendezvous, join-up, contact with an actual receiver (helicopter or CV-22), and a lost contact/no visual contact procedure. Copilots may be evaluated performing only copilot duties during rendezvous and join-up and will demonstrate flying ability during contact. Once qualified/certified, pilots may be evaluated during periodic evaluations.

4.6.1.2. If a crew member goes unqualified in Tanker Air Refueling (either through lack of currency or not accomplished during periodic evaluation) then accomplish a requalification SPOT evaluation to regain qualification.

4.6.2. **Receiver Air Refueling.**

4.6.2.1. **Initial/Requalification.** The SPOT evaluation will include a rendezvous, join-up, contact, and breakaway.

4.6.2.2. AAR qualification is only required in one MC-130 or C-130 MDS. Once AAR qualified, AAR may be conducted in any MC-130 or C-130 in which the pilot is qualified/differences trained. Once qualified, pilots may be evaluated during periodic evaluations.

4.6.3. **Formation (MC-130P).**

4.6.3.1. **Initial/Requalification.** The SPOT evaluation will include mountainous NVG low-level and NVG Tanker Air Refueling option one/two (actual). An IMC break or Tanker Air Refueling lost contact/no visual contact procedure will be evaluated.

4.6.3.2. Once qualified, follow guidance in **paragraph 4.5.3.2**.

4.6.3.3. If a crew member goes unqualified in formation (either through lack of currency or not accomplished during periodic evaluation) then accomplish a requalification SPOT evaluation to regain qualification.

Table 4.1. Pilot/Copilot INSTM/QUAL Grading Areas.

Area	Notes	Grading Areas	QUAL	INSTM
30	1	Ground Operations/Taxi	X	
31	1	Takeoff	X	
32		Instrument Departure		X
33	1	En route Navigation/Use of NAVAIDs		X
34	1	Descent/Arrival Procedures		X
35	1	Holding/Procedure Turn		X
36	4	Precision Approach		
36a	1, 3	Precision Approach Radar (PAR)		X
36b	1	Instrument Landing System (ILS)		X
37	4	Non-Precision Approach		X
37a	1	Tactical Air Navigation (TACAN)		X
37b	1	Very High Frequency (VHF) Omni-Directional Range (VOR)		X
37c	1	Localizer (LOC)		X
37d	1	Nondirectional Radio Beacon ((NDB)		X
37e	1, 3	Airport Surveillance Radar (ASR)		X
38	1	Circling/Side-Step Approach		X
39	1	Engine-Out Approach		X
40	1	Missed Approach/Go-Around		X
41	1	Engine-Out Go-Around	X	
42	1	VFR Pattern	X	
43		Final Approach and Landing		
43a	1	100 Percent Flap Landing	X	
43b	1	50 Percent Flap Landing	X	
43c	1, 2	No Flap Landing	X	
43d	1	Engine-Out Landing	X	
43e	1	Touch-and-Go Landing	X	
44		Fuel Conservation	X	

Area	Notes	Grading Areas	QUAL	INSTM
45		Systems Operations/Knowledge/Limitations/National Airspace System (NAS)	X	X
46-49		Reserved for future use		

NOTES:
1. Required in-flight or simulator certified for this event.
2. Aircraft commanders/first pilots/instructors only.
3. Only one of the two required approaches may be controller directed (PAR/ASR).
4. Any one required.

Table 4.2. Pilot/Copilot MSN and Special Qualification Grading Areas.

Area	Notes	Grading Areas	MSN	Special Qual
50		Low-level Operations		
50a	2	Low-level – TF (MC-130E/H)	X	
50b	2	Low-level – NVG	X	
51	2	Threat Avoidance/Tactics	X	
52	2	Airdrop Procedures	X	
53	2, 6, 8	Tanker Air Refueling	X	X
54	1, 5, 8	Receiver Air Refueling		X
55	2, 4	Tactical Recovery	X	
56	2, 5	Maximum Effort Takeoff	X	
57	2, 5	Maximum Effort Landing	X	
58	2	NVG Airland	X	
59	2, 7, 8	Formation		X
60	3	Systems Operations/Knowledge/Limitations	X	X
61	3, 9	Authentication/Encode-Decode Procedures	X	
62-99		Reserved for future use		

NOTES:
1. Required in-flight.
2. Required in-flight or simulator certified for this event.
3. Required in-flight or alternate method.
4. Aircraft commanders/instructors only.
5. Copilots perform copilot duties only.
6. HAAR/TAAR is a special qualification for MC-130E/H pilots/copilots.
7. MC-130P only.
8. Optional for CAA Squadrons.
9. Required MC-130H only.

4.7. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 4.1** and **Table 4.2**

4.7.1. **Area 30. Ground Operations/Taxi.**

4.7.1.1. Q. Established and adhered to station, start engine, taxi, and take-off time to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight; completed all systems preflight/post-flight inspections, and checklists IAW flight manual; conducted taxi operations according to flight manual, AFI 11-218, *Aircraft Operations and Movement on the Ground*, and local procedures.

4.7.1.2. Q-. Same as above except for minor procedural deviations that did not detract from mission effectiveness.

4.7.1.3. U. Failed to accurately determine readiness of aircraft for flight; major deviations in procedure that would preclude safe mission accomplishment. Crew errors directly contributed to a late takeoff that degraded the mission or made it ineffective; omitted checklist items.

4.7.2. **Areas 31 through 34.** Use the following general grading criteria for all phases of flight except as noted for specific events and instrument final approaches.

4.7.2.1. Q.

4.7.2.1.1. Altitude ± 200 feet (’)

4.7.2.1.2. Airspeed +10/- 5 knots (kts) (but not less than Vmca)

4.7.2.1.3. Course ± 5 degrees/3 NM (whichever is greater)

4.7.2.2. Q-.

4.7.2.2.1. Altitude ± 300’

4.7.2.2.2. Airspeed +15/- 5 kts (but not less than Vmca)

4.7.2.2.3. Course ± 10 degrees/5 NM (whichever is greater)

4.7.2.3. U.

4.7.2.3.1. Exceeded Q- criteria

4.7.3. **Area 31. Takeoff.**

4.7.3.1. Q. Maintained smooth, positive aircraft control throughout takeoff; performed takeoff IAW flight manual and as published/directed.

4.7.3.2. Q-. Minor deviations from published procedures without affecting safety of flight; aircraft control was safe but not consistently smooth and positive; hesitant in application of procedures or corrections.

4.7.3.3. 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; exceeded Q- criteria.

4.7.4. **Area 32. Instrument Departure.**

4.7.4.1. Q. Performed departure IAW published procedures and directives. Complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly. Demonstrated smooth, positive aircraft control.

4.7.4.2. 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.

4.7.4.3. U. Instrument departure was not IAW technical orders, directives, or published procedures. Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance; aircraft control was erratic.

4.7.5. **Area 33. En Route Navigation/Use of Navaids.**

4.7.5.1. Q. Able to navigate using all available means; used appropriate navigation procedures. Ensured navaids were properly tuned, identified, and monitored; complied with clearance instructions. Aware of position at all times; remained within the confines of assigned airspace.

4.7.5.2. Q-. Minor errors in procedures/use of navigation equipment; some deviations in tuning, identifying, and monitoring navaids were observed. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course; slow to adjust for deviations in time and course.

4.7.5.3. U. Major errors in procedures/use of navigation equipment; did not ensure navaids were tuned, identified and monitored; 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.

4.7.6. **Area 34. Descent/Arrival Procedures.**

4.7.6.1. Q. Performed descent as directed; complied with all flight manual, controller issued, or Standard Terminal Arrival Routing (STAR) restrictions in a proficient manner; accomplished all required checks.

4.7.6.2. Q-. Performed descent as directed with minor deviations that did not compromise mission safety; slow to comply with controller instructions and accomplish required checks.

4.7.6.3. U. Performed descent with major deviations; failed to follow controller instructions or made erratic corrections. Exceeded flight manual limitations or did not accomplish required checks.

4.7.7. **Area 35. Holding/Procedure Turn.**

4.7.7.1. Q. Performed entry and holding IAW published procedures and directives. Holding pattern limits exceeded by not more than:

4.7.7.1.1. VOR leg timing: ± 15 seconds

4.7.7.1.2. TACAN: ± 2 NM

4.7.7.2. Q-. Performed entry and holding procedures with minor deviations. Holding pattern limit exceeded by not more than:

4.7.7.2.1. VOR leg timing: ± 30 seconds

4.7.7.2.2. TACAN: ± 3 NM

4.7.7.3. U. Holding was not IAW technical orders, directives, or published procedures; exceeded Q- holding pattern limits.

4.7.8. **Area 36. Precision Approach Radar (PAR or ILS)** ***NOTE:*** Use the following criteria as general tolerances for airspeed, altitude, heading, glide slope, and azimuth. Airspeed tolerances are based on computed approach speed.

4.7.8.1. Q.

4.7.8.1.1. Airspeed: +10/-5 kts

4.7.8.1.2. Heading: ± 5 degrees of controller's instructions (PAR)

4.7.8.1.3. Glide slope: Within one dot (ILS)

4.7.8.1.4. Azimuth: Within one dot (ILS)

4.7.8.2. Q-.

4.7.8.2.1. Airspeed: +15/-10 kts

4.7.8.2.2. Heading: ± 10 degrees of controller's instructions (PAR)

4.7.8.2.3. Glide slope: Within one dot low, two dots high (ILS), after runway was in sight examinee momentarily deviated below glide path but corrected for a safe landing ("duck under").

4.7.8.2.4. Azimuth: Within two dots (ILS)

4.7.8.3. U.

4.7.8.3.1. Exceeded Q- criteria.

4.7.8.4. **Subarea 36a. PAR.**

4.7.8.4.1. Q. Approach was IAW flight manual, directives, and published procedures; smooth and timely response to controller's instructions; established initial glide path and maintained glide slope with minor deviations; complied with decision height; position would have permitted a safe landing. Elevation did not exceed slightly above or slightly below glide path.

4.7.8.4.2. Q-. Performed approach with minor deviations. Slow to respond to controller's instructions and make corrections. Position would have permitted a safe landing. Elevation did not exceed well above or well below glide path.

4.7.8.4.3. U. Approach not IAW flight manual, directives, or published procedures. Erratic course and glide slope corrections. Did not make corrections or react to controller's instructions. Did not comply with decision height and/or position would not have permitted a safe landing. Exceeded Q- limits.

4.7.8.5. **Subarea 36b. ILS.**

4.7.8.5.1. Q. Approach was IAW flight manual, directives, and published procedures. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position permitted a safe landing.

4.7.8.5.2. Q-. Performed procedures with minor deviations; slow to make corrections or initiate procedures. Slow to comply with decision height. Position would have permitted a safe landing.

4.7.8.5.3. U. Approach not IAW flight manual, directives, or published procedures; erratic course/glide slope corrections. Did not comply with decision height or position would not have permitted a safe landing; exceeded Q- criteria.

4.7.9. **Area 37. Non-Precision Approach.**

4.7.9.1. Q. Approach was IAW flight manual, directives, and published procedures. Used appropriate descent rate to arrive at Minimum Decision Altitude (MDA) at or before Visual Descent Point (VDP). Position permitted a safe landing; smooth and timely response to controller's instructions (ASR).

4.7.9.1.1. Airspeed: +10/-5 kts

4.7.9.1.2. Heading: ±5 degrees (ASR)

4.7.9.1.3. Course: ±5 degrees at MAP (TAC, VOR, NDB), less than one dot deflection (LOC)

4.7.9.1.4. MDA: +100'/-0'

4.7.9.1.5. MAP: Timing computed/adjusted within 10 seconds or distance within ± .5 NM

4.7.9.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP; position would have permitted a safe landing. Slow to respond to controller's instructions and make corrections (ASR).

4.7.9.2.1. Airspeed: +15/-10 kts

4.7.9.2.2. Heading: ±10 degrees (ASR)

4.7.9.2.3. Course: ±10 degrees at MAP (TAC, VOR, NDB)

4.7.9.2.4. Localizer: Within two dots deflection

4.7.9.2.5. MDA: +150'/-50'

4.7.9.2.6. MAP: Timing computed/adjusted within 20 seconds or distance within +1/-.5NM

4.7.9.3. U. Approach not IAW flight manual, directives, or published procedures; maintained steady-state flight below the MDA, even though the -50' limit was not exceeded. Could not land safely from approach and did not initiate missed approach/go-around when appropriate or directed; exceeded Q- criteria.

4.7.9.4. **Area 37a. TACAN.**

4.7.9.5. **Area 37b. VOR.**

4.7.9.6. **Area 37c. LOC.**

4.7.9.7. **Area 37d. NDB.**

4.7.9.8. **Area 37e. ASR.**

4.7.10. **Area 38. Circling/Side-Step Approach.**

4.7.10.1. 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 with out 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.

4.7.10.1.1. Airspeed: +10/-5 kts

4.7.10.1.2. Altitude: +100'/-0'

4.7.10.2. Q-. Slow to comply with controller's instructions. Attained runway alignment but occasionally required excessive bank angles or maneuvering.

4.7.10.2.1. Airspeed: +15/-10 kts

4.7.10.2.2. Altitude: +150'/-50'

4.7.10.3. 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 position for a normal glide path or landing; exceeded Q- criteria.

4.7.11. **Area 39. Engine-Out Approach.**

4.7.11.1. Q. Performed procedures IAW the flight manual and associated directives; individual technique complied with established procedures. Proper control inputs were used to correct asymmetric condition. Aircraft was properly trimmed. Proper consideration was given to maneuvering with regard to the "dead" engine.

4.7.11.2. Q-. Minor deviations in procedures/aircraft control allowed the aircraft to occasionally be in uncoordinated flight; unnecessary maneuvering due to minor errors in planning or judgment.

4.7.11.3. U. Major/unsafe deviations from procedures; individual technique unsafe or violated established procedures; aircraft was not properly trimmed. Aircraft control consistently resulted in uncoordinated flight; potentially unsafe maneuvering with regard to the "dead" engine.

4.7.12. **Area 40. Missed Approach/Go-Around.**

4.7.12.1. Q. Executed missed approach IAW published procedures and restrictions. Initiated and performed go-around promptly; complied with controller's instructions; applied smooth control inputs. Attained and maintained a positive climb.

4.7.12.2. Q-. Executed missed approach with minor deviations to published procedures/directives; was slow or hesitant to initiate go-around. Slow to respond to controller's instructions; slightly over-controlled the aircraft.

4.7.12.3. U. Did not execute missed approach IAW technical orders, directives or published procedures; did not comply with controller's instructions. Deviations or misapplication of procedures could have led to an unsafe condition; exceeded Q- criteria.

4.7.13. **Area 41. Engine-Out Go-Around.** ***NOTE:*** Use Area 40 criteria and the following.

4.7.13.1. Q. Applied smooth, coordinated control inputs; rudder and aileron inputs were in the correct direction; maneuvered appropriately with regard to the "dead" engine. Individual technique complied with established procedures.

4.7.13.2. Q-. Rudder and aileron inputs were in correct direction but some over/under control. Individual techniques were safe, but detracted from the maneuver.

4.7.13.3. U. Rudder and/or aileron inputs were incorrect; maneuvering with regard to the "dead" engine potentially unsafe. Failed to comply with/consider minimum control speeds; individual technique unsafe or violated established procedures.

4.7.14. **Area 42. VFR Pattern.**

4.7.14.1. Q. Adhered to published restrictions/local guidance. Performed traffic pattern and turn to final/final approach IAW flight manual procedures. Aircraft control was smooth and positive. Did not over/under-shoot final; constantly cleared area of intended flight.

4.7.14.2. Q-. Minor deviations from published restrictions/local guidance; performed traffic pattern and turn to final/final approach with minor deviations to procedures; aircraft control was safe but not consistently smooth and positive. Over/under-shot final approach slightly but was able to intercept a normal glide path; adequately cleared area of intended flight.

4.7.14.3. U. Major/unsafe deviations from published restrictions/local guidance; did not perform traffic pattern and turn to final/final approach IAW technical orders, directives or published procedures. Displayed erratic aircraft control; over/under-shot final approach by a wide margin requiring a go-around or potentially unsafe maneuvering on final; did not clear area of intended flight; exceeded Q- criteria.

4.7.15. **Area 43. Final Approach and Landing.**

4.7.15.1. **Areas 43a through 43e.** Use the following criteria. ***NOTE:*** The following criteria are written to generally apply to all landings. Flight examiners must apply these criteria judiciously to allow for the unique characteristics of each type of landing. Where runway configuration, arresting cable placement, or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glide slope from either the decision height or from a point where visual acquisition of the runway environment is made. Specific items to evaluate include threshold altitude/airspeed, runway alignment, flare, touchdown speed, and landing crab.

4.7.15.1.1. Q. Performed landing as published/directed IAW flight manual. Crossed threshold at threshold speed ± 5 knots at proper attitude; smooth and positive aircraft control throughout the round out and flare; touched down with no crab, and not more than 15 feet left or right of centerline; complied with flight manual procedures for the use of brakes and reverse thrust. Met the following criteria:

4.7.15.1.1.1. Touchdown Speed: ±5 kts

4.7.15.1.1.2. Touchdown Point: Within 1,000' of intended touchdown point.

4.7.15.1.2. Q-. Performed landing with minor deviations to procedures as published/directed. Crossed threshold at threshold speed +10/-5 kts slightly high or low but no compromise of safety; touched down not more than 25' left or right of centerline. Exceeded Q criteria but not the following:

4.7.15.1.2.1. Touchdown Speed: +10/-5 kts

4.7.15.1.2.2. Touchdown Point: Threshold-3000'

4.7.15.1.3. U. Landing not performed as published/directed. Failed to comply with flight manual procedures for the use of brakes and reverse thrust; exceeded Q-criteria.

4.7.15.2. **Area 43a. 100 Percent Flap Landing.**

4.7.15.3. **Area 43b. 50 Percent Flap Landing.**

4.7.15.4. **Area 43c. No Flap Landing.**

4.7.15.5. **Area 43d. Engine-Out Landing.**

4.7.15.6. **Area 43e. Touch-and-Go Landing.**

4.7.16. **Area 44. Fuel Conservation.**

4.7.16.1. 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; successfully applied fuel conservation procedures during the mission.

4.7.16.2. Q-. Possessed some knowledge of applicable aircraft publications and other governing directives and understood how to apply both to enhance fuel conservation. Successfully applied some fuel conservation procedures, but missed several opportunities to apply fuel conservation procedures during the mission.

4.7.16.3. U. Unaware of fuel conservation procedures; failed to apply any fuel conservation procedures during the mission.

4.7.17. **Area 45. Systems Operation/Knowledge/Limitations/NAS.**

4.7.17.1. Q. Demonstrated and/or explained a complete knowledge of aircraft systems operations, limitations, and proper procedural use of systems; demonstrated complete knowledge of and complied with NAS rules and procedures in all areas of mission planning and flight operations.

4.7.17.2. Q-. Marginal knowledge of aircraft systems operations and limitations in some areas; used individual technique instead of established procedures and was unaware of differences; marginal knowledge of NAS rules and procedures.

4.7.17.3. U. Unsatisfactory systems knowledge; failed to demonstrate and/or explain the procedures for aircraft system operations; unsatisfactory knowledge of NAS rules and procedures.

4.7.18. **Areas 46 - 49. Reserved for future use.**

4.7.19. **Area 50. Low-level Operations.**

4.7.19.1. **Area 50a. Low-level – TF (MC-130E/H).**

4.7.19.1.1. Q. Planned and flew a route to minimize risk to aircraft and crew for a given mission using TF procedures IAW governing directives and appropriate tactics, techniques and procedures (TTP). Avoided excessive or numerous low altitude warnings. Maintained airspeed ± 10 kts IAW navigator inputs; airspeed deviations greater than ±10 kts are allowed for energy management (N/A MC-130H).

4.7.19.1.2. Q-. Numerous low altitude warnings (obstacle warning, climb calls, etc.) experienced but no significant compromise to safety; minor deviations from TTP.

4.7.19.1.3. U. Had excessive amount of low altitude warnings and airspeed deviations from navigator inputs; major/unsafe deviations from established directives and appropriate TTP.

4.7.19.2. **Area 50b. Low-level – NVG**

4.7.19.2.1. Q. Planned and flew a route to minimize risk to aircraft and crew for a given mission using NVG procedures IAW governing directives and appropriate TTP. Avoided excessive or numerous low altitude warnings; appropriately assisted navigator with TOT/TOA control; maintained airspeed commensurate with navigator inputs; flew appropriate profile for terrain and environmental conditions.

4.7.19.2.2. Q-. Had numerous low altitude warnings but no significant compromise to safety; minor deviations from TTPs and airspeed profile.

4.7.19.2.3. U. Had excessive amount and/or excessively low altitude warnings; major/unsafe deviations from established directives and appropriate TTP.

4.7.20. **Area 51. Threat Avoidance/Tactics.**

4.7.20.1. Q. Able to formulate a plan of action to avoid lethal range of given threat system; executed the proper evasive maneuver in a timely manner when given an immediate threat. Adequately analyzed and degraded all threats ensuring effective mission accomplishment; demonstrated satisfactory knowledge of defensive systems/tactics; aware of appropriate tactics to avoid threats and exposure.

4.7.20.2. Q-. Made minor errors in avoiding the lethal range of a given threat system which did not compromise mission accomplishment; slow to execute the proper evasive maneuver; minor errors in threat analysis or tactics selection; limited knowledge of defensive systems.

4.7.20.3. U. Did not avoid lethal range of given threat system; did not execute an effective evasive maneuver when given an immediate threat; failed to ensure mission effectiveness by not adequately analyzing or degrading threat; not aware of appropriate tactics for specific threats or terrain. Knowledge of defensive systems was unsatisfactory.

4.7.21. **Area 52. Airdrop Procedures.**

4.7.21.1. Q. Complied with all published/briefed procedures; correctly identified the Drop Zone (DZ) and made appropriate corrections to fine-tune the track. Track was flown IAW mission plan or as updated by crew. Aircraft configuration was correct. Escape was executed IAW published or briefed procedures.

4.7.21.1.1. Airspeed: ± 5 kts

4.7.21.1.2. Altitude: + 50’/-0’

4.7.21.2. Q-. Had minor deviations in published/briefed procedures; identified the DZ late despite clear marking and sufficient landmarks. Alignment was satisfactory but tended to angle. Minor errors in escape procedures but did not affect mission accomplishment.

4.7.21.2.1. Airspeed: + 10/-10 kts

4.7.21.2.2. Altitude: + 100’/-50’

4.7.21.3. U. Had major deviations to published/briefed procedures which adversely affected mission accomplishment; was unable to identify DZ due to poor technique or pilot error. Did not fly proper alignment or was unaware of alignment error. Mission not accomplished due to aircraft configuration, poor DZ acquisition, alignment, or deviation from procedures, caused by pilot error or omission; did not recognize a no-drop situation.

4.7.22. **Area 53. Tanker Air Refueling (HAAR/TAAR).**

4.7.22.1. Q. Performed rendezvous, join-up, and contact procedures as published/directed; maintained positive aircraft control throughout the refueling event; responded quickly and accurately to situations requiring an emergency breakaway.

4.7.22.1.1. Airspeed: ± 5 kts

4.7.22.1.2. Heading/Course: ±10 degrees

4.7.22.1.3. Altitude: ± 100’

4.7.22.2. Q-. Performed procedure with minor deviations; slow to make aircraft attitude corrections. Aircraft control was not consistently smooth and positive.

4.7.22.2.1. Airspeed: + 10/- 5 kts

4.7.22.2.2. Heading/Course: ± 20 degrees

4.7.22.2.3. Altitude: ± 150’

4.7.22.3. U. Refueling not performed IAW flight manual, directives, or published procedures; made erratic corrections throughout the aerial refueling; did not respond accurately to situation requiring emergency breakaway; exceeded Q- criteria.

4.7.23. **Area 54. Receiver Air Refueling.**

4.7.23.1. Q. Accomplished effective rendezvous using proper procedures; demonstrated effective/appropriate use of radio communications for briefed Emitter Condition (EMCON) level. Expeditiously established and maintained aircraft proper position. Positive/smooth aircraft control. Maintained the contact position for 10 minutes (at least 5 minutes continuous) with no more than one pilot-induced disconnect.

4.7.23.2. Q-. Rendezvous delayed by improper techniques, procedures or radio communications. Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate; accomplished published/directed procedures with deviations or omissions that did not affect the successful completion of air-to-air refueling. Maintained the contact position for at least 10 minutes with no more than two pilot-induced disconnects.

4.7.23.3. U. Displayed lack of knowledge or familiarity with procedures to the extent that air-to air-refueling was or could have been jeopardized; failed rendezvous as a result of improper procedures; spent excessive time in trail; aircraft control in the pre-contact/refueling position was erratic or unsafe; made deviations or omissions that affected flight safety and/or the successful completion of the air to air refueling; used unacceptable procedures. Performance caused more than two pilot-induced disconnects and/or delayed mission accomplishment.

4.7.24. **Area 55. Tactical Recovery.** ***NOTE:*** Includes SCAs, overheads, downwind, random steep/shallow.

4.7.24.1. Q. Followed procedures as briefed and IAW flight manual, directives, or published procedures; displayed smooth, positive control throughout the recovery; positioned aircraft to intercept glide path for normal landing; gave proper consideration to threat location and adjusted pattern accordingly; constantly cleared area of intended flight.

4.7.24.2. Q-. Performed recovery with minor deviations to published procedures; aircraft control was not consistently positive and smooth. Over/under-shot final approach slightly but was able to intercept glide path for normal landing.

4.7.24.3. U. Recovery not performed IAW flight manual, directives, or published procedures. Displayed erratic aircraft control; over/under-shot final approach, requiring a go-around or potentially unsafe maneuvering to intercept final; failed to consider threat location or proximity and/or maneuvering could have placed the aircraft within lethal range of given threat system; did not clear area of intended flight.

4.7.25. **Area 56. ME Takeoff.**

4.7.25.1. Q. Displayed satisfactory knowledge of assault procedures; could describe and apply terms such as acceleration check speed, Minimum Field Length for Maximum Effort Take-Off (MFLMETO), three-engine Vmca, etc. Thoroughly analyzed departure/landing runway and surrounding terrain. Reviewed all applicable Takeoff and Landing Data (TOLD) and thoroughly briefed crew on their duties; maintained smooth positive control throughout departure roll and takeoff; climbed on speed and decreased angle or attack once clear of obstacle.

4.7.25.2. Q-. Minor deviations in knowledge or published procedures; minor errors in describing or applying above terms; minor errors or omissions in TOLD or crew briefing. Control inputs were abrupt. Minor deviations from published/briefed procedures did not jeopardize safety.

4.7.25.3. U. Procedures not IAW flight manual, directives, or published procedures. Failed to analyze assault zone constraints or verbalize concerns posed by terrain or other factors. Could not describe or apply above terms; major errors in TOLD data review or crew briefing; displayed unsatisfactory knowledge of assault procedures. Takeoff was not IAW with flight manual, directives, or published procedures; did not use Vmca when conditions permitted; raised flaps too quickly with relation to airspeed. Performance of maneuver jeopardized safety.

4.7.26. **Area 57. ME Landing.**

4.7.26.1. Q. Adhered to published procedures; maintained smooth approach path; used proper aim points with positive corrections, as necessary; touched down on centerline within the zone (defined as the marked 500' zone or prebriefed 500' zone if instrument markings are used) without excessive bouncing or crab. Maintained runway centerline during rollout; stopped at prebriefed location or exited the runway at prebriefed location.

4.7.26.1.1. Airspeed: ± 5 kts

4.7.26.2. Q-. Minor deviations to published procedures; aim point/aircraft alignment wandered or corrections were not smooth or timely. Landed in zone but had excessive bouncing or crab.

4.7.26.2.1. Airspeed: + 10/- 5 kts

4.7.26.3. U. Touchdown short of the landing zone; touchdown beyond the landing zone and did not execute a go-around. Touchdown/rollout was more than 10' from centerline. Failed to stop at prebriefed location or exit the runway at prebriefed location.

4.7.27. **Area 58. NVG Airland.** ***NOTE:*** NVG Airland may be evaluated utilizing normal or maximum effort procedures.

4.7.27.1. For non-ME NVG Airland operations use following areas for detailed criteria:

4.7.27.1.1. Area 31 – Takeoff

4.7.27.1.2. Area 43 – Landing

4.7.27.1.3. Area 40 – Missed Approach/Go-Around. ***NOTE:*** If using ME procedures during NVG Airland Procedures, additionally use Areas 56 and 57.

4.7.27.2. Q. Takeoff, landing, and missed approach criteria listed were not exceeded; displayed satisfactory knowledge of procedures. Thoroughly analyzed departure/landing runway and surrounding terrain.

4.7.27.3. Q-. Minor deviations in knowledge or published procedures; errors did not affect safety or mission accomplishment.

4.7.27.4. U. Procedures not IAW flight manual, directives, or published procedures. Failed to analyze constraints or verbalize concerns posed by terrain or other factors. Could not describe or apply above terms; displayed unsatisfactory knowledge of procedures; major errors impacting safety and mission accomplishment.

4.7.28. **Area 59. Formation.**

4.7.28.1. Q. Executed IMC breaks IAW directives and appropriate TTP in a safe and timely manner. Performed helicopter lost contact procedures IAW flight manual, directives, or published procedures. Lead: Established and maintained appropriate formations utilizing published and briefed procedures. Smooth controls/power inputs and considered wingman. Planned ahead and made timely decisions. Wing: Maintained position IAW published and briefed procedures. Demonstrated smooth and immediate position corrections and maintained safe separation. Rejoins were smooth and timely.

4.7.28.2. Q-**.** Slow to execute IMC break or lost contact procedures or accomplished maneuver with minor errors. Flight safety was not compromised. Lead: Made minor deviations from briefed or published procedures; maneuvered excessively making it

difficult for wingman to maintain position; did not plan ahead or hesitant to make decisions. Wing: Minor deviations to published procedures. Slow to rejoin; varied position considerably.

4.7.28.3. U. Failed to execute IMC break or lost contact procedures when required or executed maneuver in an unsafe manner. Lead: Flight not accomplished IAW published and/or briefed procedures. Continually rough on controls and/or maneuvered erratically causing wing-man to overrun formation; little wingman consideration; indecisive. Wing: Failed to maintain formation position; did not maintain safe separation. Rejoin unsafe.

4.7.29. **Area 60. Systems Operation/Knowledge/Limitations.**

4.7.29.1. Q. Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems.

4.7.29.2. Q-. Marginal knowledge of aircraft systems operations and limitations in some areas; used individual technique instead of established procedures and was unaware of differences.

4.7.29.3. U. Unsatisfactory systems knowledge; failed to demonstrate/explain the procedures for aircraft system operations.

4.7.30. **Area 61. Authentication/Encode-Decode Procedures (MC-130H).**

4.7.30.1. Q. Thorough knowledge of authentication/encode-decode materials and procedures; correct/timely authentication procedures. Correct/timely encode-decode procedures when required. Correct authentication/encode-decode materials were always readily at hand.

4.7.30.2. Q-. Limited knowledge of authentication/encode-decode materials and procedures which did not affect mission accomplishment; correct but slow authentication which did not affect mission accomplishment; correct but slow encode-decode procedures which did not affect mission accomplishment.

4.7.30.3. U. Unsatisfactory knowledge of authentication/encode-decode materials and procedures; incorrect or excessively slow authentication; failed to encode-decode when required. Authentication/encode-decode materials were not readily available or were incorrect.

4.7.31. **Areas 62 - 99. Reserved for future use.**

Chapter 5

NAVIGATOR (NAV) EVALUATIONS

5.1. General. Mission qualified NAVs require a combined QUAL/MSN evaluation. NAVs maintaining only basic qualification require a QUAL evaluation. Instructors will demonstrate instructor duties on all periodic evaluations.

5.2. Requirements. Evaluate all general areas outlined in **Table 2.1** on all evaluations. Also, evaluate all instructors on areas in **Table 3.1** on all evaluations.

5.3. QUAL Evaluation. In addition to areas listed in **Table 2.1** and **Table 3.1**, QUAL evaluations will include Note 3 areas in **Table 5.1**

5.3.1. **Initial/Requalification.** NAVs require an initial QUAL evaluation in any variant of the M/C-130. The evaluation profile consist of a minimum of two hours using navigation procedures for flights in oceanic airspace were the distance between the last suitable and first suitable airfield is greater than 5 hours. ***NOTE:*** CAA individuals qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered qualified in the C-130 as described in this instruction.

5.3.2. **Periodic.** Periodic QUAL evaluations may be on a C-130 or MC-130. Complete evaluation as outlined in paragraph **5.3.1** NAVs with two or more years of experience in C-130s may accomplish their periodic QUAL evaluation in an operational flight trainer (OFT), aircrew training device (ATD), WST, or satellite navigation station (SNS) simulator. Do not conduct two consecutive evaluations in an approved aircrew training device.

5.4. QUAL/MSN Evaluations. In addition to areas listed in **Table 2.1** and **Table 3.1**, MSN evaluations will include areas in **Table 5.1** The Tanker Air Refueling rendezvous can be to an actual helicopter or another C-130 flying Tanker Air Refueling airspeeds. At a minimum, annotate the following on the AF Form 8/8a Section IV Comments: the type of drop conducted, drop score, TOT/TOA, type of low-level flown, and if it was conducted in mountainous terrain. MC-130P NAVs will demonstrate proficiency in both the left and right navigator positions. Accomplish C-130 MSN evaluations using MC-130 criteria without the Tanker Air Refueling requirement.

5.4.1. **Initial/Requalification:** Required in-flight events include at least 60 minutes of mountainous NVG/TF low-level to a tactical event. A tactical event is considered to be Tanker Air Refueling, airdrop, or SCA. Though only one TOT/TOA is required, all three events must be observed. ***EXCEPTION***: MC-130E/H does not require Tanker Air Refueling to be observed on initial/requalification evaluation. The navigator must be acting as the primary navigator and actively directing the aircraft during the low-level (***NOTE*:** MC-130E Left and Right NAVs are both considered primary NAVs). Mountainous low-level is required. If the timed tactical event is a high speed airdrop or Tanker Air Refueling, then a separate slow speed TOT/TOA is required. In that case, the evaluator will determine the length of the additional low-level.

5.4.1.1. NAVs requiring requalification for an unqualified period requiring an ETCA formal school flying training course use the initial/requalification profile described above

in paragraph 5.4.1. with the following exception: The low-level must be at least 30 minutes.

5.4.1.2. If a periodic evaluation is not completed within the eligibility period, the navigator requires a requalification evaluation. The evaluation profile will be IAW the guidance for that periodic evaluation and **paragraph 5.4.2**, plus any additional training as directed by the squadron commander.

5.4.1.3. C-130. CAA individuals mission qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered mission qualified in the C-130 as described in this instruction, following AFSOC approved differences training, with the exception of areas 102 (SCA Data/Charts), 114 (SCA procedures), and 127 (Low-Level NVG). These areas must be evaluated during the flight phase of either a SPOT evaluation or a subsequent periodic MSN check in order for the navigator to be considered qualified.

5.4.2. **Periodic.** Required in-flight events are the same as initial/requalification evaluations noted above with the following exceptions: The low-level must be at least 30 minutes. A TOT/TOA and threat reaction is required on all periodic evaluations. The TOT/TOA may be timed to a high speed airdrop, Tanker Air Refueling, or slow speed event. A tactical event is considered to be Tanker Air Refueling, airdrop, or SCA. Two different tactical events will be observed. Though only two tactical events are required, all three are preferable. The third event, if not observed in flight, will be evaluated through an alternate method. Do not miss the same tactical event on consecutive evaluations. Do not conduct two consecutive evaluations in non-mountainous terrain.

5.5. Special Qualification Evaluations.

5.5.1. **Tanker Air Refueling (MC-130H).**

5.5.1.1. **Initial/Requalification.** The SPOT evaluation will include a rendezvous, join-up, contact with an actual receiver (helicopter or CV-22), and a lost contact/no visual contact procedure. Once qualified/certified, NAVs may be evaluated during periodic evaluations. If a crew member goes unqualified in Tanker Air Refueling (either through lack of currency or not accomplished during periodic evaluation) then accomplish a requalification evaluation to regain qualification.

Table 5.1. NAV QUAL/MSN Grading Areas.

Area	Notes	Grading Areas
100	2, 3	Flight Plan/Charts
101	2	Airdrop Data/Charts
102	2	SCA Data/Charts
103	2, 3	Fuel Planning
104	2, 3	Departure
105	1	Low-level Navigation Procedures
106	2, 3	Radio Navigation
107	2, 3	Radar Navigation/Weather Avoidance
108	1	Low-level Radar Navigation
109	2, 3	Navigation Systems

Area	Notes	Grading Areas
110	2, 3	True Airspeed (TAS) Check
111	2, 3	High Altitude Course and Estimated Time of Arrival (ETA) Tolerance
112	2, 3	Fuel Management
113	2, 3	Descent/Approach/Landing
114	1	SCA Procedures
115	2	Tactical Planning (C-130, MC-130P)
116	2	Defensive Systems Knowledge/Employment (C-130, MC-130P)
117	2	In-flight Threat Analysis/Maneuvers
118	2, 4	Receiver Air Refueling Procedures
119	2, 4	Tanker Air Refueling Procedures
120	1	In-flight CARP Reevaluation
121	1	Slowdown
122	1	DZ Acquisition (Visual Airdrop)
123	1	DZ Alignment
124	1	Airdrop Procedures
125	1	Escape
126	1	Low-level-TF/Terrain Avoidance (TA) (MC-130E/H)
127	1	Low-level-NVG
128	1	Altitude Calibration
129	2, 4	Formation
130	1	TOT/TOA Control
131	1	Degraded Operations
132-149		Reserved for future use
NOTES: 1. Required in-flight or simulator certified for this event. 2. Required in-flight or alternate method. 3. Required for QUAL-only flight evaluations. 4. Optional for CAA.		

5.6. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 5.1**

5.6.1. **Area 100. Flight Plan/Charts.**

5.6.1.1. Q. Completed a flight plan IAW applicable directives; selected current navigation charts of a proper scale and type of the sortie profile. Charts were constructed IAW current directives; demonstrated proper manual flight planning procedures, if required.

5.6.1.2. Q-. Flight plan/charts contained minor errors or omissions that would not have adversely affected mission accomplishment.

5.6.1.3. U. Flight plan not accomplished, incomplete, or contained major errors that adversely affected mission accomplishment. Could not demonstrate manual procedures, or failed to review computer generated flight plan.

5.6.2. **Area 101. Airdrop Data/Charts.**

5.6.2.1. Q. Completed CARP IAW applicable directives; correctly computed and plotted CARP based on the most accurate data available; demonstrated proper manual CARP computation, if required.

5.6.2.2. Q-. Minor errors or omissions that would not have adversely affected mission accomplishment.

5.6.2.3. U. CARP not accomplished, incomplete, or contained major errors. Could not demonstrate manual procedures, or failed to review computer generated CARP.

5.6.3. **Area 102. SCA Data/Charts.**

5.6.3.1. Q. Completed SCA IAW applicable directives; correctly computed and plotted SCA based on the most accurate data available.

5.6.3.2. Q-. SCA contained minor errors or omissions that would not have adversely affected mission accomplishment.

5.6.3.3. U. SCA not accomplished, incomplete, or contained major errors.

5.6.4. **Area 103. Fuel Planning.**

5.6.4.1. Q. Completed a fuel plan IAW applicable directives; used correct entering arguments (temp deviation, altitudes, drag index, gross weight (GW), cargo weight, etc.) for manual or computer generated fuel plans; correctly computed an Equal Time Point (ETP), when required.

5.6.4.2. Q-. Fuel plan contained minor errors or omissions that would not have adversely affected mission accomplishment.

5.6.4.3. U. Fuel plan not accomplished, incomplete, or contained major errors. ETP not completed or contained major errors or omissions.

5.6.5. **Area 104. Departure.**

5.6.5.1. Q. Monitored headings, airspeeds, altitudes, and aircraft position throughout departure; used an instrument departure procedure and/or appropriate scale departure area chart; provided headings, ETA, and other required information in a timely manner. Monitored appropriate radios and clearances to ensure crew compliance; provided updated information when the clearance caused a change in the planned departure; ensured terrain clearance during departure by use of all available aids and the area chart.

5.6.5.2. Q-. Monitored aircraft position, but slow to provide headings, ETA, or other required information. Performance did not degrade mission accomplishment or compromise flight safety.

5.6.5.3. U. Did not monitor departure headings, airspeeds or altitudes; unaware of aircraft position and unable to provide updated information when required; did not use an instrument departure procedure and/or an appropriate scale departure area chart; allowed major deviations that degraded mission accomplishment or compromised safety; did not ensure terrain clearance during the departure. No area chart available.

5.6.6. **Area 105. Low-level Navigation Procedures.**

5.6.6.1. Q. Certain of exact aircraft position; remained within 1 NM of course centerline or planned deviation (***EXCEPTION***: Threat avoidance, weather deviation, air traffic control (ATC) assigned heading, time control deviations, or other unplanned, required deviations); thorough knowledge of en route time status in relation to objective area; complied with all altitude and airspace restrictions.

5.6.6.2. Q-. Uncertain of exact aircraft position due to marginal navigational procedures; deviated more than 1 NM from course (unplanned) and failed to modify vertical/horizontal profile as needed. Better awareness of required timing events or en route time status could have avoided excessive, unplanned maneuvering.

5.6.6.3. U. Exceeded 3 NM during en route navigation without the above exceptions; failed to maintain position awareness throughout most of the route. Failed to accurately assess required timing or unaware of mission time status, jeopardizing mission accomplishment. Violated airspace restrictions; poor airspeed control resulted in numerous or extreme airspeed adjustment; descended below minimum altitude restrictions.

5.6.7. **Area 106. Radio Navigation.**

5.6.7.1. Q. Accurately tuned (if capable), identified, and interpreted readings of en route/terminal area TACANs, VORs, or NDBs.

5.6.7.2. Q-. Better use of radio aids could have enhanced navigation; displayed weakness in fixing or plotting procedures.

5.6.7.3. U. Failed to accurately tune (if capable) and identify en route radio aids.

5.6.8. **Area 107. Radar Navigation/Weather Avoidance.**

5.6.8.1. Q. Demonstrated thorough knowledge and understanding of radar equipment, used correct procedures for radar operation and weather avoidance, and maintained proper distance from adverse weather.

5.6.8.2. Q-. Demonstrated adequate knowledge of equipment, but occasionally used improper operating procedures; did not update radar/weather analysis while avoiding known weather; had difficulty identifying radar returns; weather avoidance was safe with minor deviation from prescribed procedures.

5.6.8.3. U. Displayed unsatisfactory knowledge of radar equipment, used improper operating procedures that were potentially harmful to system components, failed to correctly interpret scope returns; unsatisfactory knowledge of weather avoidance procedures.

5.6.9. **Area 108. Low-level Radar Navigation**

5.6.9.1. Q. Effectively tuned and employed radar to identify aircraft hazards throughout the flight. Ensured aircraft was terrain masked as necessary. Properly interpreted radar and effectively communicated information with clear/concise terminology to ensure smooth/safe low-level navigation. Demonstrated ability to accurately identify radar targets and analyze aircraft position based on these targets; effectively used radar to update aircraft position, both during en route low-level and during terminal areas (DZ/landing zone (LZ)) operations.

5.6.9.2. Q-. Improper radar tuning/interpretation caused confusion during low-level navigation but did not jeopardize safety; failed to effectively use terrain to mask aircraft from threats. Did not effectively use radar targets to analyze aircraft position, resulting in mission degradation.

5.6.9.3. U. Failed to tune radar sufficiently for safe low-level flight; failed to identify hazardous terrain in the aircraft flight path or directed a turn towards high terrain without directing a climb. (MC-130E/H) Jeopardized mission success due to inaccuracies in system caused by failure to analyze or update aircraft position using radar targets.

5.6.10. **Area 109. Navigation Systems.**

5.6.10.1. Q. Demonstrated thorough knowledge of onboard navigation system operating procedures; effectively used navigation systems to direct the aircraft and update system as required.

5.6.10.2. Q-. Demonstrated basic knowledge of onboard navigation systems; made minor errors in operation/interpretation of navigation system data. More selective updating could have increased system effectiveness.

5.6.10.3. U. Displayed inadequate knowledge of onboard navigation system procedures; improper operation procedures could have resulted in damage to equipment or affected mission accomplishment. Failed to update or correctly interpret navigation system data.

5.6.11. **Area 110. TAS Check.**

5.6.11.1. Q. TAS check accomplished on time and error did not exceed 5 kts.

5.6.11.2. Q-. Minor errors in readings or computations; error did not exceed 10 kts. Completed TAS check late.

5.6.11.3. U. Did not accomplish TAS check when required or error exceeded 10 kts.

5.6.12. **Area 111. High Altitude Course and ETA Tolerance.**

5.6.12.1. Q. Unless required to deviate for weather or required by ATC, remained within 5 NM of course centerline, or within tolerances specified for Required Navigation Performance (RNP) airspace (if applicable), whichever is less. ETAs/Revised ETAs (RETAs) were within 2 minutes of actual times of arrival (ATAs).

5.6.12.2. Q-. Remained within 10 NM of course centerline; ETAs/RETAs were within 3 minutes of ATAs.

5.6.12.3. U. Exceeded Q- criteria or exceeded RNP requirement. Evaluator had to alter aircraft heading to remain within course tolerance or clear special use airspace.

5.6.13. **Area 112. Fuel Management.**

5.6.13.1. Q. Maintained fuel management IAW directives; kept pilot advised of fuel status.

5.6.13.2. Q-. Adequate fuel management with minor computation errors noted; did not adequately update the pilot on fuel status.

5.6.13.3. U. Failed to demonstrate an understanding of fuel management procedures; fuel computations not accomplished or contained significant errors; failed to inform pilot of fuel status.

5.6.14. **Area 113. Descent/Approach/Landing.**

5.6.14.1. Q. Monitored aircraft position, approach instructions, and tuned, identified and monitored primary approach navigation aids; furnished headings, ETAs and other information to the pilot as required. Thoroughly understood approach and missed approach procedures; ensured terrain clearance during approach by use of all available aids and area chart.

5.6.14.2. Q-. Monitored aircraft position but did not fully understand approach instructions/procedures. Slow to provide headings, ETAs or other appropriate information.

5.6.14.3. U. Failed to monitor aircraft position or tune, identified and monitor the appropriate navigation aid; did not ensure terrain clearance during the approach. Did not use appropriate chart/approach plate.

5.6.15. **Area 114. SCA Procedures.**

5.6.15.1. Q. Completed SCA IAW appropriate instructions; successfully directed the aircraft to a position where a safe landing could have been accomplished; used proper, clear, and concise terminology during entire approach.

5.6.15.2. Q-. Briefing was incomplete or deviated from established procedures. Improperly programmed equipment, had minor deviations on directing planned go-around, or directed excessive course/glide slope corrections, but still able to direct aircraft to a point where a safe landing could be made.

5.6.15.3. U. Had unsatisfactory knowledge of SCA procedures; failed to direct the aircraft to a point from which a safe landing could be made.

5.6.16. **Area 115. Tactical Planning. (C-130, MC-130P)**

5.6.16.1. Q. Demonstrated thorough knowledge of necessary defensive systems/tactics applicable to the mission; able to plot threats and apply appropriate tactics to avoid them or minimize exposure to them.

5.6.16.2. Q-. Was unfamiliar with the appropriate tactic for a given scenario; made minor errors in plotting and avoiding a given threat.

5.6.16.3. U. Major errors in tactics selection would have resulted in an unsuccessful mission. Was unable to plot and avoid a given threat; failed to ensure mission effectiveness by not adequately analyzing or degrading threats.

5.6.17. **Area 116. Defensive Systems Knowledge/Employment. (C-130, MC-130P).**

5.6.17.1. Q. Properly programmed defensive equipment for a given threat; correctly interpreted threat information, deployed expendables as necessary, and directed aircraft maneuvers in a timely manner.

5.6.17.2. Q-. Minor errors in programming defensive systems; was slow to interpret threat information, deploy expendables or direct aircraft maneuvers. Successfully defeated threat but could have used a better tactic for a given scenario.

5.6.17.3. U. Failed to program/arm defensive equipment as necessary; used wrong tactic for a given threat. Knowledge of defensive systems was unsatisfactory.

5.6.18. **Area 117. In-flight Threat Analysis/Maneuvers.**

5.6.18.1. Q. Made timely and appropriate inputs to crew during mission; able to plot threats in flight and formulate a plan of action to avoid/defeat a given threat; executed the proper evasive maneuver when given an immediate threat. Adequately analyzed and defeated all threats ensuring effective mission accomplishment; aware of appropriate tactics to avoid threats and exposure.

5.6.18.2. Q-. Was unfamiliar with the appropriate tactic for a given scenario; did not make timely inputs to crew during threat engagement. Made minor errors in plotting and avoiding a given threat; was slow to interpret threat information, deploy expendables or direct aircraft maneuvers.

5.6.18.3. U. Major errors in tactics execution would have resulted in an unsuccessful mission.

5.6.19. **Area 118. AAR Procedures.**

5.6.19.1. Q. Completed preflight, in-flight, and post-flight duties IAW the governing directives and properly complete refueling portion of fuel planning as applicable to the mission.

5.6.19.2. Q-. Minor errors in preflight, in-flight, and post-flight AAR duties but still able to complete AAR; minor errors in the refueling portion of fuel planning as applicable to the mission.

5.6.19.3. U. Displayed lack of knowledge or familiarity with the checklist, equipment, and procedures.

5.6.20. **Area 119. Tanker Air Refueling Procedures.**

5.6.20.1. Q. Effectively accomplished rendezvous and air refueling procedures; used available navigation systems to acquire, identify, and accurately locate the air-refueling receiver; provided timely and accurate advisories to direct aircraft to 1 NM range. Made distance advisories to the pilot to 1NM range and confirmed visual contact; continued to provide advisories as needed; performed timely and accurate No Visual Contact or Contact Lost procedure (as required).

5.6.20.2. Q-. Made limited use of navigational systems and experienced difficulty acquiring, identifying, and accurately locating the receiver. Provided limited advisories, but was able to accomplish the rendezvous to 1 NM.

5.6.20.3. U. Failed to use available navigation systems to acquire, identify, and accurately locate the receiver by 1 NM; failed to direct the aircraft to a successful rendezvous; failed to execute the correct No Visual Contact or Contact Lost procedure in a timely manner (as required).

5.6.21. **Area 120. In-flight CARP Reevaluation.**

5.6.21.1. Q. CARP properly reevaluated in-flight and updated information conveyed to pilot.

5.6.21.2. Q-. CARP reevaluated in-flight but data was old or improperly computed. Errors were not great enough to cause an unsuccessful airdrop.

5.6.21.3. U. CARP not reevaluated in-flight or was improperly reevaluated leading to a no-drop or unsuccessful airdrop.

5.6.22. **Area 121. Slowdown.**

5.6.22.1. Q. Had thorough knowledge of slowdown procedures and complied with all published/briefed procedures.

5.6.22.2. Q-. Minor deviations which did not affect mission accomplishment or formation integrity.

5.6.22.3. U. Major deviations adversely affected mission accomplishment or formation integrity.

5.6.23. **Area 122. DZ Acquisition (Visual Airdrop).**

5.6.23.1. Q. Timely identification of the DZ allowed for smooth approach to the objective area.

5.6.23.2. Q-. Late identification of the DZ caused an abrupt change in procedures or course into the objective area, but did not affect mission accomplishment.

5.6.23.3. U. Did not identify the DZ or late identification negatively affected the airdrop.

5.6.24. **Area 123. DZ Alignment.**

5.6.24.1. Q. Directed the aircraft to an optimum DZ alignment on run-in through escape and clearly communicated desired aircraft position to the crew.

5.6.24.2. Q-. Slow in directing aircraft to establish/maintain effective DZ alignment, but did not adversely impact mission accomplishment.

5.6.24.3. U. Failed to establish effective DZ alignment that contributed to an unsuccessful airdrop/no-drop condition.

5.6.25. **Area 124. Airdrop Procedures.**

5.6.25.1. Q. Accurately used all available data to accomplish airdrop within the following Circular Error (CE): Heavy Equipment (HE), Personnel, SATB, door/ramp bundles, or Container Delivery System (CDS): 300 meters. For all airdrops (except CDS) above 800’ Above Ground Level (AGL), add 15 meters for each 100’ above 800’ to a maximum total CE of 600 meters. For CDS airdrops above 600’ AGL add 20 meters for each 100’ above 600’ to a maximum total CE of 500 meters; complied with all applicable directives.

5.6.25.2. Q-. Failed to use all data available to ensure the most accurate drop.

5.6.25.3. U. Incorrect procedures led to a CE exceeding Q criteria.

5.6.26. **Area 125. Escape.**

5.6.26.1. Q. Escape executed IAW published or briefed procedures.

5.6.26.2. Q-. Minor errors in escape procedures that did not affect mission accomplishment.

5.6.26.3. U. Major deviations from procedures that negatively affected mission accomplishment, formation integrity, or flight safety.

5.6.27. **Area 126. Low-level - TF/TA (MC-130E/H).**

5.6.27.1. Q. Planned and flew TF/TA profile IAW governing directives and appropriate TTP; demonstrated knowledge of TF/TA by integrating systems into successful low-level mission. Properly recognized and rectified system failures and took corrective action as applicable. Altered method of low-level as required. Took all means possible to safely continue mission if possible, based on mission priority and threat scenario. MC-130H: Acknowledged and managed system notifications (e.g., warnings and enunciators).

5.6.27.2. Q-. Minor errors in TF/TA procedures or employment; demonstrated limited knowledge of system capabilities or procedures; slow to take appropriate action. Demonstrated limited ability to recognize or rectify system failures. Could not accomplish corrective action without limited assistance or slow to take corrective action.

5.6.27.3. U. Failed to employ TF/TA systems to ensure mission accomplishment; misunderstood system capabilities, failed to acknowledge system notifications or failed to fully integrate/interpret all sensors (infrared detection set (IDS) and radar displays) while flying the profile. Did not recognize system failure or could not accomplish corrective action without assistance; did not recommend alternate method of low-level when required. Lack of knowledge affected ability to accomplish mission using TF/TA procedures.

5.6.28. **Area 127. Low-level – NVG**

5.6.28.1. Q. Planned and flew a route to minimize risk to aircraft and crew for a given mission using NVG procedures IAW governing directives and appropriate TTP; consistently updated crew with controlling terrain, reference altitudes, and start climb points. Avoided excessive or numerous low altitude warnings; appropriately assisted pilot flying with TOT/TOA control; flew appropriate profile for terrain and environmental conditions.

5.6.28.2. Q-. Had numerous low altitude warnings but no significant compromise to safety; minor deviations from TTP, altitude, and airspeed profile.

5.6.28.3. U. Had excessive amount and/or excessively low altitude warnings and major/unsafe deviations from established directives and appropriate TTP.

5.6.29. **Area 128. Altitude Calibration.**

5.6.29.1. Q. Properly updated Mission Computer (MC)/Self Contained Navigation System (SCNS) altitude both en route and near the objective area. Understood relationship of barometric and radar altimeter data on aircraft systems. (MC-130E/H) Used TRUE ALT as appropriate and demonstrated system knowledge throughout the mission.

5.6.29.2. Q-. Completed altitude calibration which resulted in minor altitude errors in the MC/ SCNS. Altitude calibration incorrectly accomplished or not accomplished in a timely manner (i.e., near the objective area).

5.6.29.3. U. Failed to accomplish altitude calibration or altitude calibration resulted in major errors in the MC/SCNS.

5.6.30. **Area 129. Formation.**

5.6.30.1. Q. Demonstrate knowledge of proper formation procedures IAW applicable instructions. At the discretion of the flight examiner, or if required by in-flight conditions, safely directed appropriate inadvertent weather penetration procedures.

5.6.30.2. Q-. Minor errors in formation procedures; poor wingman considerations (aggressive turns, airspeed changes, or extreme airspeeds); slow to accomplish inadvertent weather procedures.

5.6.30.3. U. Major errors in formation procedures; no wingman considerations; incorrect inadvertent weather procedures.

5.6.31. **Area 130. TOT/TOA Control.**

5.6.31.1. Q. Accurately used all available data to arrive at the objective on time; recomputed TOT/TOA in-flight as necessary.

5.6.31.2. Q-. Arrived at the objective on time but used excessive timing maneuvers or airspeed changes; minor deviations in recomputing TOT/TOA in-flight as necessary.

5.6.31.3. U. Exceeded ± 30 seconds for airdrop/SCA, 60 seconds late for Tanker Air Refueling, or 60 seconds early for AAR; could not accurately establish new TOT/TOA while airborne, when required.

5.6.32. **Area 131. Degraded Operations.**

5.6.32.1. Q. Demonstrate ability to react to loss of specific navigational equipment and systems (ex: SCNS, Civilian Announcement Notification System (CANS), Inertial Navigation Units (INUs), MC, etc.) before and during flight. Know operation restrictions associated with degraded systems. Accurately recommend correct course of action, based on particular loss.

5.6.32.2. Q-. Able to react to some equipment or systems failures which did not significantly contribute to mission degradation or failure.

5.6.32.3. U. Failure to recognize and react to system or equipment failure which affected ability for safe aircraft operation or significant mission degradation or failure.

5.6.33. **Areas 132 - 149. Reserved for future use.**

Chapter 6

ELECTRONIC WARFARE OFFICER (EWO) EVALUATIONS

6.1. General. EWOs require a combined QUAL/MSN evaluation. Instructors will demonstrate instructor duties on all periodic evaluations.

6.2. Requirements. Evaluate all general areas outlined in **Table 2.1** on all evaluations. Also, evaluate all instructors on areas in **Table 3.1** on all evaluations.

6.3. QUAL/MSN Evaluations. In addition to **Tables 2.1** and **3.1**, see **Table 6.1** for required evaluation areas.

6.3.1. **Initial.** Required in-flight events include at least 60 minutes of NVG/TF low-level with a realistic threat scenario in addition to Electronic Countermeasures (ECM) activity with ground radar, naval radar, or airborne interceptors. ECM activity will include tactical maneuvers against a cross section of available signals. At least three distinct tactical engagements/intercepts will be performed. A minimum of one pre-briefed threat will be placed on the low-level route. Additionally, at least one non-preplanned threat will be given in-flight. MC-130H EWOs will direct 30 minutes of NVG low-level and 30 minutes of TF low-level in mountainous terrain. They will also perform one SCA.

6.3.2. **Periodic.** Required in-flight events are the same as initial and requalification evaluations except fly a minimum of 30 minutes of NVG or TF low-level. Additionally, only two distinct engagements/intercepts must be performed. MC-130H EWOs will direct navigation for at least 20 minutes and will perform one SCA. Do not conduct consecutive NVG/TF low-level evaluations in non-mountainous terrain.

6.3.3. **Requalification.** Required in-flight events include at least 40 minutes of NVG/TF low-level with a realistic threat scenario in addition to ECM activity with ground radar, naval radar, or airborne interceptors. ECM activity will include tactical maneuvers against a cross section of available signals. At least three distinct tactical engagements/intercepts will be performed. A minimum of one pre-briefed threat will be placed on the low-level route. MC-130H EWOs will direct 20 minutes of NVG low-level and 20 minutes of TF low-level in mountainous terrain. They will also perform one SCA.

6.4. Special Qualification Evaluations. Radar Trail Formation and subcategories.

Table 6.1. EWO QUAL/MSN Grading Areas.

Area	Notes	Grading Areas
150	1	Use of Navigational Equipment
151	1	Threat Identification
152	1	Crew Notification
153	1	Use of Evasive Maneuvers
154	1	Expendable Employment
155	1	ECM/Infrared Countermeasures (IRCM) Employment
156	1	Equipment Operation/Malfunction Analysis
157	1	Ingress
158	1	Low-level Procedures/Tactical Execution

Area	Notes	Grading Areas
159	1	Egress of Objective Area
160	2	Training Restrictions/Range Procedures/Rules of Engagement (ROE)
161	2, 3	Crypto System Operations
162	1, 3	Low-level TF/TA Procedures
163	1, 3	Low-level NVG Procedures
164	1, 3	SCA Procedures
165-199		Reserved for future use
NOTES: 1. Required in-flight or simulator certified for this event 2. Required in-flight or alternate method 3. Required on MC-130H evaluations only.		

6.5. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 6.1**

6.5.1. **Area 150. Use of Navigational Equipment.**

6.5.1.1. Q. Demonstrated thorough knowledge of onboard navigation system operating procedures; effectively used navigation systems to direct the aircraft and verify execution of threat maneuvers; able to interpret bullseye threat calls and calculate range and bearing information with available equipment. (MC-130H) Performed system updates as required.

6.5.1.2. Q-. Demonstrated basic knowledge of onboard navigation systems; made minor errors in operation/interpretation of navigation system data. Slow to interpret bullseye information or calculate range and bearing. (MC-130H) More accurate/selective updating could have increased system accuracy.

6.5.1.3. U. Displayed inadequate knowledge of onboard navigation system procedures; improper operation could have resulted in damage to equipment or affected mission accomplishment; could not determine aircraft position/attitude/altitude; failed to determine position relative to bullseye point; failed to correctly interpret navigation system data. (MC-130H) Performed unsatisfactory system updates or failed to update navigations system data.

6.5.2. **Area 151. Threat Identification.**

6.5.2.1. Q. All direct threat/target acquisition radar (TAR) signals were correctly identified in a timely manner. All indirect signals were identified as appropriate for the situation.

6.5.2.2. Q-. All threat signals were correctly identified with only minor delays that did not affect the mission. Indirect signal(s) were initially identified as a threat/TAR but corrected in a timely manner.

6.5.2.3. U. Failed to identify threat signals correctly without adverse delay; identified an indirect threat as a direct threat/TAR or a direct threat/TAR as an indirect threat.

6.5.3. **Area 152. Crew Notification.**

6.5.3.1. Q. Threat calls (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct maneuvers or describe the tactical situation.

6.5.3.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from threat reaction, SA, mutual support, or mission accomplishment. Extraneous comments over radios/interphone presented minor distractions.

6.5.3.3. U. Threat calls over radios/interphone were inadequate or excessive causing delay in crew notification and threat reactions. Inaccurate or confusing terminology significantly detracted from threat reaction, mutual support, SA, or mission accomplishment. Failed to notify or update crew of terminal threats.

6.5.4. **Area 153. Use of Evasive Maneuvers.**

6.5.4.1. Q. Applied tactics consistent with the threat type, current directives, and good judgment; executed the plan and achieved mission goals; quickly adapted to changing environment; maintained awareness of all threat modes and locations. Threat reactions were timely and correct.

6.5.4.2. Q-. Applied tactics with only minor deviations, omissions, and/or errors which degraded the reliable accomplishment of mission objectives or mission effectiveness but did not prevent the successful accomplishment of the overall mission goal; slow to react to a changing environment; timely threat reactions and awareness of all threat modes and locations were poor.

6.5.4.3. U. Failed to accomplish the mission due to major errors or omissions during execution of the tactical plan; awareness of threat modes and locations was lost. Numerous threat reactions were omitted or incorrect; failed to perform maneuvers to counter threat.

6.5.5. **Area 154. Expendable Employment.**

6.5.5.1. Q. Expendable procedures were accomplished in a timely manner and according to the flight manual and governing directives, with only minor deviations, omissions, and/or errors. Procedures ensured maximum protection without undue highlighting of aircraft.

6.5.5.2. Q-. Expendable procedures were accomplished according to the flight manual and governing directives, but with deviations, omissions, and/or errors demonstrating minimum acceptable knowledge of flight manual or governing directives. Procedures/settings caused unnecessary highlighting of the aircraft, but did not compromise the objective/mission accomplishment or aircraft protection.

6.5.5.3. U. Procedures were omitted or accomplished with deviations, omissions, or errors demonstrating unacceptable knowledge of the flight manual or governing directives; unauthorized use of expendables; poor procedures caused unnecessary highlighting of aircraft/compromise of objective area.

6.5.6. **Area 155. ECM/IRCM Employment.**

6.5.6.1. Q. Correctly applied, set, configured countermeasures in a timely manner IAW governing directives. (MC-130E) Manual jamming accomplished in a timely manner.

6.5.6.2. Q-. Applied, set, configured countermeasures in a timely manner with only minor deviations, omissions, and/or errors; late configuring automatic jammers for operations, but did not cause undue exposure to the threat; demonstrated minimum acceptable knowledge of the flight manual or governing directives.

6.5.6.3. U. Late or inappropriate countermeasures for the threat encountered. Inappropriate threat file selected. Demonstrated unacceptable knowledge and indicated a definite need for additional training. Did not give threat/maneuver calls or calls were unreadable. Failed to counter a direct threat; unauthorized use of ECM.

6.5.7. **Area 156. Equipment Operation/Malfunction Analysis.**

6.5.7.1. Q. Operated equipment according to procedures and checklists contained in the flight manuals and governing directives. Accurately and efficiently analyzed equipment malfunctions with consistent reliable mission results; notified crew in a timely manner.

6.5.7.2. Q-. Operated equipment with minor deviations, omissions, and/or errors from procedures required by the flight manual or governing directives. Equipment malfunctions were analyzed in error or caused by erroneous data insertion or faulty operator techniques, but did not significantly affect mission accomplishment. Deviations, omissions, and/or errors in malfunction analysis, prescribed procedures, or faulty techniques caused a degradation of equipment performance. The level of performance or knowledge consistently resulted in marginal reliability; did not damage equipment; unnecessarily delayed notifying crew.

6.5.7.3. U. Equipment damage would have resulted due to circumstances within operator's control. Equipment malfunctions were consistently ignored; could not recognize a major equipment malfunction; could not obtain acceptable results due to poor operational techniques or procedures; failed to notify crew.

6.5.8. **Area 157. Ingress.**

6.5.8.1. Q. Initial equipment settings were accomplished IAW applicable mission materials and verified using pre-combat entry checklists prior to the Combat Entry Point. Notified crew of the Combat Entry Point; accomplished receiver monitoring and procedures IAW governing directives; effectively used evasive maneuvers, terrain masking, route, and/or altitude selection to ingress the objective area without undue exposure to enemy defenses or compromise of the objective.

6.5.8.2. Q-. Accomplished procedures with minor deviations, omissions, or errors; did not ensure aircraft was fully configured prior to the Combat Entry Point, but did not affect exposure to threats, aircraft safety, or mission accomplishment; demonstrated minimum acceptable knowledge/performance of the flight manual or governing directives. Ingress contributed to unnecessary exposure to threats.

6.5.8.3. U. Major deviations, omissions, or errors; failed to accomplish pre-combat entry procedures; delayed pre-combat entry procedures exposing the aircraft to threats, affecting mission accomplishment. Lacked minimum acceptable knowledge/performance of the flight manual or governing directives; ingress caused excessive exposure to threats or compromised the objective.

6.5.9. **Area 158. Low-level Procedures/Tactical Execution.**

6.5.9.1. Q. Applied tactics consistent with the threat, current directives, and good judgment; executed the plan and achieved mission goals; quickly adapted to changing environment; maintained SA; threat reactions were timely and correct; thorough knowledge of tactical procedures to include frequencies, radio requirements, and aircraft/airspace deconfliction; able to determine aircraft position utilizing available resources (charts, flight plan, and aircraft equipment).

6.5.9.2. Q-. Applied tactics with only minor deviations, omissions, and/or errors which degraded the reliable release of weapons or mission effectiveness but did not prevent the successful accomplishment of the overall mission goal; slow to react to a changing environment; poor SA and slow threat reactions; limited knowledge of tactical procedures to include frequencies, radio requirements, and aircraft/airspace deconfliction. Slow to determine aircraft position utilizing available resources (charts, flight plan, and aircraft equipment). Low-level procedures included minor errors not critical to mission safety and/or accomplishment.

6.5.9.3. U. Failed to accomplish the mission due to major errors or omissions during execution of the tactical plan; lost SA; omitted/incorrectly applied numerous threat reactions; failed to accomplish countermeasures or perform maneuvers to counter threat; lacked knowledge of tactical procedures to include frequencies, radio requirements, and aircraft/airspace deconfliction; failed to determine aircraft position utilizing available resources (charts, flight plan, and aircraft equipment). Low-level procedures compromised mission safety and/or accomplishment.

6.5.10. **Area 159. Egress of Objective Area.**

6.5.10.1. Q. Effectively used evasive maneuvers, terrain masking, route, and/or altitude selection to complete an expeditious egress from the objective area without undue exposure to enemy defenses; minimized over-flight of previous objective areas/threats.

6.5.10.2. Q-. Egress contributed to unnecessary exposure to threats and delayed departure from objective area.

6.5.10.3. U. Egress caused excessive exposure to threats; disregarded previous objective areas/ threats.

6.5.11. **Area 160. Training Restrictions/Range Procedures/ROE.**

6.5.11.1. Q. Fully knowledgeable of applicable range restrictions/range handbook guidance/ROE. Properly coordinated ECM range/airintercepts IAW established guidance. Used proper procedures for ECM range/working area check-in, entry, and exit. Used proper air intercept coordination and check-in procedures; understands and utilized all applicable brevity terms. Ensured crew understands/adheres to restrictions/ROE.

6.5.11.2. Q-. Minor deviations, omissions, and/or errors; made timely and positive corrections; minor delays in ceasing ECM or expendable operations when directed by range; did not jeopardize safety.

6.5.11.3. U. Significant deviations indicating a lack of knowledge of training restrictions/range procedures/ROEs; failed to accomplish air intercept coordination brief IAW established guidance. Did not understand critical brevity terms; failed to cease ECM or expendable operations when directed by range; failed to adhere to

ECM/expendable restrictions; deviations would jeopardize safety if allowed to continue uncorrected; unauthorized use of operational ECM software.

6.5.12. **Area 161. Crypto System Operations (MC-130H).**

6.5.12.1. Q. Thorough knowledge of applicable crypto systems; full knowledge of keying devices and materials; with use of a guide, keyed all systems without error.

6.5.12.2. Q-. Familiar with applicable crypto systems, keying devices, and materials; with the use of guide, keyed most systems with minor errors.

6.5.12.3. U. Lacked knowledge of applicable crypto systems, keying devices, or keying materials; failed to key systems without error.

6.5.13. **Area 163. Low-level TF/TA Procedures (MC-130H).**

6.5.13.1. Q. Planned and flew TF/TA profile IAW governing directives and appropriate TTP; demonstrated knowledge of TF/TA by integrating systems into successful low-level mission. Acknowledged and managed system notifications (e.g. warnings and enunciators). Recognized and rectified system failures or altered method of low-level as appropriate.

6.5.13.2. Q-. Minor errors in TF/TA procedures or employment; minor difficulty communicating TF/TA low-level directions to pilots; demonstrated limited knowledge of system capabilities or procedures; slow to take appropriate action.

6.5.13.3. U. Failed to employ TF/TA systems to ensure mission accomplishment; major difficulty communicating TF/TA low-level directions to pilots. Misunderstood system capabilities, failed to acknowledge system notifications or failed to fully integrate/interpret all sensors (IDS and radar displays) while flying the profile.

6.5.14. **Area 164. Low-level NVG Procedures (MC-130H).**

6.5.14.1. Q. Planned and flew a route to minimize risk to aircraft and crew for a given mission using NVG procedures IAW governing directives and appropriate TTP; consistently updated crew with controlling terrain, NVG altitudes, and start climb points (if applicable). Avoided excessive or numerous low altitude warnings; appropriately assisted pilot flying with TOT/TOA control; flew appropriate profile for terrain, airspace, and environmental conditions.

6.5.14.2. Q-. Had numerous low altitude warnings but no significant compromise to safety; minor difficulty communicating NVG low-level directions to pilots. Minor deviations from TTP, altitude, and airspeed profile.

6.5.14.3. U. Had excessive amount and/or excessively low altitude warnings; major difficulty communicating NVG low-level directions to pilots; major/unsafe deviations from established directives and appropriate TTP.

6.5.15. **Area 165. SCA Procedures (MC-130H).**

6.5.15.1. Q. Completed SCA IAW appropriate instructions. Successfully directed the aircraft to a position where a safe landing could have been accomplished; used proper, clear, and concise terminology during entire approach.

6.5.15.2. Q-. Briefing was incomplete or deviated from established procedures. Improperly programmed equipment, had minor deviations on directing planned go-around, or directed excessive course/glide slope corrections, but still able to direct aircraft to a point where a safe landing could be made.

6.5.15.3. U. Had unsatisfactory knowledge of SCA procedures. Failed to direct the aircraft to a point from which a safe landing could be made.

6.5.16. **Area 166-199. Reserved for future use.**

Chapter 7

FLIGHT ENGINEER (FE) EVALUATIONS

7.1. General. FEs maintaining basic qualification require a QUAL evaluation only. Instructors will demonstrate instructor duties on all periodic evaluations.

7.2. Requirements. Evaluate all general areas outlined in **Table 2.1** on all evaluations. Also, evaluate all instructors on instructor areas in **Table 3.1** FE specific areas and criteria are listed in this chapter.

7.3. QUAL Evaluations. Accomplish on any flight profile except Functional Check Flight (FCF) and Acceptance Check Flights (ACF).

7.3.1. **Initial/Requalification.** In addition to areas listed in **Table 2.1** and **Table 3.1**, QUAL evaluations will include Note 1 areas in **Table 7.1** FEs require an initial QUAL evaluation in any variant of the C-130 prior to MC-130 QUAL evaluations. Required events include a minimum of a complete aircraft preflight, a sortie of any type, and a complete post-flight. ***NOTE:*** CAA individuals qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered qualified in the C-130 as described in this instruction.

7.3.2. **Periodic.** Periodic QUAL evaluations may be on a C-130 or MC-130. Complete evaluation as outlined in **paragraph 7.3.1**

7.4. QUAL/MSN Evaluations.

7.4.1. **Initial/Requalification.** MC-130 E/H/P. The evaluation profile will include a complete pre-flight; operations of aircraft systems, normal procedures, night TF or NVG low-level, and an SCA utilizing the infiltration (infil)/exfiltration (exfil) checklists. (MC-130P) Evaluation profile will also include a night Tanker Air Refueling. The Tanker Air Refueling portion will include, as a minimum, completion of all checklists, a contact, and actual fuel transfer.

7.4.1.1. C-130. CAA individuals mission qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered mission qualified in the C-130 as described in this instruction, following AFSOC approved differences training, with the exception of areas 212 (Tactical Checklists), 214 (Mission Procedures) and 218 (NVG Usage/Limitations). These areas must be evaluated during the flight phase of either a SPOT evaluation or a subsequent periodic MSN check in order for the FE to be considered qualified.

7.4.2. **Periodic.** MC-130E/H/P. Required in-flight events are the same as initial/requalification evaluations noted in **paragraph 7.4.1** except the night/IMC TF or NVG low-level can terminate with either an SCA utilizing the infil/exfil checklist, or airdrop. (MC-130P) Evaluation profile may also include a night Tanker Air Refueling. The Tanker Air Refueling portion, if evaluated, will include completion of the checklist as a minimum. Actual fuel transfer is not required.

7.5. Special Qualification Evaluations. HAAR (MC-130H). FEs will accomplish the rendezvous with an actual receiver on the initial evaluation to include completion of checklist and contact. Once qualified/certified, FEs may be evaluated during periodic evaluations. If a

crew member goes unqualified in Tanker Air Refueling (either through lack of currency or not accomplished during periodic evaluation) then accomplish a requalification evaluation to regain qualification.

Table 7.1. FE QUAL/MSN Grading Areas.

Area	Notes	Grading Areas
200	1	Air Force Technical Order (AFTO) Form 781 series documentation
201	1, 3	TOLD
202	1	Cockpit Checklist
203	1	Before Starting Engines/Starting Engines
204	1	Before Taxi/Taxi
205	1	Before Takeoff/Lineup
206	1	After Takeoff
207	1	En route
208	1	Descent/Before Landing
209	1	After Landing
210	1	Engine Shutdown
211	1	Before Leaving Airplane
212		Tactical Checklists
213	1	Post-flight
214		Mission Procedures
215	3	ME Takeoff/Landing
216		NVG Usage/Limitations
217	2, 4	Receiver Air Refueling Systems/Procedures
218	2, 4	Tanker Air Refueling Systems/Procedures
219		Search and Rescue (SAR) Operations
220	1	Ground Support Equipment
221	1	Refuel/Defuel
222	1	Engine
223	1	Propeller
224	1	Auxiliary Power Unit (APU)/Gas Turbine Compressor (GTC)
225	1	Fire Detection/Extinguishing
226	1	Oxygen
227	1	Pneumatics/Bleed Air
228	1	Pressurization/Depressurization
229	1	Air-Conditioning/Floor Heating
230	1	Anti-icing/De-icing
231	1	Flight Controls
232	1	Flaps
233	1	Window/Hatches/Doors/Ramp
234	1	Landing Gear/Nose Wheel Steering
235	1	Brakes
236	1	Hydraulics

237	1	Fuel
238	1	Electrical
239	1	Radios/Radar/Navigation Equipment
240	1	Cockpit Voice Recorder (CVR) /Digital Flight Data Recorder (DFDR)
241		Defensive Systems
242		Defensive Tactics/Threat Calls
243-249		Reserved for future use
NOTES: 1. Required for QUAL evaluations 2. Optional for CAA squadrons 3. A ME TOLD card will be computed using the applicable -1-1 on all MSN evaluations 4. Required in-flight or simulator certified for this event.		

7.6. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 7.1**

7.6.1. **Area 200. AFTO Form 781 Series Documentation.**

7.6.1.1. Q. Identified and reported discrepancies in a clear, concise, accurate, and timely manner IAW AFI 11-401 and AFTO 00-20-1, *Aerospace Equipment Maintenance Inspection Documentation, Policies, and Procedures*, Aircraft, Drone, Aircrew Training Devices, Engines, Air Launched Missile Inspections, Flight Reports, Supporting Maintenance Documents, and other applicable directives.

7.6.1.2. Q-. Some information reported incorrectly or incompletely due to errors, omissions, or deviations; limited knowledge of proper discrepancy reporting IAW AFI 11-401 and T.O. 00-20-1.

7.6.1.3. U. Did not identify or report discrepancies; omitted or incorrectly reported significant information due to errors, omissions, or deviations.

7.6.2. **Area 201. TOLD.**

7.6.2.1. Q. Correctly computed the TOLD data using applicable performance data and corrections for existing field conditions; transcribed mini TOLD data correctly; was fully knowledgeable of TOLD.

7.6.2.1.1. TOLD criteria:

7.6.2.1.1.1. Required Airspeeds: ±2 kts

7.6.2.1.1.2. Required Distances: ±200’

7.6.2.1.1.3. Predicted Takeoff Torque: ±200 in/lbs

7.6.2.2. Q-. Minor errors in the use of applicable performance charts, computing the performance data, or correcting for existing field conditions resulting in data exceeding Q criteria. Incorrectly transcribed mini TOLD data. Had some knowledge of takeoff and landing performance data; errors would not have compromised safety of flight.

7.6.2.2.1. TOLD criteria:

7.6.2.2.1.1. Required Airspeeds: ± 4 kts

7.6.2.2.1.2. Required Distances: ± 400’

7.6.2.2.1.3. Predicted Takeoff Torque: ± 400 in/lbs

7.6.2.3. U. Failed to compute TOLD data, omitted necessary corrections for existing field conditions, or errors in computing performance data resulted in airspeeds and/or distances exceeding Q- criteria. Limited knowledge of TOLD. Did or could have compromised safety of flight.

7.6.2.4. **Areas 202 through 212.** Use the following criteria.

7.6.2.4.1. Q. Accomplished required checklists without errors, omissions, or deviations; backed up pilots on flight parameters (i.e., altitude, airspeed, and clearances); satisfactorily monitored engine/system indicators. Fully knowledgeable of performance charts and procedures required to obtain and record in-flight performance data. Fuel system usage and configuration was IAW flight manual and applicable directives. Recognized and corrected minor omissions or deviations. Recognized, reported, and properly documented out of limit conditions or malfunctions.

7.6.2.4.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations; backed up pilots on flight parameters (i.e., altitude, airspeed, and clearances) with some deviations; monitored engine/system indicators with some deviations; limited knowledge of performance charts and procedures required to obtain and/or record in-flight performance data. Limited knowledge of fuel system usage and configuration caused deviations from flight manual and applicable directives. Slow to recognize, report, and/or document out of limit conditions or malfunctions.

7.6.2.4.3. U. Failed to accomplish required checklists or made numerous errors, omissions, or deviations; failed to back up pilots on flight parameters (i.e., altitude, airspeed, and clearances); failed to monitor engine/system indicators; inadequate knowledge of performance charts and/or procedures required to obtain data for two or three engines operating; had inadequate knowledge of fuel system usage and configuration; allowed limitations to be exceeded, which, without correction, would cause damage to equipment.

7.6.3. **Area 202. Cockpit Checklist.**

7.6.4. **Area 203. Before Starting Engines/Starting Engines.**

7.6.5. **Area 204. Before Taxi/Taxi.**

7.6.6. **Area 205. Before Takeoff/Lineup.**

7.6.7. **Area 206. After Takeoff.**

7.6.8. **Area 207. En route.**

7.6.9. **Area 208. Descent/Before Landing.**

7.6.10. **Area 209. After Landing.**

7.6.11. **Area 210. Engine Shutdown.**

7.6.12. **Area 211. Before Leaving Airplane.**

7.6.13. **Area 212. Tactical Checklist**

7.6.14. **Area 213. Post-flight.**

7.6.14.1. Q. Accomplished required checklists without errors, omissions, or deviations; insured aircraft properly configured for parking (i.e., nose gear pin, ground wires (if applicable), intakes, door locks).

7.6.14.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations; minor errors insuring aircraft properly configured for parking.

7.6.14.3. U. Failed to accomplish required checklists; did not insure aircraft was properly configured for parking.

7.6.15. **Area 214. Mission Procedures.** ***NOTE:*** FEs will be verbally evaluated on mission knowledge. Actual mission profiles will be flown to the maximum extent possible. Applicable mission requirements will be published in the local unit supplement to AFI 11-202V2.

7.6.15.1. Q. Was fully knowledgeable of unit mission procedures and mission events; demonstrated adequate SA.

7.6.15.2. Q-. Had limited knowledge of unit mission procedures; demonstrated limited knowledge of mission events. Limited SA.

7.6.15.3. U. Had inadequate knowledge of unit mission procedures; had inadequate knowledge of mission events and inadequate SA.

7.6.16. **Area 215. ME Takeoff/Landing.**

7.6.16.1. Q. Was fully knowledgeable of ME takeoff and landing procedures IAW applicable directive; TOLD data computed within Q tolerances as stated in area 201.

7.6.16.2. Q-. Limited knowledge of ME takeoff and landing procedures. TOLD data computed within Q- tolerances as stated in area 201.

7.6.16.3. U. Had inadequate knowledge of ME takeoff and landing procedures. TOLD data exceeded Q- tolerances as stated in area 201.

7.6.17. **Area 216. NVG Usage/Limitations.**

7.6.17.1. Q. Correctly described the use/limitations of NVGs. Properly preflighted, handled, and used NVGs during the flight.

7.6.17.2. Q-. Minor omissions or deviations in describing the use/limitations of NVGs; did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success was not negatively affected.

7.6.17.3. U. Procedures for using NVGs were incorrect; caused damage to equipment; mission unsuccessful as a result of improper NVG usage.

7.6.18. **Area 217. AAR System/Procedures.**

7.6.18.1. Q. Was fully knowledgeable of AAR operations and procedures; performed all pre-refueling, refueling, and post-refueling checks IAW applicable checklist and

directives. Satisfactorily managed/monitored fuel systems and on-load/off-load distribution IAW procedures and techniques outlined in the flight manual, checklist, and other directives. Correctly identified and located system components, explained and related there functions, and specified the limitations. Stated correct system status and its effect on related systems. Recognized malfunctions and applied proper corrective actions.

7.6.18.2. Q-. Limited knowledge of AAR operations and procedures; performed pre-refueling, refueling and post-refueling checks with some minor deviations/omissions that did not affect successful accomplishment of AAR; limited management/monitoring of fuel systems and on load distribution IAW procedures and techniques outlined in the flight manual, checklist and other directives; limited knowledge of identification, location, functions, and limitations of system components. Stated correct system status, but could not determine its effect on related systems. Delay in recognizing malfunctions and/or applying proper corrective actions.

7.6.18.3. U. Inadequate knowledge of AAR operations and procedures; deviations/omissions could have affected successful accomplishment of the AAR. Inadequate knowledge of fuel system management or exceeded wing fuel balance limitations. Could not identify, locate, or relate systems functions and limitations; could not determine status of system or its effect on related system. Failed to recognize malfunctions and/or apply corrective actions.

7.6.19. **Area 218. HAAR/TAAR System/Procedures.**

7.6.19.1. Q. Was fully knowledgeable of HAAR/TAAR operations and procedures; performed all pre-refueling, refueling, and post-refueling checks IAW applicable checklist and directives. Satisfactorily managed/monitored fuel systems and on-load/off-load distribution IAW procedures and techniques outlined in the flight manual, checklist, and other directives. Correctly identified and located system components, explained and related there functions, and specified the limitations. Stated correct system status and its effect on related systems. Recognized malfunctions and applied proper corrective actions.

7.6.19.2. Q-. Limited knowledge of HAAR/TAAR operations and procedures; performed pre-refueling, refueling, and post-refueling checks with some minor deviations/omissions that did not affect successful accomplishment of air refueling. Limited management/monitoring of fuel systems and on-load/off-load distribution IAW procedures and techniques outlined in the flight manual, checklist and other directives; limited knowledge of identification, location, functions, and limitations of system components. Stated correct system status, but could not determine its effect on related systems. Delay in recognizing malfunctions and/or applying proper corrective actions.

7.6.19.3. U. Inadequate knowledge of HAAR/TAAR operations and procedures; deviations/omissions could have affected successful accomplishment of the air-refueling mission. Inadequate knowledge of fuel system management or exceeded wing fuel balance limitations. Could not identify, locate, or relate systems functions and limitations; could not determine status of system or its effect on related system. Failed to recognize malfunctions and/or apply corrective actions.

7.6.20. **Area 219. SAR Operations.**

7.6.20.1. Q. Was fully knowledgeable of SAR procedures; performed search checklist IAW applicable directives. Search performance data computed within TOLD criteria listed in area 201.

7.6.20.2. Q-. Limited knowledge of search procedures; minor deviations, errors, or omissions in search checklist that would not have adversely affected mission accomplishment; search performance data computed within TOLD criteria listed in area 201.

7.6.20.3. U. Had inadequate knowledge of search procedures; was responsible for significant deviations, errors, and/or omissions in the search checklist that would have adversely affected the safe or timely accomplishment of the mission. Failed to compute TOLD card, omitted necessary corrections for existing conditions, or errors in computing performance data resulted in airspeeds and/or torque exceeding Q- criteria listed in area 201.

7.6.21. **Area 220. Ground Support Equipment.**

7.6.21.1. Q. Accomplished or demonstrated a satisfactory knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with no errors, omissions, or deviations.

7.6.21.2. Q-. Accomplished or demonstrated a limited knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with minor errors, omissions, or deviations that did not jeopardize safety.

7.6.21.3. U. Failed to accomplish or demonstrate adequate knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment that did or could have jeopardized safety.

7.6.22. **Area 221. Refuel/Defuel.**

7.6.22.1. Q. Demonstrated a satisfactory knowledge of or accomplished refuel/defuel operations with no errors, omissions, or deviations from established procedures. Maintained fuel balance limits and adhered to existing published safety precautions; demonstrated a working knowledge of the aircraft the refueling/defueling system and a satisfactory knowledge of concurrent refueling procedures and appropriate safety precautions IAW T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*.

7.6.22.2. Q-. Demonstrated a limited knowledge of or accomplished refuel/defuel operations with minor errors, omissions, or deviations that did not jeopardize safety; limited knowledge of the aircraft refueling/defueling system and components.

7.6.22.3. U. Demonstrated inadequate knowledge of or failed to accomplish refuel/defuel operations, made errors, omissions, or deviations that would have jeopardized safety; demonstrated inadequate knowledge of concurrent refueling operations and appropriate safety precautions.

7.6.23. **Areas 222 through 241.** Use the following criteria.

7.6.23.1. Q. Demonstrated a complete knowledge of aircraft systems and operating limitations both with and without reference to the flight manual and/or available aids.

7.6.23.2. Q-. Limited knowledge of aircraft systems operations and limitations in some areas; used individual technique instead of procedures and was unaware of differences.

7.6.23.3. U. Unsatisfactory systems knowledge; failed to demonstrate or explain the procedures for aircraft systems operations with or without reference to the flight manual and/or available aids.

7.6.24. **Area 222. Engine.**

7.6.25. **Area 223. Propeller.**

7.6.26. **Area 224. APU/GTC.**

7.6.27. **Area 225. Fire Detection/Extinguishing.**

7.6.28. **Area 226. Oxygen.**

7.6.29. **Area 227. Pneumatics/Bleed Air.**

7.6.30. **Area 228. Pressurization/Depressurization.**

7.6.31. **Area 229. Air-Conditioning/Floor Heating.**

7.6.32. **Area 230. Anti-icing/De-icing.**

7.6.33. **Area 231. Flight Controls.**

7.6.34. **Area 232. Flaps.**

7.6.35. **Area 233. Window/Hatches/Doors/Ramp.**

7.6.36. **Area 234. Landing Gear/Nose Wheel Steering.**

7.6.37. **Area 235. Brakes.**

7.6.38. **Area 236. Hydraulics.**

7.6.39. **Area 237. Fuel.**

7.6.40. **Area 238. Electrical.**

7.6.41. **Area 239. Radios/Radar/Navigation Equipment.**

7.6.42. **Area 240. CVR/DFDR.**

7.6.43. **Area 241. Defensive Systems.**

7.6.44. **Area 242. Defensive Tactics/Threat Calls.**

7.6.44.1. Q. Satisfactory knowledge of defensive tactics; properly identify threats and the maneuvers required to defeat it.

7.6.44.2. Q-. Limited knowledge of proper scanning techniques; limited ability to identified threats and the maneuvers required to defeat them.

7.6.44.3. U. Had inadequate knowledge of proper scanning technique; could not identify threats or state maneuvers to defeat the threat.

7.6.45. **Area 243 - 249. Reserved for future use.**

Chapter 8

LOADMASTER (LM) EVALUATIONS

8.1. General. Mission qualified LMs require a combined QUAL/MSN evaluation. Instructors will demonstrate instructor duties on all periodic evaluations.

8.2. Requirements. Refer to **Chapter 2** for general and **Chapter 3** for instructor grading areas and criteria. LM specific areas and criteria are listed in this chapter.

8.3. QUAL Evaluations. For QUAL evaluations, QUAL Open and Closed Book examinations (or Formal School EOC examinations), Boldface, and an EPE are prerequisites for initial evaluations and requisites for individuals who are not mission qualified. The EPE will cover, at a minimum, one of the following areas during a QUAL evaluation: emergency signals, ground emergencies, in-flight emergencies (fuselage fire/smoke and fume elimination, in-flight door warning, rapid decompression, cargo door and ramp failure, cargo jettison, bailout procedures), and landing emergencies (landing gear retracted and ditching).

8.3.1. **Initial/Requalification.** In addition to areas listed in **Table 2.1** and **Table 3.1**, qualification evaluations will include Note 1 areas in **Table 8.1** LMs require an initial QUAL evaluation in any variant of the C-130 prior to MC-130 QUAL evaluations. Required events include a minimum of complete aircraft preflight, sortie of any type, and complete post flight. ***NOTE:*** CAA individuals qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered qualified in the C-130E/H as described in this instruction.

8.3.2. **Periodic.** Periodic QUAL evaluations may be on a C-130 or MC-130. Complete evaluation as outlined in paragraph **8.3.1**

8.4. QUAL/MSN Evaluations. MSN evaluations may be administered concurrently with the initial QUAL evaluation. RQ evaluations will be administered as required to regain qualification. MSN Open and Closed Book examinations (or Formal School EOC examinations) and an EPE are requisites (prerequisites for initial).

8.4.1. **Initial/Requalification.** Administer the evaluation to include, as a minimum a complete aircraft preflight, completion of the applicable weight and balance forms, HAAR to include, as a minimum, one wet/dry contact using NVG procedures, one airdrop, and an aircraft post-flight. Airdrop may be any equipment/personnel delivery (military free fall (MFF) personnel airdrop, door bundles, or SATB airdrop is not acceptable). ***EXCEPTION*:** HAAR is a special qualification for MC-130E/H aircrews and N/A for C-130. It will not be evaluated on initial/requalification.

8.4.1.1. C-130. CAA individuals mission qualified in the C-130 by an evaluation administered under AFI 11-2C-130V2 are also considered mission qualified in the C-130 as described in this instruction, following AFSOC approved differences training, with the exception of areas 263 (Defensive Tactics/Threat Calls), 266 (Infiltration/Exfiltration), 268 (Airdrop Rigging Procedures), 271 (Airdrop Knowledge), and 277 (FARP) . These areas must be evaluated during the flight phase of either a SPOT evaluation or a subsequent periodic MSN check in order for the LM to be considered qualified.

8.4.2. **Periodic.** Administer the evaluation on any flight representative of the MC/C-130 mission and series. This includes airdrop (excluding MFF, door bundles or SATBs), HAAR, Forward Area Refueling Point (FARP), and infil/exfil (with certified equipment). Specify in the comment section of the AF Form 8/8a the type of mission accomplished. If the evaluation is accomplished on FARP or infil/exfil, the following restrictions apply:

8.4.3. Infil/exfil load must consist of, as a minimum, one four-wheeled vehicle capable of transporting at least four people.

8.4.4. Accomplish FARP evaluations on tanker aircraft under NVG conditions.

8.5. Special Qualification Evaluations. (MC-130E/H). HAAR: LMs will accomplish a night HAAR to include, as a minimum, at least one wet/dry contact using NVG procedures. If a crew member goes unqualified in HAAR (either through lack of currency or not accomplished during periodic evaluation) then accomplish a requalification SPOT evaluation.

Table 8.1. LM QUAL/MSN Grading Areas.

Area	Notes	Grading Areas
250	1	Life Support Equipment
251	1	Aircraft Configuration
252	1	Load Planning/Inspection
253	1	On-/Off-Loading Procedures
254	1	Supervisory Abilities
255	1	Tie-Down/Restraint
256	1	Winching Procedures
257	1	Hazardous Material
258	1	Aircraft Limitations
259	1	Passenger Handling
260	1	Border Clearance
261	1	Weight and Balance
262	1	Scanner Duties
263		Defensive Tactics/Threat Calls
264	2	Receiver Air Refueling AAR System/Procedures
265	1	Engine Running On-/Off-Load
266		Infil/Exfil
267	1	Systems Knowledge
268		Airdrop Rigging Procedures
269		Joint Airdrop Inspection (JAI)
270	1	Coordinated Tasks Briefing
271		Airdrop Knowledge
272		NVG Usage/Limitations
273	2, 3	Tanker Air Refueling System/Procedures
274		Combat Search and Rescue (CSAR)/Search Scanning Procedures.
275		Pyrotechnics.
276		FARP
277-299		Reserved for future use

Area	Notes	Grading Areas
NOTES: 1. Required for QUAL portion of flight evaluations. 2. Not required for CAA squadrons. 3. Required in-flight or simulator certified for this event.		

8.6. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 8.1**

8.6.1. **Area 250. Life Support Equipment.**

8.6.1.1. Q. Located, inspected, distributed and/or demonstrated the proper use of life support or emergency equipment; satisfactory knowledge of equipment.

8.6.1.2. Q-. Difficulty locating, inspecting and/or demonstrating the proper use of life support or emergency equipment; adequate knowledge of equipment, but needs improvement.

8.6.1.3. U. Failed to inspect, distribute and/or demonstrate the proper use of life support or emergency equipment; unsatisfactory knowledge of equipment.

8.6.2. **Area 251. Aircraft Configuration.**

8.6.2.1. Q. Ensured the aircraft was properly configured to accommodate mission requirements. Familiar with various configurations as outlined in applicable directives and properly stowed configuration items that were not used.

8.6.2.2. Q-. Difficulty configuring the aircraft but did not impede mission. Limited knowledge of various configurations as outlined in applicable directives.

8.6.2.3. U. Failed to ensure proper aircraft configuration or caused mission delays; unsatisfactory knowledge of configurations; failed to properly stow configuration items.

8.6.3. **Area 252. Load Planning/Inspection.**

8.6.3.1. Q. Accurately planned a passenger/cargo load and met aircraft center of gravity (CG) limits. Inspected load for proper preparation and documentation.

8.6.3.2. Q-. Difficulty planning a passenger/cargo load to meet CG limits; difficulty inspecting load for proper preparation and documentation.

8.6.3.3. U. Failed to plan a passenger/cargo load and meet CG limits; failed to inspect load for proper preparation and documentation.

8.6.4. **Area 253. On-/Off-Loading Procedures.**

8.6.4.1. Q. Correctly on-/off-loaded the aircraft and in a safe, timely manner.

8.6.4.2. Q-. Difficulty correctly on-/off-loading the aircraft.

8.6.4.3. U. Failed to correctly/safely on-/off-load the aircraft; procedures caused undue delay.

8.6.5. **Area 254. Supervisory Abilities.**

8.6.5.1. Q. Established and maintained control of personnel during loading operations.

8.6.5.2. Q-. Established and maintained control of personnel, but made minor supervisory error; safety was not compromised.

8.6.5.3. U. Did not establish or maintain control of personnel and/or safety was compromised.

8.6.6. **Area 255. Tie-Down/Restraint.**

8.6.6.1. Q. Correctly calculated and applied correct amount of restraint to a given item. Understood and could state the principals of restraint.

8.6.6.2. Q-. Difficulty calculating or applying the correct amount of restraint. Did not fully understand the principals of restraint.

8.6.6.3. U. Failed to correctly calculate or apply the correct amount of restraint. Did not understand and could not state the principals of restraint.

8.6.7. **Area 256. Winching Procedures.**

8.6.7.1. Q. Correctly demonstrated and/or explained winching procedures.

8.6.7.2. Q-. Difficulty demonstrating and/or did not completely explain correct winching procedures but safety was not compromised.

8.6.7.3. U. Failed to demonstrate and/or did not explain correct winching procedures or safety was compromised.

8.6.8. **Area 257. Hazardous Material.**

8.6.8.1. Q. Understood hazardous cargo procedures. Could comply with the provisions of AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipments* and/or follow the procedures for air movement of hazardous cargo under tactical, contingency, or emergency conditions.

8.6.8.2. Q-. Understood hazardous cargo procedures, but made minor deviations stating them; could comply with the provisions of AFMAN 24-204(I), and/or follow the procedures for air movement of hazardous cargo under tactical, contingency, or emergency conditions.

8.6.8.3. U. Did not understand hazardous cargo procedures in AFMAN 24-204(I).

8.6.9. **Area 258. Aircraft Limitations.** ***NOTE:*** Limitations may include, but are not limited to cargo floor, roller station, compartment, pallet weight, height, nets, and loading aids.

8.6.9.1. Q. Correctly stated, understood, and could apply the correct limitations associated with the aircraft, on-/off-loading, and associated equipment.

8.6.9.2. Q-. Had difficulty stating various limitations; difficulty locating correct limitations in the loading manual.

8.6.9.3. U. Failed to state various limitations or could not locate correct limitations in the loading manual.

8.6.10. **Area 259. Passenger Handling.**

8.6.10.1. Q. Correctly briefed and performed passenger handling procedures.

8.6.10.2. Q-. Had difficulty briefing and/or performing passenger handling procedures.

8.6.10.3. U. Failed to brief and/or did not perform proper passenger handling procedures.

8.6.11. **Area 260. Border Clearance.**

8.6.11.1. Q. Correctly followed command guidelines; completed/explained border clearance requirements IAW current directives.

8.6.11.2. Q-. Difficulty explaining border clearance requirements; minor mistakes degraded effectiveness.

8.6.11.3. U. Could not accurately complete forms; unaware of command guidance or could not explain requirements.

8.6.12. **Area 261. Weight and Balance.**

8.6.12.1. Q. Knowledge of aircraft limitations and weight and balance directives was satisfactory. Completed DD Form 365-4, *Weight and Balance Clearance Form F-Transport/ Tactical*, legibly and accurately with only minor errors.

8.6.12.1.1. Takeoff or landing gross weights: ±500 lbs

8.6.12.1.2. Percent of mean aerodynamic chord (MAC): ±0.5 percent

8.6.12.1.3. Aircraft gross takeoff limits: Not exceeded.

8.6.12.1.4. Center of gravity limitations: Not exceeded.

8.6.12.2. Q-. Limited knowledge of aircraft limitations and weight and balance directives; had difficulty completing DD Form 365-4 legibly; DD Form 365-4 contained errors within criteria listed below.

8.6.12.2.1. Takeoff or landing gross weights: ±501 to 1,000 pounds (lbs)

8.6.12.2.2. Percent of MAC: ±0.6 to 1.0 percent.

8.6.12.2.3. Aircraft gross takeoff limits: Not exceeded.

8.6.12.2.4. Center of gravity limitations: Not exceeded.

8.6.12.3. U. Knowledge of aircraft limitations and weight and balance directives was inadequate; failed to complete DD Form 365-4 accurately; exceeded Q- criteria.

8.6.13. **Area 262. Scanner Duties.**

8.6.13.1. Q. Periodically performed scanner duties by monitoring aircraft interior and exterior for abnormal conditions.

8.6.13.2. Q-. Did not scan in a timely manner to recognize abnormal conditions.

8.6.13.3. U. Failed to perform scanner duties by monitoring or making periodic checks of the aircraft interior and exterior for abnormal conditions.

8.6.14. **Area 263. Defensive Tactics/Threat Calls.**

8.6.14.1. Q. Satisfactory knowledge of defensive tactics employed by MC/C-130 aircraft; properly identified threats and the maneuvers required to defeat it. Explained proper scanning technique from the troop doors and ramp and door.

8.6.14.2. Q-. Limited knowledge of proper scanning techniques; limited ability to identify threats and the maneuvers required to defeat them.

8.6.14.3. U. Had inadequate knowledge of proper scanning technique; could not identify threats, or state maneuvers to defeat the threat.

8.6.15. **Area 264. AAR System/Procedures.**

8.6.15.1. Q. Satisfactory knowledge of AAR procedures; adequate knowledge of system components and locations. Accomplished all AAR procedures, including leak checks during contact, IAW with approved checklist and directives; properly configured the aircraft prior to completion of the preparation for contact checklist.

8.6.15.2. Q-. Limited knowledge of AAR procedures and limited knowledge of AAR system components and locations; accomplished AAR procedures with minor errors, omissions, or deviations. Performed limited checks during contact; performed aircraft configuration with minor errors or omissions that did not affect successful mission accomplishment.

8.6.15.3. U. Had inadequate knowledge of AAR procedures, system components and/or locations; accomplished AAR procedures with major errors, omissions, or deviations critical to safety of flight; failed to properly configure aircraft before completion of preparation for contact checklist and failed to perform required checks during contact.

8.6.16. **Area 265. Engine Running On-/Off-Load.**

8.6.16.1. Q. Followed/explained proper procedures for engine running on-/off-load operations.

8.6.16.2. Q-. Difficulty following/explaining proper procedures for engine running on-/off-load operations.

8.6.16.3. U. Did not follow/explain proper procedures for engine running on-/off-loading.

8.6.17. **Area 266. Infil/Exfil.**

8.6.17.1. Q. Followed/explained proper procedures for NVG infil/exfil operations.

8.6.17.2. Q-. Difficulty following/explaining proper procedures for NVG infil/exfil operations.

8.6.17.3. U. Did not follow/explain proper procedures for NVG infil/exfil operations.

8.6.18. **Area 267. Systems Knowledge.** ***NOTE:*** As a minimum, evaluate the following areas (as applicable) QUAL: oxygen, ramp and door, roller conveyors/dual rails, and hydraulics. MSN: Static line retrievers, aerial delivery system (ADS) system, and aft anchor cable supports.

8.6.18.1. Q. Displayed satisfactory knowledge of systems, ensuring satisfactory operation within prescribed limits; explained proper corrective action for each type of malfunction.

8.6.18.2. Q-. Difficulty in displaying a satisfactory knowledge of systems; slow to analyze problems or apply proper corrective actions.

8.6.18.3. U. Failed to display a satisfactory knowledge of systems; failed to analyze problems or apply proper corrective actions.

8.6.19. **Area 268. Airdrop Rigging Procedures.**

8.6.19.1. Q. Correctly rigged and identified key airdrop components.

8.6.19.2. Q-. Difficulty rigging and/or identifying key airdrop components.

8.6.19.3. U. Failed to rig and/or identify key airdrop components.

8.6.20. **Area 269. Joint Airdrop Inspection.**

8.6.20.1. Q. Correctly completed/explained the JAI (if required).

8.6.20.2. Q-. Had difficulty completing/explaining the JAI (if required).

8.6.20.3. U. Failed to or had extreme difficulty completing/explaining the JAI (if required).

8.6.21. **Area 270. Coordinated Tasks Briefing.**

8.6.21.1. Q. Correctly briefed the coordinated tasks IAW current directives (if required).

8.6.21.2. Q-. Had difficulty briefing the coordinated tasks IAW current directives (if required).

8.6.21.3. U. Failed to accomplish coordinated tasks briefing IAW current directives (if required).

8.6.22. **Area 271. Airdrop Knowledge.**

8.6.22.1. Q. Correctly demonstrated airdrop procedures for the event being flown, if performed. Knowledge of airdrop load information and procedures for other types of loads were satisfactory.

8.6.22.2. Q-. Had difficulty demonstrating and/or understanding airdrop procedures and load information.

8.6.22.3. U. Could not demonstrate and/or understand airdrop procedures and load information.

8.6.23. **Area 272. NVG Usage/Limitations.**

8.6.23.1. Q. Correctly described the use/limitations of NVGs.

8.6.23.2. Q-. Minor omissions or deviations in describing the use/limitations of NVGs; did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success was not negatively affected.

8.6.23.3. U. Procedures for using NVGs were incorrect; caused damage to equipment; mission unsuccessful as a result of improper NVG usage.

8.6.24. **Area 273. HAAR/TAAR System/Procedures.**

8.6.24.1. Q. Knowledge of aerial refueling procedures was satisfactory. During fuel transfer operations, relayed light signals without errors; transmitted clear, concise, timely information to the pilot concerning helicopter/CV-22 position throughout the refueling maneuver. Ensured emergency equipment was properly configured for the aerial refueling. Successfully demonstrated breakaway procedures or verbally evaluated to the satisfaction of the evaluator.

8.6.24.2. Q-. Limited knowledge of aerial refueling procedures; minor errors in relaying light signals during operations; unclear, nonstandard transmissions concerning helicopter/CV-22 position; minor deviations in configuring emergency equipment for the aerial refueling; emergency breakaway performed with minor discrepancies that did not affect safety.

8.6.24.3. U. Had inadequate knowledge of aerial refueling procedures; significant errors in relaying light signals during operations. Transmissions concerning helicopter/CV-22 position were unclear or erroneous; failed to configure emergency equipment properly for the aerial refueling. Performed emergency breakaway with major discrepancies or verbally evaluated event with major errors noted.

8.6.25. **Area 274. CSAR/Search Scanning Procedures.** ***NOTE:*** Evaluate both threat and CSAR scanning procedures.

8.6.25.1. Q. Knowledge of CSAR/search scanning procedures was satisfactory.

8.6.25.2. Q-. Limited knowledge of CSAR/search procedures; minor difficulties in keeping scanners motivated; did not adversely affect the mission.

8.6.25.3. U. Knowledge of CSAR/search procedures was unsatisfactory. Adversely affected the mission or jeopardized safety.

8.6.26. **Area 275. Pyrotechnics.**

8.6.26.1. Q. Thorough knowledge of pyrotechnics; identified the appropriate pyrotechnics for the mission; satisfactory knowledge of ground and in-flight emergency procedures.

8.6.26.2. Q-. Limited knowledge of pyrotechnics; did not always correctly identify the most efficient pyrotechnics for the mission, but safety was not affected.

8.6.26.3. U. Lacked knowledge of pyrotechnics; could not identify appropriate pyrotechnics for the mission; inadequate knowledge of emergency procedures; compromised safety.

8.6.27. **Area 276. FARP.**

8.6.27.1. Q. Satisfactorily demonstrated knowledge of Hot Refueling Supervisor (HRS) and Panel Operator (PO) duties, FARP equipment, and emergency procedures; satisfactorily performed all items associated with HRS or PO duties, exercised sound CRM principles, and SA.

8.6.27.2. Q-. Minor deviations in knowledge associated with HRS and PO duties and FARP equipment; minor omissions in procedures during performance of HRS or PO duties.

8.6.27.3. U. Lacks adequate knowledge to safely perform FARP duties to include HRS/PO duties, FARP equipment, and/or emergency procedures; could not perform HRS or PO duties to the extent of creating unnecessary delays and/or jeopardizing FARP completion. Could not exercise sound CRM and/or SA.

8.6.28. **Areas 277 – 299. Reserved for future use.**

Chapter 9

AIRBORNE MISSION SYSTEMS SPECIALIST (AMSS) EVALUATIONS

9.1. General. AMSS require a combined QUAL/MSN evaluation. Instructors will demonstrate instructor duties on all periodic evaluations.

9.2. Requirements. Refer to **Chapter 2** for all evaluations and **Chapter 3** for instructor evaluations. AMSS specific areas and criteria are listed in this chapter.

9.3. QUAL/MSN Evaluations. See **Table 9.1** for required evaluation areas.

9.3.1. **Initial/Requalification.** Required events include an NVG or TF low-level route to an actual AAR, HAAR, airdrop, or SCA.

9.3.2. **Periodic.** Required events include an NVG or TF low-level route to an AAR, HAAR, airdrop or SCA.

Table 9.1. Airborne Mission Systems Specialist (AMSS) QUAL/MSN Grading Areas.

Area	Notes	Grading Areas
300	2	Authentication Procedures -CRITICAL
301	2	Encode-Decode Procedures – CRITICAL
302	2	En route Procedures
303	1	Low-Level Procedures
304	2	COMSEC - CRITICAL
305	2	Defensive Systems
306	2	Crypto Systems Operations (KYV-5/KY-58/KY-100)
307	2	Ultrahigh Frequency (UHF)/ Very High Frequency **(**VHF) Frequency Hopping Operation
308	2	Satellite Communications (SATCOM)/Demand Assigned Multiple Access (DAMA)/High Performance Waveform (HPW) Systems Operations
309	1	Interphone Procedures
310	2	Equipment Troubleshooting
311	1, 3	NVG/Scanner Duties
312	2	Mission Systems Knowledge
313	1	Tactical and Command and Control (C2) Communications/ Procedures
314	1	ATC Communications
315-349		Reserved for Future Use
NOTES: 1. Required in-flight 2. Required in-flight or alternate method 3. MC-130E – N/A		

9.4. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 9.1**

9.4.1. **Area 300. Authentication Procedures - CRITICAL.**

9.4.1.1. Q. Correct authentication materials were readily at hand. Able to authenticate within prescribed time using all authentication materials.

9.4.1.2. U. Unsatisfactory knowledge of authentication materials and procedures; incorrect or excessively slow authentication; authentication materials were not readily available or were incorrect.

9.4.2. **Area 301. Encode-Decode Procedures – CRITICAL.**

9.4.2.1. Q. Thorough knowledge of encode-decode materials and procedures. Correct/timely encode-decode was demonstrated. Correct materials were readily at hand.

9.4.2.2. U. Unsatisfactory knowledge of encode-decode materials and procedures. Incorrect or excessively slow encode-decode procedures. Encode-decode materials were not readily available or were incorrect.

9.4.3. **Area 302. En route Procedures.**

9.4.3.1. Q. Thorough knowledge of Flight Information Publication (FLIP) en route procedures, frequencies, and radio requirements; comply with all International Civil Aviation Organization (ICAO) procedures, ATC, Allied Communication Publication (ACP), Joint Army- Navy- Air Force Publication (JANAP), communications plan, and COMSEC directives. Ensured complete communications plan was developed and executed to aid in mission safety and completion. Able to use charts flight plan and mission equipment to flight follow and communicate required information to appropriate ATC facility.

9.4.3.2. Q-. Limited knowledge of FLIP en route, ICAO procedures, ATC, ACP, JANAP, communications plans, directives, or procedures; communications procedures included minor errors not critical to mission safety and/or accomplishment; did not affect mission safety or completion.

9.4.3.3. U. Lacked knowledge of en route procedures, frequencies, and radio requirements; major errors in communications procedures compromised mission safety and/or accomplishment.

9.4.4. **Area 303. Low-level Procedures.**

9.4.4.1. Q. Thorough knowledge of low-level procedures to include frequencies, radio requirements, and aircraft/airspace deconfliction; able to determine aircraft position utilizing available resources (charts, flight plan, aircraft equipment).

9.4.4.2. Q-. Limited knowledge of low-level procedures to include frequencies, radio requirements, and aircraft/airspace deconfliction; difficulty in determining aircraft position utilizing available resources (charts, flight plan, and aircraft equipment). Low-level procedures included minor errors not critical to mission safety and/or accomplishment.

9.4.4.3. U. Lacked knowledge of low-level procedures to include frequencies, radio requirements, and aircraft/airspace deconfliction. Failed to determine aircraft position utilizing available resources (charts, flight plan, and aircraft equipment). Low-level procedures compromised mission safety and/or accomplishment.

9.4.5. **Area 304. COMSEC-CRITICAL**

9.4.5.1. Q. Acquired, inventoried, maintained positive control, and/or demonstrated the proper use and storage of classified material, equipment, and information; satisfactory knowledge of all procedures, including destruction.

9.4.5.2. U. Failed to acquire, inventory, maintain positive control and/or demonstrate the proper use of classified material, equipment, and information; unsatisfactory knowledge of procedures.

9.4.6. **Area 305. Defensive Systems**

9.4.6.1. Q. Demonstrated satisfactory knowledge of aircraft defensive systems; familiar with nomenclature and basic operation and capabilities/limitations of aircraft defensive system components against specific threats; able to describe impact of equipment outages on mission objectives.

9.4.6.2. Q-. Demonstrated adequate knowledge of defensive systems but needs improvement; needed assistance with nomenclature and basic operation and capabilities/limitations of aircraft defensive system components against specific threats; difficulty describing impact of equipment outages on mission objectives.

9.4.6.3. U. Failed to demonstrate adequate knowledge of aircraft defensive systems; unfamiliar with nomenclature and basic operation and capabilities/limitations of aircraft defensive system components against specific threats; failed to describe impact of equipment outages on mission objectives.

9.4.7. **Area 306. Crypto Systems Operations (KYV-5/KY-58/KY-100)**

9.4.7.1. Q. Knowledge of all crypto systems was thorough; full knowledge of keying devices and materials. Was able to key all systems without error, was able to demonstrate/explain over the air rekeying Over the Air Rekey (OTAR procedures).

9.4.7.2. Q-. Limited knowledge of crypto systems, keying devices, and materials; required excessive time to key systems; was able to demonstrate/explain OTAR procedures with minor errors or omissions.

9.4.7.3. U. Lacked knowledge of crypto systems, OTAR procedures, keying devices, or keying materials. Failed to key systems or demonstrate/explain OTAR procedures.

9.4.8. **Area 307. UHF/VHF Frequency Hopping Operation.**

9.4.8.1. Q. Knowledgeable of frequency hopping systems and initialization procedures. Was able to key systems and operate without errors.

9.4.8.2. Q-. Knowledgeable of frequency hopping systems but has difficulty during initialization procedures; was able to key systems with minor errors or omissions.

9.4.8.3. U. Lacked knowledge of Frequency Hopping systems or required assistance in initialization procedures; failed to key systems.

9.4.9. **Area 308. SATCOM/DAMA/HPW Systems Operations.**

9.4.9.1. Q. Knowledgeable of SATCOM/DAMA/HPW operations and system initialization procedures; was able to communicate on system in all modes without error.

9.4.9.2. Q-. Knowledgeable of SATCOM/DAMA/HPW system but has difficulty during initialization procedures; was able to communicate on the system with minor errors.

9.4.9.3. U. Lacked knowledge of SAT/DAMA/HPW system or required assistance in initialization procedures; failed to communicate on the system.

9.4.10. **Area 309. Interphone Procedures.**

9.4.10.1. Q. Used sound judgment to facilitate essential crew communications; communicated with crew so they understand pilot intentions and crew requirements to effect safe, efficient mission accomplishment.

9.4.10.2. Q-. Minor errors in judgment to facilitate essential crew communications; errors in timing of communications and interruptions of other crew positions did not detract from safety or mission accomplishment.

9.4.10.3. U. Failed to facilitate effective crew communications and/or caused confusion during critical phases of flight.

9.4.11. **Area 310. Equipment Troubleshooting.**

9.4.11.1. Q. Able to analyze and isolate malfunctions, identify work around solutions and/or troubleshoot and repair/swap malfunctioning communications and navigation equipment.

9.4.11.2. Q-. Had difficulty analyzing and isolating malfunctions, identifying work around solutions and/or, troubleshooting and repairing/swapping malfunctioning communications and navigation equipment.

9.4.11.3. U. Failed to identify malfunctioning equipment, troubleshoot and/or repair/swap malfunctioning communications and navigation equipment.

9.4.12. **Area 311. NVG/Scanner Duties.**

9.4.12.1. Q. Thorough knowledge of scanning procedures for threats/terrain avoidance using NVGs, calling out threats, and appropriate aircraft defensive maneuvers; understood appropriate defensive countermeasures.

9.4.12.2. Q-. Limited knowledge of scanning/NVG procedures for threats/terrain avoidance, calling out threats or appropriate aircraft defensive maneuvers were slow; had some understanding of appropriate defensive countermeasures.

9.4.12.3. U. Lacked knowledge of scanning procedures for threats, improper use of NVGs, unable to call out threats or appropriate aircraft defensive maneuver; lacked understanding of appropriate defensive countermeasures.

9.4.13. **Area 312. Mission Systems Knowledge.** ***NOTE:*** Evaluate the following areas: SCNS, High Frequency (HF), VHF, UHF, public address (PA), Identification Friend or Foe/Selective Identification Feature (IFF/SIF) equipment, navigation equipment, Emergency Locator Transmitter (ELT), and Global Positioning System (GPS).

9.4.13.1. Q. Thorough knowledge of system operation, to include operating limits; able to quickly locate published information in manuals and instructions for those items not requiring memorization.

9.4.13.2. Q-. Limited knowledge of system operation, to include operating limits. Some difficulty in locating published information in manuals and instructions for items not requiring memorization.

9.4.13.3. U. Lacked knowledge of system operation, to include operating limits; could not locate published information in manuals and instructions for items requiring memorization.

9.4.14. **Area 313. Tactical and C2 Communications/Procedures.**

9.4.14.1. Q. Monitored aircraft position; contacted the DZ/LZ prior to arrival. Maintained contact throughout objective area operations; properly configured communications systems prior to HAAR/AAR. Completed all required execution checklist reports. Communications were clear and concise.

9.4.14.2. Q-. Difficulty monitoring aircraft position and contacting the DZ/LZ prior to arrival; difficulty maintaining contact throughout objective area operations; configured communications systems prior to HAAR/AAR in an untimely manner; did not complete all execution checklist reports. Communications were unclear and/or excessively long.

9.4.14.3. U. Failed to monitor aircraft position; not prepared to make contact with the DZ/LZ prior to arrival. Did not ensure contact throughout objective area operations; did not configure communication systems prior to HAAR/AAR; did not complete execution checklist reports. Communications were not clear and concise.

9.4.15. **Area 314 ATC Communications**

9.4.15.1. Q. Knowledge of basic ATC communications/procedures able to communicate with appropriate ATC agencies in regards to aircraft position and intent during and transitioning to/ from Instrument Flight Rules (IFR)/VFR flight. Has a thorough knowledge and used appropriate flight publications.

9.4.15.2. Q-. Some knowledge of basic ATC communications/procedures with assistance able to relay basic aircraft information to ATC; limited knowledge or use of appropriate flight publications; difficulty in coordinating transition to/from IFR/VFR flight.

9.4.15.3. U. Failed to relay basic aircraft information to ATC, did not understand procedures for transition between IFR/VFR flight and unable to use flight publications.

9.4.16. **Areas 315 - 349. Reserved for future use.**

Chapter 10

DIRECT SUPPORT OPERATORS (DSO) EVALUATIONS

10.1. General. DSO requires a combined QUAL/MSN evaluation. Instructors will demonstrate instructor duties on all periodic evaluations.

10.2. Requirements. Refer to **Chapter 2** for all evaluations and **Chapter 3** for instructor evaluations. DSO specific areas and criteria are listed in this chapter.

10.3. QUAL/MSN Evaluations. See **Table 10.1** for required evaluation areas.

10.3.1. **Initial/Requalification.** Required events include complete equipment preflight, a flight profile that includes a realistic threat scenario, at least one aircraft defensive maneuver during any portion of a tactical mission in which the DSO provides input, and post-flight procedures. Any mission in an actual threat environment will satisfy same requirements.

10.3.2. **Periodic.** Requirements are the same as initial/requalification evaluations.

Table 10.1. DSO QUAL/MSN Grading Areas.

Area	Notes	Grading Areas
500	1	Control of Classified Material
501	3	Communication System Suite (CSS) Operation
502	3	Tactical Data Receiver (TDR) Operation
503	3	GPS Operation
504	1	Threat Knowledge
505	1	Threat Analysis
506	1	Threat Reporting
507	1	Defensive Systems
508	1	Mission Operations
509-549		Reserved for future use
NOTES: 1. Required in-flight. 2. Required in-flight or simulator certified for this event. 3. Required in-flight or alternate method.		

10.4. Grading Criteria. The following subparagraphs contain grading criteria for the areas listed in **Table 10.1**

10.4.1. **Area 500. Control of Classified Material.**

10.4.1.1. Q. Acquired, inventoried, maintained positive control, and/or demonstrated the proper use and storage of classified material, equipment, and information; satisfactory knowledge of all procedures, including destruction.

10.4.1.2. Q-. Difficulty acquiring, inventorying, maintaining positive control, and/or demonstrating the proper use of classified material, equipment, and information; adequate knowledge of procedures, but needs improvement.

10.4.1.3. U. Failed to acquire, inventory, maintain positive control, and/or demonstrate the proper use of classified material, equipment, and information; unsatisfactory knowledge of procedures.

10.4.2. **Area 501. CSS Operation.**

10.4.2.1. Q. Demonstrated proper execution of frequency spectrum scans, discrete frequency searches, and manual operations employing all assets of the CSS as applicable to operator's mission area; demonstrated ability to use different pieces of CSS equipment in tandem; satisfactory knowledge of CSS equipment hardware and software operations, installation, and troubleshooting.

10.4.2.2. Q-. Difficulty demonstrating proper execution of frequency spectrum scans, discrete frequency searches, and manual operations employing all assets of the CSS as applicable to operator's mission area; difficulty using different pieces of CSS equipment simultaneously; adequate knowledge of CSS equipment hardware and software operations, installation, and troubleshooting, but needs improvement.

10.4.2.3. U. Failed to demonstrate proper execution of frequency spectrum scans, discrete frequency searches, and manual operations employing all assets of the CSS as applicable to operator's mission area; failed to use different pieces of CSS equipment in tandem; unsatisfactory knowledge of CSS equipment hardware and software operations, installation, and troubleshooting.

10.4.3. **Area 502. TDR Operation.**

10.4.3.1. Q. Demonstrated proper set-up and use of the TDR as applicable to operator's mission area; configured TDR and applicable software in satisfactory amount of time; extracted TDR information pertinent to the mission; satisfactory knowledge of TDR equipment hardware and software operations, installation, and troubleshooting.

10.4.3.2. Q-. Difficulty demonstrating proper set-up and use of the TDR as applicable to operator's mission area; configured TDR and applicable software in satisfactory amount of time, but needs improvement; extracted TDR information pertinent to the mission but needs improvement; adequate knowledge of TDR equipment hardware and software operations, installation, and troubleshooting, but needs improvement.

10.4.3.3. U. Failed to set-up and use of the TDR as applicable to operator's mission area; failed to configure TDR and/or applicable software within a satisfactory amount of time; failed to extract TDR information pertinent to the mission; unsatisfactory knowledge of TDR equipment hardware and software operations, installation, and troubleshooting.

10.4.4. **Area 503. GPS Operation.**

10.4.4.1. Q. Demonstrated proper set-up and use of the GPS in conjunction with navigational software; demonstrated use of the GPS as an aid to SA; integrated GPS information into CSS and TDR operations; had satisfactory knowledge of GPS equipment hardware and software operations, installation, and troubleshooting.

10.4.4.2. Q-. Difficulty demonstrating proper set-up and use of the GPS in conjunction with navigational software; difficulty demonstrating use of the GPS as an aid to SA; difficulty integrating GPS information into CSS and TDR operations; adequate

knowledge of GPS equipment hardware and software operations, installation, and troubleshooting, but needs improvement.

10.4.4.3. U. Failed to set-up and use the GPS in conjunction with navigational software; failed to use the GPS as an aid to SA; failed to integrate GPS information into CSS and TDR operations; unsatisfactory knowledge of GPS equipment hardware and software operations, installation, and troubleshooting.

10.4.5. **Area 504. Threat Knowledge.**

10.4.5.1. Q. Demonstrated knowledge of characteristics, procedures, and capabilities associated with threats to the aircraft as applicable to the operator's mission area; demonstrated knowledge of SILENT SHIELD equipment capabilities/limitations to threats; satisfactory overall threat knowledge.

10.4.5.2. Q-. Demonstrated adequate knowledge of characteristics, procedures, and capabilities associated with threats to the aircraft as applicable to the operator's mission area, but needs improvement; demonstrated only basic knowledge of SILENT SHIELD equipment capabilities/ limitations to threats. Adequate overall threat knowledge, but needs improvement.

10.4.5.3. U. Demonstrated insufficient knowledge of characteristics, procedures, and capabilities associated with threats to the aircraft as applicable to the operator's mission area; demonstrated a lack of knowledge of SILENT SHIELD equipment capabilities/limitations to threats; unsatisfactory overall threat knowledge.

10.4.6. **Area 505. Threat Analysis.**

10.4.6.1. Q. Demonstrated ability to prioritize equipment resources against threats based on location and level of threat to the aircraft.

10.4.6.2. Q-. Difficulty prioritizing equipment resources against threats based on location and level of threat to the aircraft.

10.4.6.3. U. Failed to prioritize equipment resources against threats based on location and level of threat to the aircraft.

10.4.7. **Area 506. Threat Reporting.**

10.4.7.1. Q. Demonstrated ability to relay appropriate SA or threat-related information affecting the safety of the aircraft or its mission to the appropriate crew member in a timely manner; threat calls excluded extraneous information and met acceptable standards for clarity and brevity; demonstrated ability to extract Essential Elements of Information (EEIs) and intelligence pertinent to technical reporting.

10.4.7.2. Q-. Demonstrated ability to relay appropriate SA or threat-related information affecting the safety of the aircraft or its mission to the appropriate crew member, but needs improvement in timeliness, clarity, and/or brevity. Threat calls included some extraneous information not pertinent to the aircraft and/or mission, but the overall mission was not impacted; difficulty extracting EEI and intelligence pertinent to technical reporting.

10.4.7.3. U. Failed to relay appropriate SA or threat-related information affecting the safety of the aircraft or its mission to the appropriate crew member in a timely manner;

threat calls included extraneous information and fell below acceptable standards for clarity and brevity. Inadequate threat reporting negatively impacted the mission; failed to extract EEIs and intelligence pertinent to technical reporting.

10.4.8. **Area 507. Defensive Systems.**

10.4.8.1. Q. Demonstrated satisfactory knowledge of aircraft defensive systems; familiar with nomenclature, basic operation, and capabilities/limitations of aircraft defensive system components against specific threats; able to describe impact of equipment outages on mission objectives.

10.4.8.2. Q-. Demonstrated adequate knowledge of defensive systems but needs improvement; needed assistance with nomenclature, basic operation, and capabilities/limitations of aircraft defensive system components against specific threats; difficulty describing impact of equipment outages on mission objectives.

10.4.8.3. U. Failed to demonstrate adequate knowledge of aircraft defensive systems; unfamiliar with nomenclature, basic operation, and capabilities/limitations of aircraft defensive system components against specific threats; failed to describe impact of equipment outages on mission objectives.

10.4.9. **Area 508. Mission Operations.**

10.4.9.1. Q. Able to explain support provided to SILENT SHIELD operations and MC-130 tactical operations by support aircraft (e.g., suppression of enemy air defenses (SEAD)/destruction of enemy air defenses (DEAD) aircraft, RC-135 RIVET JOINT, E-3 AWACS, etc.); able to explain basic mission employment doctrine of the MC-130 and impact of SILENT SHIELD on MC-130 operations.

10.4.9.2. Q-. Difficulty explaining support provided to SILENT SHIELD operations and MC-130 tactical operations by support aircraft (e.g. SEAD/DEAD aircraft, RC-135 RIVET JOINT, E-3 AWACS, etc.); able to explain basic mission employment doctrine of the MC-130 and impact of SILENT SHIELD on MC-130 operations, but needed improvement.

10.4.9.3. U. Failed to explain support provided to SILENT SHIELD operations and MC-130 tactical operations by support aircraft (e.g., SEAD/DEAD aircraft, RC-135 RIVET JOINT, E-3 AWACS, etc.); failed to explain basic mission employment doctrine of the MC-130 and impact of SILENT SHIELD on MC-130 operations.

10.4.10. **Areas 509 - 549. Reserved for future use.**

BURTON M. FIELD, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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

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

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AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 11 April 2001

AFI 11-2MC-130V1, *MC-130 Aircrew Training*, 3 September 2008

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AFMAN 33-363, *Management of Records*, 13 October 2011

T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection Documentation, Policies, and Procedures*, 30 April 2003

T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, 15 July 2002

Adopted Forms

AF Form 8/8a, *Certificate of Aircrew Qualification*

AF Form 847, *Recommendation for Change of Publication*

AF Form 3862, *Air Crew Evaluation Worksheet*

AF IMT 4031, *CRM Skills Criteria Training/ Evaluation*

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Recorder*

Abbreviations and Acronyms

AAR—Air-to-Air Refueling

ACF—Acceptance Check Flight

ACP—Allied Communication Publication

ADS—Aerial Delivery System

AETC—Air Education and Training Command

AF—Air Force

AFI—Air Force Instruction

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSOC—Air Force Special Operations Command

AIRCAT—Automated Inspection, Repair, Corrosion & Aircraft Tracking

AMSS—Airborne Mission Systems Specialist

APU—Auxiliary Power Unit

ARMS—Aviation Resource Management Systems

ASR—Airport Surveillance Radar

ATA—Actual Times of Arrival

ATC—Air Traffic Control

ATO—Air Tasking Order

BAI—Back-up Aircraft Inventory

CAA—Combat Aviation Advisor

CANS—Civilian Announcement Notification System

CARP—Computed Air Release Point

CG—Center of Gravity

COMSEC—Communication Security

CRM—Crew Resource Management

CSAR—Combat Search and Rescue

CSS—Communication System Suite

CVR—Cockpit Voice Recorde

DAMA—Demand Assigned Multiple Access

DEAD—Destruction of Enemy Air Defenses

DFDR—Digital Flight Data Recorder

DSO—Direct Support Operators

DZ—Drop Zone

ECM—Electronic Counter Measures

EEI—Essential Elements of Information

ELT—Emergency Locator Transmitter

EMCON—Emitter Condition

EPE—Emergency Procedures Evaluation

ETA—Estimated Time of Arrival

ETP—Equal Time Point

EWO—Electronic Warfare Officer

EXFIL—Exfiltration

FARP—Forward Area Refueling Point

FCF—Functional Check Flight

FCIF—Flight Crew Information File

FDP—Flight Duty Period

FE—Flight Engineer

FLIP—Flight Information Publication

GPS—Global Positioning System

GTC—Gas Turbine Compressor

HAAR—Helicopter Air-to-Air Refueling

HQ—Headquarters

HRS—Hot Refueling Supervisor

IAW—In Accordance With

ICAO—International Civil Aviation Organization

IDS—Infrared Detection Set

IFF—Identification Friend or Foe

IFR—Instrument Flight Rules

ILS—Instrument Landing System

IMC—Instrument Meteorological Condition(s)

IMT—Information Management Tool

INFIL—Infiltration

INSTM—Instrument

INU—Inertial Navigation Units

IRCM—Infrared Countermeasures

JAI—Joint Airdrop Inspection

JANAP—Joint Army- Navy- Air Force Publication

kts—Knots

LOC—Localizer

LZ—Landing Zone

MAC—Mean Aerodynamic Chord

MAJCOM—Major Command

MC—Mission Computer

MDA—Minimum Descent Altitude

MDS—Mission Design Series

ME—Maximum Effort

MFF—Military Free Fall

MFLMETO—Minimum Field Length for Maximum Effort Take-Off

MSN—Mission

NAS—National Airspace System

NDB—Nondirectional Beacon

NM—Nautical Mile

NOTAMS—Notice to Airman System

NVG—Night Vision Goggles

OPR—Office of Primary Responsibility

OPSEC—Operations Security

OTAR—Over the Air Rekeying

PAR—Precision Approach Radar

PO—Panel Operator

QUAL—Qualification

RETA—Revised Estimated Time of Arrival (ETA)

RNP—Required Navigation Performance

ROE—Rules of Engagement

RQ—Requalification

RQS—Rescue Squadron

SA—Situational Awareness

SAR—Search and Rescue

SATB—Standard Airdrop Training Bundle

SCA—Self-Contained Approach

SCNS—Self-Contained Navigation System

SEAD—Suppression of Enemy Air Defenses

SIF—Selective Identification Feature

SNS—Satellite Navigation Station

SOF—Special Operation Forces

SOW—Special Operations Wing

SPINS—Special Instructions

TA—Terrain Avoidance

TAAR—Tilt Rotor Air-to-Air Refueling

TACAN—Tactical Air Navigation

TAR—Target Acquisition Radar

TAS—True Airspeed

TDR—Tactical Data Receiver

TF—Terrain Following

T.O.—Technical Order

TOA—Time On Arrival

TOLD—Takeoff and Landing Data

TOT—Time On Target

TTP—Tactics, Techniques and Procedures

UHF—Ultrahigh Frequency

VDP—Visual Descent Point

VFR—Visual Flight Rules

VHF—Very High Frequency

Vmca—Minimum Control Speed

VOR—Very High Frequency Omnidirectional Range Station

WST—Weapon System Trainer