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Flying Operations

T-38 AND AT-38 AIRCREW TRAINING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFPD 11-2, *Aircraft Rules and Procedures*, and AFI 11-202, Volume 1, *Aircrew Training.* It applies to personnel who perform duties in the T-38 and AT-38 (T/AT-38) aircraft and establishes the minimum Air Force standards for training and qualification. **Chapter 7**, **Chapter 8**, and **Chapter 9** apply to all pilots flying the T-38 under the Companion Trainer Program (CTP). References in this instruction to OG/CC will mean 57 TG/CC for Det 1, 57 WG. File a copy of all approved waivers with this instruction. **Attachment 1** contains a glossary of references and supporting information used in this publication.

Major commands (MAJCOM) will forward proposed MAJCOM-level supplements to this volume to HQ USAF/XOOT through HQ AETC/DOFV for approval prior to publication according to AFPD 11-2, paragraph 4.2. After being approved and published, send copies of MAJCOM-level supplements to HQ USAF/XOOT, HQ AETC/DOFV, and user-MAJCOM office of primary responsibility (OPR). Field units below MAJCOM level will forward copies of their supplements to their parent MAJCOM OPR for post-publication review. See paragraph **1.3.** of this volume for guidance on submitting comments and suggesting improvements to this publication.

The Privacy Act of 1974 affects this instruction. The Privacy Act System Number F011 AF XO A, Air Force Operations Resource Management Systems (AFORMS) covers required information. The authority for maintenance of the system is 37 U.S.C. 301a, *Incentive Pay;* Public Law 92-204, Section 715, *DoD Appropriations Act for 1972, December 18, 1971;* Public Law 93-294, *Aviation Career Incentive Act of 1974, May 31, 1974;* Public Law 93-570, *Continuing Appropriations, 1975, February 28, 1975;* DoD Directive 7730.57, *Aviation Career Incentive Act and Required Annual Report, February 5, 1976;* and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons, November 22, 1943.* The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Maintain and dispose of records created as a result of prescribed processes in accordance with AFMAN 37-139, *Records Disposition Schedul*e (will become AFMAN 33-322, Volume 4).

This instruction contains references to the following field (subordinate level) publications and forms which, until converted to departmental-level publications and forms, may be obtained from the respective

MAJCOM publication office: MCMAN 11-238, Volume 1 (projected to be AFMAN 11-2XX, Volume 1)(AETC).

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed. Major changes update guidance on continuation training (paragraph **1.4.3.**) and senior officer qualifications (paragraph **2.5.**), add guidance on the functional check flight program (paragraphs **1.8.**, **3.4.3.**, **6.7.**), prescribe AF Form 4290 (previously AETC Forms 202 and 203) (paragraph **1.8.1.9.**), address handling interruptions to training (paragraph **2.1.1.**), add authorization for T-37 first assignment instructor pilots scheduled to attend introduction to fighter fundamentals T-38 simulator and aircraft sorties (paragraph **2.7.**), delete quarterly flying safety training requirement and joint ethics training requirement, add life support and egress training requirements for flight surgeons (paragraph **3.4.1.2.**), make the squadron commander the determining authority on recurrency requirements (paragraph **3.6.**), update landing/sortie currency (paragraph **3.7.**), require squadron operations officers develop continuation training profiles (paragraph **3.9.2.**), add Buddy IP program guidance (paragraph **4.2.**), update night qualification requirements (paragraph **4.3.**), update procedures for logging proficiency sorties (paragraph **4.7.5.**), update stall training requirements (paragraph **4.12.1.**), and prescribe AF Form 4287 (previously AETC Form 25D) (paragraph **6.7.**).

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Chapter 1

GENERAL GUIDANCE

1.1. References and Supporting Information. See **Attachment 1**.

1.2. Responsibilities. Supervisors at all levels are responsible for monitoring the progress of aircrew training to ensure timely progression through appropriate training phases and for identifying areas for which additional training is needed.

1.2.1. As the responsible agency for this instruction according to AFI 11-202, Volume 1, HQ AETC/DO will:

1.2.1.1. Host periodic conferences to review ground and flying training requirements and programs for applicable units. Conference participants will include the OPR and applicable MAJCOM representatives.

1.2.1.2. Process all change requests.

1.2.1.3. Determine training requirements.

1.2.1.4. Review subordinate unit supplemental instructions and supplemental training programs annually.

1.2.2. Wings and groups will:

1.2.2.1. Assist subordinate units in managing training programs, ensure programs meet unit needs, and provide necessary staff support.

1.2.2.2. Develop programs to ensure training objectives are met. Forward copies of unit training programs that expand upon the minimum guidelines of this instruction and subsequent changes to the appropriate MAJCOM for review.

1.2.2.3. Review programs and supplements annually.

1.2.2.4. Identify training shortfalls through appropriate channels.

1.2.3. Squadron commanders will:

1.2.3.1. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned and attached pilots.

1.2.3.2. Ensure review of training and evaluation records of newly assigned pilots and those completing formal training to determine the training required for them to achieve qualification and to ensure provisions of this instruction have been met. Brief new instructor pilots (IP) on their instructor responsibilities prior to accomplishing student training.

1.2.3.3. Determine and certify missions and events in which individual pilots may participate (for example, letter of Xs).

1.2.3.4. Report end-of-cycle training deficiencies through the operations group (OG) to the appropriate MAJCOM.

1.2.3.5. Identify the levels of supervision required to accomplish the required training, unless specifically directed.

1.2.3.6. Assist the wing and group in developing the unit training programs.

1.2.4. Flight commanders will:

1.2.4.1. Monitor individual assigned or attached pilot currencies and requirements.

1.2.4.2. Ensure pilots only participate in sorties, events, and tasks for which they are adequately prepared, trained, and current.

1.2.5. Individual pilots will:

1.2.5.1. Hand-carry all available training records to assist the gaining unit in assessing qualifications and training requirements.

1.2.5.2. Be responsible for completing training requirements and currencies within the guidelines of this instruction.

1.2.5.3. Ensure they participate only in ground and flying activities for which they are qualified and current unless the activity is part of an upgrade syllabus leading to qualification.

1.3. Recommended Changes and Waivers. Submit suggested improvements to this publication on AF Form 847, **Recommendation for Change of Publication,** to the parent MAJCOM through standardization/evaluation (stan/eval) channels. Parent MAJCOMs will forward approved recommendations to HQ AETC/DOFV. In accordance with (IAW) AFPD 11-2, paragraph 2.4.1, HQ USAF/XO is approval authority for changes or revisions to this instruction. MAJCOM DO is waiver authority for this instruction. Waiver requests may be submitted in message or memorandum format.

1.3.1. (CTP) Det 1, 57 WG (F-117 FOT&E). Det 1, 57 WG pilots will follow 49 FW T-38 guidance unless deviations are required to support the unique aspects of the test programs. Det 1, 57 WG may deviate from the contents of this instruction as outlined in individually approved test plans required for follow-on test and evaluation (FOT&E) purposes. Deviation waiver authority is the 57 TG/CC for test-related waivers and 49 OG/CC for operational-related waivers.

1.4. Phases of Training:

1.4.1. Initial Qualification Training (IQT). This training is necessary to qualify pilots for their primary mission in the T/AT-38 aircraft. This may include qualification to first pilot (FP) or IP. In this phase, upgrades to FP or IP will only be accomplished with a MAJCOM-approved syllabus.

1.4.2. Mission Qualification Training (MQT). This training is necessary to qualify pilots to the specific unit or local area requirements. MQT requirements are specified in the specific T-38 and AT-38 chapters.

1.4.3. Continuation Training (CT). This training is necessary for pilots, already qualified, to maintain their assigned level of proficiency and/or increase flight qualifications. It provides minimum ground and flight training event requirements. Squadron commanders will designate aircrew members as "experienced" or "inexperienced" for CT purposes. The wing commander, vice wing commander, operations group commander, deputy operations group commander, squadron commander, and squadron operations officer are designated experienced pilots for the purposes of this instruction. Flight commanders are responsible for scheduling aircrew CT missions and flight training objectives for assigned or attached personnel to their respective flights.

1.4.3.1. Experienced Pilots:

1.4.3.1.1. Fighter Pilot. An experienced fighter pilot has 500 hours primary aircraft authorized (PAA), or 1,000 hours (FP/IP/MP) of which 300 are PAA, or 600 fighter hours, of which 200 hours are PAA, or previously fighter experienced and 100 hours PAA, and certified by the squadron commander on the letter of Xs. Hours are FP/IP/MP and time is defined as FP/IP/MP hours logged in aircraft with an assigned AFSC of 11FX. OA-10 is considered fighter time.

1.4.3.1.2. Other Pilot. An experienced other pilot has 1,500 hours total with 750 PAA or 1,800 total with 500 hours PAA, or previously experienced and 100 hours PAA, and certified by the squadron commander on the letter of Xs. Hours are FP/IP/MP and time is defined as FP/IP/MP hours.

1.4.3.1.3. Companion Trainer Program Pilot. For the purpose of this instruction, an experienced CTP pilot has 100 hours of FP/IP/MP time in the T-38 if previously experienced in another aircraft, or 500 hours of FP/IP/MP time in the T-38 if not previously experienced in another aircraft, and certified by the squadron commander on the letter of Xs.

1.4.3.1.4. AETC. All AETC pilots, regardless of previous experience must, as a minimum, meet criteria for pilot weather category (PWC) 1 as defined in AFI 11-2T/AT-38, Volume 3/AETC Sup 1, *T-38 and AT-38 Operations Procedures*, **Table 4.1.**, and certified by the squadron commander on the letter of Xs.

1.4.3.2. Inexperienced Pilots. Pilots who do not qualify as experienced or who are not certified as such by the squadron commander are considered inexperienced. Pilots designated as inexperienced will progress through a program managed by the flight commander to develop sound flying and instructional skills. Flight commanders will tailor each program based on the new instructor's performance at Pilot Instructor Training (PIT) and past flying experience. No time limit is established to transition from inexperienced to experienced.

1.4.3.3. Continuation Training Meetings. Commanders will direct and supervise periodic CT meetings for aircrew members (AETC units will conduct CT meetings at least quarterly). The purpose of these meetings is to discuss standardization, mission-related topics, and increase general knowledge. (AETC units will discuss instructional techniques and grading practices at each CT meeting.) A cockpit/crew resource management (CRM) topic or scenario should be discussed in each CT meeting referring to CRM core concepts from AFI 11-290, *Cockpit/Crew Resource Management Training Program.*

1.5. Training Concepts and Procedures:

1.5.1. Unless specifically directed, the squadron commander determines the level of supervision required to accomplish in-flight training. If the mission objectives include introduction to tasks or instruction to correct previous discrepancies, an IP may be required. If mission objectives require directed supervision, then a squadron (SQ) supervisor may be warranted.

1.5.2. IPs and flight lead (FL) qualified SQ supervisors may allow any pilot to lead limited portions of a mission if appropriately briefed. This provision will only be used to allow a pilot to practice events in which he or she is already qualified or to help determine if the pilot is ready for an upgrade program. In either case, the IP or SQ supervisor is responsible for the flight.

1.5.3. This instruction and AFI 36-2201, *Developing, Managing, and Conducting Training*, govern all required ground and ancillary training for T/AT-38 pilots.

1.5.4. The pilot training cycle is 12 months: 1 July through 30 June for CTP; 1 January through 31 December for AETC. Units will complete training requirements during the appropriate training cycle except where specifically excepted.

1.6. Training Records and Reports. Units will:

1.6.1. Maintain pilot records for individual training and evaluations IAW AFI 11-202, Volume 1, and AFMAN 37-139, *Records Disposition Schedule.*

1.6.2. Maintain formal course or equivalent training records for assigned and attached pilots.

1.6.3. Prepare and forward training reports IAW MAJCOM directives.

1.6.4. Develop and use Air Force Operations Resource Management System (AFORMS) and computer printouts. Maintain flying and ground training records IAW AFMAN 37-139.

1.6.5. Track the following information for all pilots (as applicable):

1.6.5.1. Ground training.

1.6.5.2. Sortie requirements by 30/60/90 day and cumulative totals.

1.6.5.3. Track event requirements and accomplishments by cumulative total for the training cycle.

1.6.5.4. Currencies.

1.7. Pilot Utilization Policy:

1.7.1. Commanders will ensure that wing pilots fill only authorized positions IAW unit manning documents and that pilot status is properly designated. The overall objective is for pilots to perform operations-related duties. Supervisors may assign pilots to valid, short-term tasks (escort officer, flying evaluation board (FEB) member, mishap board member, etc.) but must continually weigh the factors involved, such as level of pilot tasking, flying proficiency, currency, and experience.

1.7.2. Pilots will not be assigned the following duties at the SQ level: Air Force Suggestion Program monitor, weapons/explosive safety manager, operations security (OPSEC) monitor, campaign (Combined Federal Campaign [CFC], etc.) manager, building custodian, unit communications security (COMSEC) program monitor, disaster preparedness monitor, enlisted career advisor, functional area documentation manager, fund/campaign manager, unit ground safety program monitor, information officer, resource advisor, cost center manager, records management program monitor, wing or SQ quality officer, Freedom of Information Act monitor, Privacy Act officer, security manager, telephone control monitor, vehicle control monitor, voting advisor, enlisted advisory council representative, human resources counsel representative, squadron executive officer, unit historian, weight control program monitor, small computer program monitor, and base duties. However, OG/CCs may authorize assigned pilots to perform the above duties.

1.7.3. Duties required by various publications that may be assigned to rated position indicator (RPI)-1 pilots are weapons and tactics officer, programmer, flying safety officer, supervisor of flying (SOF), mobility/contingency plans, training (except AFORMS documentation), standardization/evaluation liaison officer (SELO), squadron life support officer, electronic combat officer, and other duties

directly related to flying operations. RPI-1s will not be attached to wing staffs or man wing staff positions unless total wing pilot RPI-1/6 manning is 100 percent or better. Commanders will ensure wing staff pilots (RPI-6s) perform duties justified in MAJCOM manpower standards documents and authorized in unit manning documents (UMD).

1.8. Functional Check Flight (FCF) Program (AETC Only). The OG/CC will designate one pilot as the chief of FCF section, one as the T-38 lead FCF pilot, and determine the number of additional duty FCF pilots required. The chief of the FCF section and the T-38 lead FCF pilot will be assigned to the operations group and work closely with maintenance quality assurance personnel. The section chief will have the primary responsibility for supervising and scheduling the aircraft FCF program IAW AFI 21-101, *Maintenance Management of Aircraft;* AETCI 21-101, Volume 2, *Maintenance Management of Aerospace Equipment;* TO 1-1-300, *Acceptance/Functional Check Flights and Maintenance Operational Checks;* and TO 1T-38A-6CF-1, *Acceptance and Functional Check Flight Procedures.* Squadron assigned additional duty FCF pilots and FCF instructors will be appointed by memorandum from the OG/CC.

1.8.1. FCF Section Chief Responsibilities:

1.8.1.1. Supervise and administer the wing aircraft FCF program IAW policy and procedures.

1.8.1.2. Maintain an FCF operational information file (OIF) in the FCF briefing areas. The FCF OIF will not duplicate the flight crew information file (FCIF).

1.8.1.3. Develop an FCF CT program for FCF techniques and procedures to include seminars and flights. The objective is to ensure FCF crews maintain a high level of proficiency and knowledge of maintenance requirements to produce a quality aircraft for mission accomplishment.

1.8.1.4. Ensure CT requirements are met by assigned and attached FCF pilots.

1.8.1.5. Act as a liaison member of the wing stan/eval division.

1.8.1.6. Designate FCF pilots as engine runup evaluators and monitors IAW AFI 11-218, *Aircraft Operations and Movement on the Ground.*

1.8.1.7. Ensure local flight clearance is coordinated between FCF section and air traffic control agencies.

1.8.1.8. Maintain a sonic boom log IAW AFI 13-201, *Air Force Airspace Management.*

1.8.1.9. Use AF Form 4290, **Aircraft Functional Check Flight/Supersonic Event Log and Flight Order,** to record FCFs. Maintain them as local flight clearance records.

1.8.1.10. Appoint a foreign object damage (FOD) prevention program officer.

1.8.2. FCF Pilot Requirements. FCF pilots are selected from highly qualified wing IPs. Pilots selected must have a minimum of 750 total flying hours and 200 IP/FP hours in the T-38 or 650 total hours and 300 IP/FP hours in the T-38.

1.8.3. FCF IP Requirements. Pilots selected to be FCF IPs must have at least 4 months of experience conducting FCFs. FCF IPs will train new FCF pilots and administer FCF standardization check flights IAW local unit training programs.

1.9. Sortie Allocation Guidance:

1.9.1. Annual T/AT-38 sortie/event requirements are discussed in paragraph **3.3.**

1.9.2. Inexperienced RPI-1 pilots will receive sortie allocation priority over experienced pilots. Limited availability of higher headquarters (HHQ) pilots will be considered. Priorities for formal syllabus training sortie allocation are as follows:

1.9.2.1. RPI-1 continuation training.

1.9.2.2. RPI-2 continuation training (if applicable).

1.9.2.3. RPI-6 continuation training.

1.9.2.4. RPI-8 continuation training or upgrade training.

1.9.2.5. Flight surgeon (FS) flying requirements.

1.9.2.6. Incentive flights.

1.9.3. RPI-8 flying authorizations and FS requirements will be IAW AFI 11-401, *Flight Management*, and AFI 11-202, Volume 1, as supplemented.

Chapter 2

INITIAL QUALIFICATION TRAINING (IQT)

2.1. General. This chapter outlines the IQT program for the T/AT-38. Upon completion of the IQT program, pilots will be qualified IAW AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program,* and AFI 11-2T/AT-38, Volume 2, *T-38 and AT-38 Aircrew Evaluation Criteria.*

2.1.1. Except for unusual circumstances, aircrew members undergoing IQT will receive ground and flight instruction with a minimum of interruption and complete training within the time specified by the syllabus, as approved. Failure to complete within the specified time limit requires notifying the gaining WG/CC with pilot's name, grade, reason for delay, planned actions, and estimated completion date.

2.1.2. (CTP) IQT will be conducted using the Companion Trainer Program Qualification Course (ACC Course T3800QYXAZ) syllabus tracks, flow programs, and requirements. An AETC formal T-38 qualification course will suffice for qualification.

2.1.3. (CTP) (Dual-qualified candidates) An upgrading T-38 pilot will be removed from primary mission design series (MDS) flying duties when the flying portion of the T-38 qualification course begins. The pilot will remain in this status until completion of or removal from the course. OG/CC is the waiver authority. ***NOTE:*** This restriction only applies to initial qualification and IP upgrade.

2.2. Prerequisites. Course prerequisites are IAW the appropriate formal course syllabus.

2.3. Ground Training. Ground training will follow the syllabus flow but may be tailored to the individual's background, experience, and local conditions.

2.4. Flying Training:

2.4.1. Pilots in IQT will fly under IP supervision until completing the qualification checkride.

2.4.2. Formal course syllabus mission objectives and tasks are minimum requirements for IQT. Additional training due to student nonprogression is available within the constraints of the formal course syllabus.

2.5. (AETC) Senior Officer Qualification. Senior officers (colonel selectees and above) must meet course entry prerequisites and complete all syllabus requirements unless waived IAW syllabus directives.

2.5.1. General Officers. Individuals occupying general officer operational and indoctrination flying positions will comply with the guidance provided in AFI 11-401 and AFI 11-202, Volume 1. The following guidance applies:

2.5.1.1. General officer flying training wing commanders will be fully qualified IPs and will complete AF Form 8, **Certificate of Aircrew Qualification,** according to the requirements of AFI 11-401 and AFI 11-202, Volume 2. 19 AF/CC may be a fully qualified IP. General officers in command billets may fly without an IP in their primary aircraft if current and qualified. (Other general officers and those maintaining basic qualifications or less must fly with an IP.)

2.5.1.2. General officer indoctrination fliers will accomplish the following initial checkout:

2.5.1.2.1. Review the flight manual with an IP.

2.5.1.2.2. Complete egress or ejection seat training IAW AETCI 11-301, *AETC Aircrew Life Support (ALS) Program.*

2.5.1.2.3. Complete one instrument flight simulator or trainer mission with an IP. The simulator is the preferred method. However, a cockpit procedures trainer (CPT) or aircraft cockpit review may be used, providing crew coordination, proper checklist use, normal and emergency procedures applicable to aircrew position, operation of aircraft equipment, and basic aircraft characteristics are emphasized.

2.5.1.3. General officer indoctrination fliers will complete an annual ground training program to include review of aircraft systems, emergency procedures, and egress and ejection seat training IAW AETCI 11-301. They are exempt from other annual flying requirements.

2.5.1.4. Document initial and annual training in the flight evaluation folder.

2.5.2. Flying Training Wing Key Personnel:

2.5.2.1. Senior leaders (wing commanders, wing vice commanders, operations group commanders, and operations group deputy commanders) will complete the initial instructor qualification checkout program.

2.5.2.2. Wing commanders, wing vice commanders, operations group commanders, and operations group deputy commanders may be dual qualified (that is, IP qualified in one type aircraft, FP qualified in another).

2.5.2.3. Wing commanders will ensure equal representation of senior leaders in all wing aircraft types by selecting primary and secondary aircraft (IP/FP) qualification for each senior leader for approval by 19 AF/CC. The operations group commander will be flight examiner (FE) qualified in the primary aircraft.

2.5.2.4. Wing flying safety officers (FSO) will maintain IP qualification in their primary mission aircraft. There will be at least one FSO for each primary mission aircraft.

2.6. Flight Surgeon:

2.6.1. Ground Training. Flight surgeons (FS) with a T/AT-38 flying requirement who are assigned to units and have not previously flown in the T/AT-38 will accomplish the following before the initial flight briefing:

2.6.1.1. Aircraft general review.

2.6.1.2. Crew resource management training IAW AFI 11-290.

2.6.1.3. Hanging harness training (as applicable).

2.6.1.4. Egress training.

2.6.1.5. Protective equipment training.

2.6.1.6. An instrument or emergency procedure (EP) review with an instructor.

2.6.1.7. An FS annual written examination. OG/OGV is OPR for development and administration. Examination will be a minimum of 20 questions from the master question file (MQF) with an 85 percent minimum required for passing.

2.6.2. Flight Training. The first flight in the unit-assigned aircraft will be with an IP and may be flown in conjunction with other training sorties. The briefing and sortie will emphasize crew coordination, communications and equipment, instrument interpretation, and the aircraft's performance envelope.

2.7. AETC T-38 Lead-In Training for T-37 First Assignment Instructor Pilots (FAIP):

2.7.1. T-37 FAIPs selected for assignment to combat air force (CAF) units are authorized T-38 familiarization training at home wings prior to attending Introduction to Fighter Fundamentals. This training will normally consist of six T-38 aircraft sorties and two simulators. Prior to flying the first aircraft sortie, T-37 FAIPs will complete a self-paced systems review, workbook, or computer-based training (CBT) as determined locally and T-38 egress training as well as normal and emergency procedures training in the simulator. Aircraft sortie emphasis should focus on contact, instrument, and formation categories.

2.7.2. Conduct all training from the front seat and use a grade sheet appropriate to the familiarization category to document progress and potential problem areas for each sortie. Assign an overall grade of No Grade (NG) to each mission.

2.7.3. In addition to familiarization training sorties, sandbag sorties are authorized.

2.7.4. Members will establish training records that will be hand-carried to Introduction to Fighter Fundamentals training units.

2.7.5. The OG/CC can authorize additional aircraft or simulator sorties based on individual needs.

Chapter 3

REQUIREMENTS AND CURRENCIES

3.1. General. This chapter outlines ground and flying training requirements for T/AT-38 pilots.

3.2. Ground Training. Ground training accomplished during IQT may be credited toward CT requirements for the training cycle in which it was accomplished. **Table 3.1.** outlines ground training requirements. The following programs comprise ground training only:

3.2.1. Physiological training IAW AFI 11-403, *Aerospace Physiological Training Program*, as supplemented.

3.2.2. Instrument refresher course (IRC) IAW AFI 11-202, Volume 2, and AFMAN 11-210, *Instrument Refresher Course (IRC) Program.*

3.2.3. Survival/life support training IAW AFI 11-301, *Aircrew Life Support (ALS) Program*, AFI 36-2209, *Survival and Code of Conduct Training*, and applicable supplements, and applicable life support publications. All T/AT-38 pilots must accomplish T/AT-38 egress, ejection, hanging harness, wet drill, personal survival equipment, and local/deployment survival training. Portions of this training may be in conjunction with primary MDS training.

3.2.4. Ancillary training, which is required for all Air Force personnel. There are three ancillary training categories: functional training (category I), general training (category II), and awareness programs training (category III). Frequency for this training will be IAW this instruction (**Table 3.1.**). Failure to accomplish this training does not affect qualification status except as noted in **Table 3.1.** and does not require professional quality index (PQI) action. ***NOTE:*** Categories I and II must be documented; category III does not have to be documented.

3.2.5. Cockpit/crew resource management (CRM) training. Units will ensure pilots are scheduled to attend CRM training. Training will build upon the basic cockpit/crew management skills taught in joint specialized undergraduate pilot training (JSUPT) and the formal training unit (FTU). This is a yearly requirement and should be tracked in AFORMS. Failure to attend CRM training results in grounding (waiverable by OG/CC). Dual-qualified pilots will accomplish CRM in their primary aircraft. Briefings and debriefings will include the core curriculum of CRM training IAW AFI 11-290 and AFI 11-290/AETC Sup 1 or appropriate MAJCOM guidance.

3.2.6. (CTP) Situational emergency procedures training (SEPT). This training is not an evaluation, but a review of abnormal and emergency procedures and aircraft systems operations and limitations during realistic scenarios. BOLDFACE and squadron special interest items should be emphasized. Incorporate the following elements into the squadron SEPT program:

3.2.6.1. Develop SEPT scenarios using T-38 mishaps or incidents as baseline cases.

3.2.6.2. Discuss at least two EPs for each phase of flight during the SEPT session.

3.2.6.3. Accomplish two SEPTs each training period with an IP or SQ supervisor and include minimum fuel and emergency divert training and discussions.

Table 3.1. Pilot Ancillary/Ground Training.

ITEM	A	B	C	D
	Subject	**Frequency**	**Reference Directive**	**Grounding**
Category I—Functional Training				
1	Physiological Training (altitude chamber)	Every 5 years	AFI 11-403	Yes
2	Instrument Refresher Course	Prior to Inst Examination	AFI 11-202, Volume 2	Yes
3	Life Support Equipment Training, LS06	Annually	AFI 11-301 and MAJCOM directives	Yes
4	Life Support Egress Training (ejection), LS07	Annually	AFI 11-301 and MAJCOM directives	Yes
5	Life Support Personal Descent Training (ejection), LS09	Annually	AFI 11-301 and MAJCOM directives	Yes
6	Life Support Local Area Survival, LS01	One Time	AFI 11-301 and MAJCOM directives	Yes
7	Emergency Procedures Simulator (SEPT)	Semiannually	AFI 11-2T/AT-38, Vol 1	Yes
8	BOLDFACE Examination	Monthly	AFI 11-2T/AT-38, Vol 1	Yes
9	Crew Resource Management Training	Annually	AFI 11-2T/AT-38, Vol 1 AFI 11-290	Yes
Category II—General Training				
10	Self-Aid and Buddy Care Training	Initial, then every 2 years	AFI 36-2238	No
11	Life Support Water Survival Training (wet drills), LS03	Every 3 years	AFI 11-301 MAJCOM directives	No
12	Social Actions Training	Initial, then every 4 years	AFPD 36-27	No
13	Supervisor Safety Training	One Time	AFI 91-301	No
Category III—Awareness Program Training				
14	Law of Armed Conflict (LOAC) Training	Annually	AFI 51-401, AFPD 51-4	No

3.2.6.4. Accomplish SEPT each calendar month. Failure to accomplish by the end of the month will result in grounding until subsequently completed.

3.2.6.5. Preferably, accomplish SEPTs one-on-one, but small flight-sized groups are allowed so all members can participate to the full extent and share equal time responding to emergency situations.

3.2.6.6. Complete an operational flight trainer (OFT) EP profile or a formal EP evaluation each training period. This satisfies the monthly SEPT requirement.

3.2.6.7. Formal course student SEPTs may satisfy the monthly SEPT requirement for the IP who administers the training.

NOTE: If dual qualified, primary MDS SEPT does not satisfy this requirement.

3.3. Flying Training. All pilots will accomplish the annual sortie/event requirements as shown in **Table 3.2.** and **Table 3.3.** Individuals who maintain IP qualification in one aircraft and FP qualification in another will meet CT requirements for the aircraft in which they instruct. Dual-qualified aircrew members must complete at least 50 percent of their requirements in their primary aircraft. In addition, the following are required: (***NOTE:*** CTP pilots will accomplish the annual requirements as shown in **Table 3.4.** and sortie requirements as depicted in the individual MDS chapter.)

3.3.1. Qualification evaluation IAW AFI 11-202, Volume 2, and AFI 11-2T/AT-38, Volume 2.

3.3.2. Instructor or mission evaluation IAW AFI 11-202, Volume 2, and AFI 11-2T/AT-38, Volume 2, if performing instructor or mission duties.

3.3.3. Currencies IAW **Table 3.5.** and **Table 3.6.**

3.4. Special Categories:

3.4.1. Flight Surgeon:

3.4.1.1. Flight surgeon flying rates and requirements are IAW AFI 11-202, Volume 1.

3.4.1.2. (AETC) Flight surgeons will accomplish life support and egress training annually IAW AETCI 11-301, followed by a closed-book examination that must be passed with a minimum score of 85 percent corrected to 100 percent. This training will be accomplished in the 5-month period before the last day of the expiration month.

3.4.2. Higher Headquarters (HHQ) RPI-8 Pilots. HHQ personnel (for training other than that conducted in support of a formal inspection) must coordinate with the supporting unit as follows:

3.4.2.1. Ensure appropriate AFORMS data is maintained and provided IAW AFI 11-401.

3.4.2.2. Units will review HHQ-assigned pilot accomplishments and currencies before authorizing them to fly.

3.4.2.3. Pilots will submit qualification and authorization documentation to the supporting SQ/CC or operations officer prior to flying with that squadron.

3.4.2.4. Units will evaluate the demands of each mission scenario and ensure HHQ-assigned pilot ability and proficiency will not be exceeded.

3.4.3. (AETC) Functional Check Flight (FCF) Pilots. FCF pilots will fly a minimum of six FCF flights per calendar half. If an FCF is flown dual, it may be counted as an FCF flight for both pilots provided a proportionate number of test items are accomplished by each pilot. FCF pilots who fail to meet these requirements are classified as FCF noncurrent and decertified. To be recertified, the pilot must review the FCF OIF, pass a ground evaluation, and fly an FCF standardization check on a full FCF profile.

Table 3.2. T-38 Sortie/Event Requirements (AETC).

ITEM	A	B	C	D	E	
		IP (Exp/Inexp)			FP (FS)/MP	
	Category	Annual	Annual/ Quarterly	Annual/ Semi-annual	Annual FP (note 1)	MP Exp/Inexp
Sortie						
1	Total	68/72			36(12)	22/26
2	Student Instructional	48/48			0	0
3	Continuation Training	20/24			36	22/26
4	Contact	4/4	1/1		12	4
5	Instrument/Navigation (notes 2 and 3)	8/8	1 (Inst)/1	2 (Nav)/2	24	8
6	Night (notes 4 and 5)	4/4		2/2	4	4
7	Formation (note 6)	4/8	1/2		0	4/8
8	Low-Level Navigation	2/2		1/1	0	2
9	EP Simulator (note 7)	2/4	0/1	1/2	2	2/4
10	Stall (note 8)					
Event						
11	Penetration (note 9)	6/6		3/3	6	6
12	Precision Approach (note 10)	12/12	3/3		12	12
13	Nonprecision Approach	12/12	3/3		12	12
14	Circling Approach	4/4	1/1		4	4
15	TP Stalls (note 11)	4/4	1/1		4	4
16	No Flap Pattern/Landing	4/4	1/1		4	4
17	SSE Pattern/Landing	4/4	1/1		4	4
18	Night Landing	4/4		2/2	4	4
19	Formation/Interval Takeoff	4/4	1/1		4	4
20	Formation Landing	4/4	1/1		4	4
21	SE Go-Around	4/4	1/1		4	4

NOTES:

1. Mission pilots (MP) must complete a MAJCOM mission qualification course of instruction and a mission checkride. Once mission qualified, the MP will maintain the same CT sortie/ event requirements (excluding student sorties) as an IP, based on the individual's experience level.

2. One instrument sortie per quarter (must include a precision and nonprecision approach). Two navigation sorties per half. Low-level navigation sorties may be used to satisfy this navigation requirement.
3. Sorties can be flown locally; however, cross-country or out-and-back training is preferred.
4. Traditional reservists have no night requirements.
5. Only if pilot maintains night qualification. Two of the night sortie requirements may be logged on student sorties. HQ AETC/IG, 19 AF FEs, and PIT aircrew members will fly a minimum of one night sortie and one night landing semiannually.
6. Only applies to formation-qualified pilots.
7. Units who do not have access to an OFT should utilize the cockpit familiarization trainer (CFT). Will be supervised by a simulator IP or IP.
8. Stall pilots will fly a stall sortie once every 90 days to maintain currency. Reference paragraph **4.12.3.3.**
9. High or low altitude penetration or local published recovery routing.
10. Combination of instrument landing system (ILS) and precision approach radar (PAR) approaches are desired. Four simulated single engine (SSE) approaches will be flown.
11. Only two events may be logged per sortie.

3.5. Currency. **Table 3.5.** and **Table 3.6.** define currency requirements for T/AT-38 pilots. If a pilot loses a particular currency, the sortie/event may not be performed except for the purpose of regaining currency, as noted.

3.6. Recurrency. Recurrency is required whenever a pilot exceeds a currency requirement in this instruction. Overdue training requirements must be satisfied before the pilot is qualified to perform applicable tasks. Training identified as not affecting qualification status does not require regression although it may result in grounding until training is completed (for example, life support training). Unless otherwise specified, supervisory requirements pertaining to recurrency may be satisfied in the flight position that offers the best control of the mission, as determined by the SQ/CC.

3.7. Landing/Sortie Recurrency. Loss of landing/sortie currency requires the following action (timing starts from last landing):

3.7.1. For 31-90 Days (46-90 Days Experienced). Regain landing currency by accomplishing at least three satisfactory landings with an IP current in landings.

3.7.2. For 91-135 Days. Same as paragraph **3.7.1.**, plus instructor-supervised emergency procedure/instrument review session (normal, emergency, and instrument procedures).

3.7.3. For 136-210 Days (136-225 Days Experienced). Same as paragraphs **3.7.1.** and **3.7.2.**, plus a minimum of one additional recurrency flight, qualification written examinations, and an EP evaluation (EPE). AF Form 8 documentation is not required.

3.7.4. For 211 or More Days (226 or More Days Experienced). Same as paragraphs **3.7.1.**, **3.7.2.**, and **3.7.3.**, plus an instrument/qualification evaluation.

Table 3.3. AT-38 Annual Sortie/Event Requirements.

ITEM	A	B	C
	Category	**IP**	**Remarks**
Sortie			
1	Aircraft Handling Characteristics (AHC)	1	
2	Instrument	4	Must include a precision and nonprecision approach.
3	Air Combat Training (ACBT)	4	May be flown in either (D)BFM, (D)ACM, or (D)ACT.
4	Surface Attack (SA) Surface Attack Tactics (SAT)	4	The IP must occupy the front cockpit and expend ordnance to meet SA requirements.
5	Low-Level Navigation	2	
6	EP Simulator	2	Units that don't have access to an OFT should utilize the CFT. Must be supervised by a simulator IP or IP.
Event			
7	Penetration	6	High or low altitude penetration or local published recovery routing.
8	Precision Approach	12	Combination of ILS and PAR approaches is desired.
9	Nonprecision Approach	12	
10	No Flap Pattern/Landing	4	
11	SE Pattern/Landing	4	
12	LOWAT	4	If Ops occur in 500 feet to 1,000 feet AGL block.

3.8. Loss of IP Status:

3.8.1. IPs will be decertified if they:

3.8.1.1. Fail a flight evaluation. To regain IP status, the IP must successfully complete a flight evaluation IAW AFI 11-202, Volume 2.

3.8.1.2. Fail a qualification or instrument written examination. To regain IP status, the IP must successfully reaccomplish the written examination.

3.8.2. If an IP becomes noncurrent in an event/sortie, IP status may be retained, but the IP will not instruct in that event/sortie until the required currency is regained.

Table 3.4. T-38 Annual Requirements (CTP).

ITEM	A	B	C
	Event/Sortie	**Number**	**Remarks**
1	AHC Sortie	2	Sortie profile will be determined by the OG/CC.
2	Instrument Sortie	4	
3	Night Sortie	4	Only if pilot maintains night qualification.
4	Weather Penetration	6	High or low altitude penetration or local published recovery routing.
5	Precision Approach	12	
6	Nonprecision Approach	12	OG/CC discretion on mixture of circling and straight-in approaches.
7	Formation Sortie	8	Only applies to formation-qualified pilots.
8	TP Stalls	4	Only two events may be logged per sortie.
9	No-Flap Pattern	6	OG/CC discretion if landing is required. Events may be flown from either visual or instrument patterns.
10	SE Pattern	6	SE landing and SE go-around requirements are at the discretion of the OG/CC. Events may be flown from either visual or instrument patterns.
11	Low-Level Navigation (LLNAV) Sortie	4	If operations occur in 500 feet to 1,000 feet AGL block, specific requirements of the LLNAV event will be determined by the OG/CC.

Table 3.5. AETC T-38 Pilot Currencies.

ITEM	A	B	C	D	E	F
	Event	**To Update/ Regain Currency, Fly**	**Inexp**	**Exp**	**Affects Qualification**	**Notes**
1	Front Cockpit (FCP) Landing	Event (day or night)	30	45	Yes	1, 2
2	Precision Approach	Event	45	60	No	3
3	Instructor Sortie	Event	60	60	Yes	1, 4
4	IP-RCP Landing	Event	60	90	No	1
5	IP-RCP Night Landing	Event	90	90	No	5
6	Formation Takeoff	Event	60	90	No	1, 6
7	Formation Landing	Event	60	90	No	1, 6
8	Fluid Maneuvering	Event	90	90	No	1, 7
9	Low-Level Navigation	Event	120	120	No	1

ITEM	A	B	C	D	E	F
	Event	To Update/ Regain Currency, Fly	Inexp	Exp	Affects Qualification	Notes
10	Stall Recog/Recovery	Event	180	180	No	1, 8

NOTES:

1. To regain currency, supervision level is IP or squadron supervisor, qualified and current in the event.
2. Rear cockpit (RCP) landings update both FCP and RCP landing currencies. FCP landing currency is good day or night.
3. If precision approach currency expires, approach category reverts to next higher category until completing a precision approach. Instrument approaches may be flown from either cockpit when simulating instrument meteorological conditions (IMC) with a qualified pilot as a safety observer or during actual IMC.
4. Flight examiners (FE) can update instructor sortie currency when performing flight evaluations.
5. To regain RCP night landing currency, three night landings must be accomplished from the RCP and the FCP IP must be qualified in night landings (FCP and/or RCP) and have landing currency.
6. FLs and IPs may update currency from either lead or wing position.
7. (ENJJPT Only) Pilots will fly one set of FM from the wing position.
8. Pilot will fly a minimum of one full aft stick stall and a minimum of one turning and one landing attitude approach to stall. Reference paragraph **4.12.1.1.**

Table 3.6. AT-38/ACC T-38 Pilot Currencies.

ITEM	A	B	C	D	E	F
	Event	To Update/Regain Currency, Fly	Inexp	Exp	Affects Qualification	Notes
1	ACBT	Event	60	90	No	1, 2, 3
2	Demanding Sortie	Sortie	21	30	Yes	1, 2, 4
3	FCP Landing	Event (day or night)	30	45	Yes	1, 5
4	Precision Approach	Event	30	45	No	6
5	Instructor Sortie	Sortie	60	60	Yes	1, 7
6	Formation Takeoff	Event	60	90	No	1, 8
7	Formation Landing	Event	60	90	No	1, 8
8	Low-Altitude Training	Event	90	90	No	1, 9, 10
9	Weapons Delivery	Event	60	90	No	1, 2, 3

ITEM	A	B	C	D	E	F
	Event	**To Update/Regain Currency, Fly**	**Inexp**	**Exp**	**Affects Qualification**	**Notes**
10	IP-RCP Landing	Event	30	45	No	1
11	IP-RCP Night Landing	Event	90	90	No	11

NOTES:

1. To regain currency, supervision level is IP or squadron supervisor, qualified and current in the event.
2. For IPs, accomplishing or instructing the event from either cockpit will update currency.
3. Currency may only be regained from the FCP with an IP in the aircraft.
4. Currency may be regained by flying a nondemanding sortie or a demanding sortie with an IP in the aircraft.
5. Rear cockpit landings update both FCP and RCP landing currencies. FCP landing currency good day or night.
6. If precision approach currency expires, approach category reverts to next higher category until completing a precision approach. Instrument approaches may be flown from either cockpit when simulating IMC with a qualified pilot as a safety observer or during actual IMC.
7. Flight examiners can update instructor sortie currency when performing flight evaluations.
8. FLs and IPs may update currency from either lead or wing position.
9. LOWAT currency is required after low-altitude step-down training (LASDT) certification to fly low-altitude tactical employment (other than low-level navigation/formation) sorties below 1,000 feet above ground level (AGL).
10. Regaining currency requires flying a LOWAT event under the supervision of a LOWAT-current IP or SQ supervisor.
11. To regain RCP night landing currency, three night landings must be accomplished from the RCP and the FCP IP must be qualified in night landings (FCP and/or RCP) and have landing currency.

3.9. Annual Training Requirements. Pilots who fail to complete annual sortie or event requirements at the end of the training cycle may need PQI action IAW AFI 11-401. Additional training may be required, depending on the type and magnitude of the deficiency. An OG/CC review is required before the pilot can fly in the new training cycle. ***NOTE:*** Refer to paragraph **3.10.** for proration guidance.

3.9.1. Failure to meet total sortie/event requirements may be cause for PQI action only. The OG/CC will determine if additional training is required. 19 AF/DO is reviewing/waiver authority for 19 AF FEs.

3.9.2. Squadron operation officers will develop profiles for all required CT sorties. Profiles will detail the minimum events and currency items that will be accomplished (such as contact: AHC, traffic pat-

tern (TP) stalls, normal and emergency single engine [SE] and no flap [NF] pattern/land, etc.) on the CT sortie.

3.10. Proration of End-of-Cycle Requirements. At the end of the training cycle, the SQ/CC may prorate training requirements for duty not involving flying (DNIF), emergency leave, nonflying temporary duty (TDY), nonflying exercises, or mandatory training required for civilian employment (AFRC). The following guidelines apply:

3.10.1. Only prorate to adjust for genuine circumstances of training nonavailability—not to mask training or planning deficiencies.

3.10.2. Proration is based on consecutive days of nonflying in the training cycle and can be applied separately for each period of nonflying. Use **Table 3.7.** to determine the number of months to be prorated based on each period of consecutive calendar days of nonflying.

3.10.3. If IQT is reaccomplished, a pilot's training cycle will start over at a prorated share following completion of IQT.

3.10.4. Prorated numbers resulting in fractions of less than 1/2 will be rounded to the next lower whole number; however, no requirement may be prorated below one.

3.10.5. Newly assigned or converted pilots and pilots achieving qualification after the 15th of the month are considered to be in CT on the first day of the following month for proration purposes. Events and sorties for the remainder of the training cycle may be prorated.

Table 3.7. Proration Allowance.

ITEM	A	B
	Consecutive Days of Nonflying	**Months of Proration**
1	0 – 15	0
2	16 – 45	1
3	46 – 75	2
4	76 – 105	3
5	106 – 135	4
6	136 – 165	5
7	166 - 180	6

Chapter 4

T-38 CONTINUATION TRAINING (AETC)

4.1. Mission Qualification Training (MQT):

4.1.1. Instructor Duties. Before performing instructor duties, IPs will complete local sorties in contact, instrument, formation, and low-level navigation (not applicable for IPs trained locally). These sorties will include normal operations and emergency situations in the local area such as diversions, single runway operations, and emergency airfields. These sorties will be flown with an experienced IP.

4.1.2. Documentation. Record MQT in the training folder.

4.2. Buddy IP (BIP) Program. The AETC BIP program formalizes and standardizes the training a new IP accomplishes from pilot instructor training (PIT) graduation to be designated "experienced." This program applies to JSUPT and ENJJPT undergraduate flying training units.

4.2.1. BIP Program Administration. Following MQT, each new IP will be assigned to a highly qualified buddy IP who monitors the new IP's performance and provides guidance in all areas of job requirements until the new IP has instructed through each category of training. Because of the different experiences of new IPs, two different BIP courses are available—long and short. The BIP long program expands on the short program and is mandatory for FAIPs and recommended for individuals who have not instructed or have limited MWS experience. The BIP short program is for new IPs with previous instructor experience or extensive major weapon system (MWS) experience. Squadron commanders will designate which program new IPs enter based on their PIT performance, MQT, and previous experience. The training prescribed in paragraphs **4.2.3.** through **4.2.4.4.** is the minimum required. Squadron commanders should tailor each individual's BIP program and provide additional training as required. Key wing personnel (wing commanders, wing vice commanders, operations group commanders, and operations group deputy commanders) are exempt from this program.

4.2.2. Responsibilities:

4.2.2.1. The squadron commander will:

4.2.2.1.1. Set squadron BIP policies and guidance.

4.2.2.1.2. Brief new IPs on BIP policies and responsibilities before the new IP flies with students. The squadron operations officer may conduct this briefing in the absence of the squadron commander.

4.2.2.1.3. Review completed BIP documentation and certify new IPs have completed the BIP program.

4.2.2.2. The squadron operations officer or assistant operations officer will:

4.2.2.2.1. Monitor all aspects of the BIP program.

4.2.2.2.2. Chair a monthly CT meeting for IPs in the BIP program. The regularly scheduled quarterly CT meeting fulfills the requirement for that month's meeting.

4.2.2.2.3. Review completed BIP documentation prior to the squadron commander's review.

4.2.2.3. The flight commander will:

4.2.2.3.1. Supervise overall scheduling, training, and progress of the flight BIP program.

4.2.2.3.2. Recommend an individually tailored BIP training program to the squadron commander based on the new IP's past performance and experience.

4.2.2.3.3. Brief new IPs on flight policies, techniques, grading practices, and other applicable topics before the new IP conducts student training. The assistant flight commander may conduct this briefing in the absence of the flight commander.

4.2.2.3.4. Fly at least one sortie with each new IP in the BIP program. The assistant flight commander may fly this sortie in the absence of the flight commander.

4.2.2.3.5. Verify that new IPs have met all BIP requirements before sending documentation up the chain of command for review.

4.2.2.4. The flight training officer will:

4.2.2.4.1. Maintain all BIP documentation in a BIP folder and forward it to the squadron training officer for review once a month as a minimum.

4.2.2.4.2. Inspect BIP documentation on new IPs who have completed the BIP program and forward the paperwork through the flight commander to the squadron operations officer.

4.2.2.4.3. Ensure the flight scheduler requests sorties required to meet BIP requirements.

4.2.3. BIP Long Program. This program should last approximately 3 to 6 months (minimum of 3 months). New instructors will accomplish training requirements listed in paragraphs **4.2.3.1.** through **4.2.3.4.** Briefings accomplished during MQT may be used to fulfill these requirements.

4.2.3.1. Ground Training. Ground training consists of the following:

4.2.3.1.1. Squadron policies briefing (before flying with students).

4.2.3.1.2. BIP briefing (before flying with students).

4.2.3.1.3. Instructor responsibilities briefing (before flying with students).

4.2.3.1.4. Commander Review (CR) or Commander Awareness Program (CAP) briefing.

4.2.3.1.5. Grading practices briefing.

4.2.3.1.6. Merit Assignment Selection System (MASS) briefing.

4.2.3.1.7. CT requirements briefing.

4.2.3.1.8. Scheduling briefing.

4.2.3.1.9. Time Related Instruction Management (TRIM), Training Integration Management System (TIMS), and Training Management System (TMS) briefing.

4.2.3.1.10. Gradebook briefing.

4.2.3.1.11. Flying safety briefing.

4.2.3.1.12. Stan/eval briefing.

4.2.3.1.13. Check section briefing.

4.2.3.1.14. Monitoring a check flight ground evaluation.

4.2.3.1.15. Runway supervisory unit (RSU) briefing.

4.2.3.1.16. Monitoring an RSU tour of duty.

4.2.3.1.17. EP/CRM simulator with a CSI.

4.2.3.1.18. Graduation evaluation program briefing.

4.2.3.1.19. Open book syllabus test (locally generated).

4.2.3.1.20. Open book course training standards (CTS) test (locally generated).

4.2.3.2. Flying Training. The flying training portion of the BIP program consists of BIP sorties and sponsor sorties.

4.2.3.2.1. BIP Sorties. BIP sorties are those flown by the buddy IP with the new IP. All BIP sorties will be flown with the assigned BIP, flight unit stan/eval monitor (USEM), or any supervisor (assistant flight commander or above) in the new IP's chain of command. The objective of these flights is to further develop the new IP's flying proficiency and instructional techniques. On each BIP sortie, the buddy IP will discuss instructional techniques, planning profiles, student progress, grading practices, local flying policies, common student errors, and possible pitfalls the new IP should avoid. Document these sorties in the new IP's BIP record. At least one BIP sortie will be flown in each of the following categories of training:

4.2.3.2.1.1. Contact.

4.2.3.2.1.2. Two-ship formation.

4.2.3.2.1.3. Four-ship formation.

4.2.3.2.1.4. Instrument and navigation out and back. (Stress instrument flight rules (IFR)/ visual flight rules (VFR) procedures.)

4.2.3.2.1.5. Low-level (may be flown as one leg of the out and back).

4.2.3.2.2. Sponsor Sorties. The BIP, flight USEM, or any supervisor (assistant flight commander or above) in the new IP's chain of command flies sponsor sorties, with the new IP's students to ensure they are being taught proper techniques. New IPs will fly a series of sorties (three contact, two instruments, and three formation) with the same student, after which the BIP will fly with that student. The BIP will provide feedback to the new IP (within 2 workdays) on instructional techniques and grading practices. Document all sponsor sorties and debriefings in the new IP's BIP training record.

4.2.3.3. Initial Student Sorties. Before the new instructor flies any pre-solo student sorties, the IP will complete a minimum of three sorties with a post-solo student (in any phase of training). Document these sorties in the IP's BIP record.

4.2.3.4. Student Solo. Prior to the new IP soloing his or her first student, someone in the BIP chain of command will fly one of the last four sorties before the student's initial solo. This sortie will not be the last sortie prior to initial solo. Document this sortie in the IP's BIP record.

4.2.4. BIP Short Program. The BIP short program lasts approximately 1 to 3 months and is designed for the new IP who has come from an MWS with previous instructor experience. After MQT and before accomplishing any student sorties, the new IP will obtain a briefing from the squadron

commander on his or her instructor responsibilities. During the briefing, the squadron commander signs the new IP's letter of appointment and BIP track letter. In the squadron commander's absence, the squadron operations officer will accomplish this brief.

4.2.4.1. Ground Training. New instructors will accomplish the same ground training requirements listed in the BIP long program (paragraph **4.2.3.1.**).

4.2.4.2. Flying Training. The flying training portion of the BIP program consists of BIP sorties and sponsor sorties.

4.2.4.2.1. BIP Sorties. BIP sorties are those flown by the BIP with the new IP. All BIP sorties will be flown with the assigned BIP, flight USEM, or any supervisor (assistant flight commander or above) in the new IP's chain of command. The objective of these flights is to further develop the new IP's flying proficiency and instructional techniques. At least one BIP sortie will be flown. It can be in any category of training (for example, contact, instruments, formation, or navigation). On the BIP sortie, the BIP will discuss instructional techniques, planning profiles, student progress, grading practices, possible pitfalls the new IP should avoid, local flying policies, and common student errors. All sorties and debriefings will be documented in the new IP's BIP record.

4.2.4.2.2. Sponsor Sorties. The BIP, flight USEM, or any supervisor (assistant flight commander or above) in the new IP's chain of command flies sponsor sorties with the new IP's students, to ensure they are being taught proper techniques. At least one sponsor sortie will be flown (in any category of training) after the student has had sufficient exposure to be influenced by the new IP's techniques. All sorties and debriefings will be documented in the new IP's BIP record.

4.2.4.3. Initial Student Sorties. Before the new instructor flies any pre-solo student sorties, the IP will complete a minimum of three sorties with a post-solo student (in any phase of training). All sorties and debriefings will be documented in the new IP's BIP record.

4.2.4.4. Student Solo. Before the new IP solos his or her first student, someone in the BIP chain of command will fly one of the last four sorties before the student's initial solo. This sortie will not be the last sortie before initial solo. Document this sortie in the IP's BIP record.

4.2.5. BIP Program Complete. After the BIP completes all of the ground and flying training events, the squadron commander will certify program completion. BIP training records will be placed in the IP's training folder.

4.3. Night Qualification. Night qualification consists of two (one at Euro-NATO joint jet pilot training [ENJJPT] and 560 FTS) night IP sorties and spatial disorientation training, accomplished before the first night student sortie. Vertigon or Barany chair training accomplished with the pilot's most recent physiological training will satisfy this requirement. If vertigon or Barany chair training is not available, squadron supervisors can substitute a briefing on spatial disorientation to satisfy the spatial disorientation training requirement. The 560 FTS spatial disorientation training should be accomplished in the advanced spatial disorientation demonstrator (ASDD), if available. One night IP sortie will be an instrument or contact sortie emphasizing spatial disorientation, night instruments, local area and traffic pattern procedures, and visual references. The other night sortie will be a formation sortie.

4.3.1. Night Student Contact Sortie. On completion of the IP night qualification, each new IP will fly a night contact student sortie within 90 days of the night IP sortie (not applicable for 560 FTS). The

student sortie should be accomplished as soon as practical after the IP becomes night qualified. If the new IP exceeds the 90 days, he or she will fly an additional IP night sortie with at least three satisfactory night landings before flying a night student sortie.

4.3.2. Night Sortie Credit. To obtain night sortie credit, fly a portion of the sortie during the period of darkness. Darkness is defined as that period from 30 minutes after sunset to 30 minutes before sunrise.

4.3.3. Senior Leader Night Qualification. Senior leaders (wing commanders, wing vice commanders, operations group commanders, and operations group deputy commanders) must complete the night qualification requirements before flying a night student sortie, night solo sortie, or a sortie with a non-night-qualified IP. These sorties will be flown with a night-qualified IP.

4.3.4. Night RCP Qualification:

4.3.4.1. For initial qualification, an IP current and qualified in RCP night landings must occupy the FCP.

4.3.4.2. The IP being night qualified will occupy the RCP and accomplish a minimum of three landings.

4.3.4.3. Night RCP landing currency is valid for 90 days. Update night RCP landing currency by accomplishing a night RCP landing.

4.3.4.4. Night landings to gain or update night landing qualification will be accomplished between 30 minutes after official sunset and 30 minutes before official sunrise. ***NOTE:*** Log all landings accomplished between official sunset and official sunrise as night landings on AFTO Form 781, **AFORM Aircrew/Mission Flight Data Document.**

4.3.4.5. Record night qualification training on AF Form 4061, **Record of Training.** This record will be maintained in the training folder.

4.4. Egress Training. Emergency ground egress training will be administered to all aircrew members according to AFI 11-403 and AFI 11-301.

4.5. Currency and Qualification Criteria. The following provides criteria for requalifying IPs and FEs. JSUPT, ENJJPT, and PIT instructors who have not performed in-flight instructor or FE duties for:

4.5.1. A period up to 225 days refer to paragraph **3.7.** and **Table 3.5.** and **Table 3.6.**

4.5.2. A period of 226 days to 2 years may complete a locally generated upgrade at the discretion of the OG/CC. An individual upgrade recurrency program will be developed taking into account the pilot's previous experience and currency. Send a copy of the proposed training to 19 AF/DO for approval. Highly experienced IPs will conduct the flying training. An instrument/qualification evaluation and an instructor flight evaluation will be completed for recertification.

4.5.3. A period of 2 years to 5 years must complete the appropriate requalification syllabus.

4.5.4. More than 5 years must complete the appropriate PIT syllabus.

4.6. Annual Emergency Procedures (EP)/Cockpit/Crew Resource Management (CRM) Training:

4.6.1. All pilots will maintain EP/CRM mission currency. Accomplish the mission in the simulator (procedural trainer for the 80 FTW) with a certified simulator instructor (CSI). If no CSI is available, a T-38 IP may administer the simulator. IPs may take credit for an EP/CRM simulator when administering the simulator. Accomplish EP/CRM simulators IAW **Table 3.2.** If quarterly or semiannual requirements are not met, pilots will not fly until their currency is reestablished by completing the remaining requirements. 560 FTS IPs may accomplish this requirement during missions flown with a T-38 FP. Both crewmembers (IP/IP or IP/FP) may apply this mission to currency requirements. Track CRM training in AFORMS.

4.6.2. Use the simulator EP/CRM instructor guide when administering the simulator. All critical and selected noncritical action emergencies will be emphasized. At least one CRM practice scenario will be briefed, accomplished, and debriefed using CRM core concepts from AFI 11-290 on each EP/CRM simulator sortie.

4.6.3. Pilots must attend an academic CRM refresher each calendar year.

4.7. CT Sortie and Event Requirements. Sortie and events covered by CT are comprehensive and ensure IP currency and proficiency to meet mission demands.

4.7.1. Failure to Maintain Quarterly Sortie or Event Requirements. If an instructor fails to maintain quarterly sortie or event requirements, the squadron commander will review the instructor's status to determine if additional training is required. 19 AF/DO is the reviewing authority for 19 AF FEs.

4.7.2. Minimum Flying Requirements. The requirements specified in **Table 3.2.** and **Table 3.3.** are the minimum considered necessary to maintain basic proficiency.

4.7.3. Circling Approaches. Circling approaches may be logged at the termination of an instrument approach or by using a low closed pattern at the home or auxiliary field if local procedures are established.

4.7.4. Solo Sorties. JSUPT and PIT IP CT sorties should be flown dual to the maximum extent possible; however, IPs may apply up to eight solo sorties toward annual proficiency sortie requirements in any category except instrument sorties flown exclusively in visual meteorological conditions (VMC). Approaches flown solo in the weather count toward annual requirements. IPs may perform touch-and-go landings and are authorized to perform the maneuvers described in AFI 11-2T/AT-38, Volume 3. JSUPT and PIT IPs will not fly solo LLNAV sorties.

4.7.5. Logging Proficiency Sorties. Only one IP in the aircraft may log a proficiency sortie; however, the other pilot may log events accomplished for currency if they share the flying time. ***EXCEPTION:*** Any experienced IP flying with another experienced IP may dual-log instrument and navigation sorties.

4.8. Requirements to Log Events:

4.8.1. Traffic patterns and landings will be performed from the RCP. ***EXCEPTION:*** PIT IPs may accomplish event requirements from either cockpit.

4.8.2. Formation takeoffs and landings may be logged from the lead or wing position.

4.8.3. Event requirements may be accomplished with student instructional training when the instructors demonstrate the maneuver or event.

4.9. Training Documentation:

4.9.1. Maintain a training folder for each aircrew member.

4.9.2. Record each flight and ground training event in the training folder.

4.9.3. Retain the training folder according to AFMAN 37-139.

4.10. Training for Graduates. JSUPT and ENJJPT OG/CCs will ensure graduates who will exceed 30 days between the last sortie in JSUPT and ENJJPT (or related training) and the beginning of Introduction to Fighter Fundamentals will fly at least one T-38 FCP training sortie. Graduates who will exceed 45 days between JSUPT and ENJJPT and Introduction to Fighter Fundamentals will fly one dedicated T-38 FCP sortie for each 7 days of break in training. In addition, graduates are authorized to occupy the FCP or RCP on IP CT sorties and fly unlimited T-38 simulator sorties on a space-available basis. Additional sorties may be flown at the discretion of the OG/CC. Use the following procedures:

4.10.1. Graduates participating in this program will fly with an IP emphasizing formation/instrument maneuvers. Graduates must accomplish a minimum of one landing per sortie.

4.10.2. Using the MQF, individuals will be tested weekly on systems and procedural (normal and emergency) knowledge and accomplish BOLDFACE testing according to local directives to ensure a safe level of proficiency is maintained.

4.11. T/AT-38 Letter of Xs. Include qualification items appropriate for squadron mission. See **Table 4.1.**

4.12. T-38 Stall Program:

4.12.1. Stall Training. Only qualified stall pilots will conduct stall training.

4.12.1.1. Stall Recognition and Recovery Currency. This currency will be maintained on a dual-contact CT sortie at least once every 180 days. On this ride, each pilot will fly a minimum of one full aft stick stall and a minimum of one turning and one landing attitude approach to stall. The stall/sink rate orientation flight given by the wing stall pilot updates this currency.

4.12.1.2. Stall Seminar. Wing stall pilots will conduct an annual stall/sink rate seminar during the first quarter of each calendar year. Attendance is mandatory for all assigned T-38 pilots. Failure to attend the annual seminar will result in a loss of stall currency. If the pilot misses the annual stall seminar, he or she will attend a makeup seminar given by the wing stall pilot. Pilots assigned to the wing after 31 March or attending PIT are exempt from this requirement.

4.12.1.3. When Stall Currency Is Lost. A pilot not current in stalls will not fly student instructional sorties or solo sorties.

4.12.1.4. To Regain Stall Currency. Pilots must practice stall recognition and recovery on a dual-contact CT sortie with a stall-current IP.

4.12.2. Stall/Sink Rate Awareness Training:

4.12.2.1. Each IP must fly a stall/sink rate orientation flight within the period of 8 to 14 months after PIT graduation. The IP will occupy the primary seat in which he or she instructs (RCP for JSUPT and ENJJPT; FCP for PIT).

4.12.2.2. The completed stall/sink rate awareness sortie will be documented using AF Form 4061 in the training folder.

4.12.2.3. Squadron stall pilots will normally be stan/eval FEs. In special circumstances, squadron or operations group commanders may designate highly experienced T-38 IPs as stall IPs.

4.12.3. Stall Pilot Qualification and Currency:

4.12.3.1. The designated T-38 stall pilot will attend one stall seminar and fly three stall training sorties.

4.12.3.2. Flying wings will conduct a semiannual stall CT meeting to discuss demonstration standardization, ground briefing, seminar techniques, problems, policies, and training objectives.

4.12.3.3. Stall pilots will fly a stall sortie once every 90 days to maintain currency. To regain currency, the stall pilot must conduct a stall sortie with a current stall pilot.

4.12.4. Stall/Sink Awareness Mission:

4.12.4.1. Objectives. The pilot must exhibit a thorough knowledge of the following:

4.12.4.1.1. Situations that could deteriorate into a stall/sink rate condition, approach-to-stall recognition, and stall recovery procedures.

4.12.4.1.2. Aft stick stall characteristics.

4.12.4.1.3. Conditions encountered through improper stall recovery procedures.

4.12.4.1.4. Appropriate cues for IPs to use in preventing stall/sink rate situations and appropriate actions for recovery.

4.12.4.1.5. Instructional techniques for conducting stall/sink rate orientation training (stall pilot only).

4.12.4.2. Ground Briefing Seminar:

4.12.4.2.1. Explain the objective of the flight.

4.12.4.2.2. Discuss factors affecting stall/high sink-rate recognition.

4.12.4.2.3. Discuss the relationship between lift and drag/thrust required and why stall recovery procedures are the best chance for survival.

4.12.4.2.4. In detail, brief the maneuvers to be accomplished, the purpose of each maneuver, and the sequence in which each maneuver will be performed. The profile requires approximately 1,600 pounds of fuel.

4.12.4.3. Demonstration. Fly the demonstration in the following sequence:

4.12.4.3.1. Aft Stick Stall Demonstration (Stall Pilot Demo). This maneuver demonstrates the full buffet range as the aircraft transitions from no buffet to the fully developed stall. It also demonstrates that power alone will not reliably recover the aircraft and confirms the importance of relaxing back stick pressure to recover. Enter the maneuver with gear and full flaps.

Observe the buffet progression that follows. Initially, the buffet will be a high-frequency, low-intensity vibration (angle of attack [AOA] below .6). The maximum performance (recovery) buffet will be a high frequency, moderate intensity (AOA .65 to .75). The definite increase in buffet intensity will be a low-frequency, high-intensity "thumping" in the cockpit (AOA .8). A very high sink rate, heavy buffet, and high AOA (above 1.0) indicate an actual stalled condition. Observe the wing rock tendencies, sink rate, airspeed, vertical velocity indicator (VVI), and slab position. Next, select full afterburner without releasing back stick pressure and note the increase in buffet and the illusion of recovery.

4.12.4.3.2. Approach to Stall Recovery Practice (IP Flies). The purpose is to practice and review standard stall recovery procedures. Enter the maneuver with gear, full flaps, and normal final turn airspeed. Note the distinctive transition to the definite increase in buffet intensity, the controlled use of rudder during recovery, and the optimum buffet and AOA for recovery.

4.12.4.3.3. Stall/Sink Rate Recovery Demonstration. The stall pilot will normally use the following demonstrations to simulate patterns resulting in rapidly stalled conditions. The stall pilot will perform reaction recoveries involving aggressive aft stick application with delayed power response to MAX. This recovery will be performed 400 to 500 feet above the simulated ground altitude to simulate recognition of ground rush. Because recognition of excessive sink rate usually occurs at an AGL altitude of approximately 10 percent of VVI, 400 to 500 feet would approximate the amount of altitude available during a descent with a 4,000 to 5,000 feet per minute VVI. Following each demonstration, the stall pilot will repeat the setup and allow the IP to apply appropriate recovery procedures at the simulated ground rush altitude. Compare and validate the effectiveness of recovery techniques and the improved controllability, reduced altitude loss, and time taken to full recovery.

4.12.4.3.4. Inadvertent No-Flap. This maneuver demonstrates the hazards of improper configuration. The stall pilot will enter the maneuver with gear, zero-percent flaps, and normal final turn airspeed. Set normal final turn picture, and apply normal back stick pressure to turn. At the early onset of buffet, relax back stick pressure and allow an increase in airspeed and sink rate. At the simulated ground rush altitude, perform the reaction recovery. Observe the rapid onset of sink rate and unpredictability of control response. Repeat the entry scenario. When reaching the simulated ground rush altitude, transfer aircraft control to the IP and direct the IP to perform the recovery simulated ground rush altitude. Compare and validate the effectiveness of the recovery procedures.

4.12.4.3.5. Diving Final Turn. This maneuver demonstrates the hazards of an overly aggressive pattern resulting from poor wind analysis or poor flight discipline, or both. The stall pilot will enter the maneuver with gear, 60 percent flaps, and normal final turn speed. Set final turn with more than 45 degrees of bank and establish an intentional high sink rate. Continue until the simulated ground rush altitude and then perform the reaction recovery. Observe the rapid onset of sink rate and the aggravated unpredictability of control response caused by the additional wing chamber generated by the flaps. Repeat the entry scenario and have the IP perform the recovery when the stall pilot initiates a reaction recovery at the simulated ground rush altitude. Compare and validate the effectiveness of the recovery procedures.

4.12.4.3.6. Slow at the Perch. This maneuver demonstrates the hazards of poor airspeed control before the perch. The stall pilot will enter the maneuver with gear, full flaps, and final

approach airspeed. Begin a normal final turn with slow airspeed, and correct by only releasing back stick pressure to maintain on speed AOA. Allow the sink to continue until the simulated ground rush altitude and perform the reaction recovery. Observe the rapid onset of sink rate and very aggravated control response resulting immediately in wing rock and stall condition. Repeat the entry scenario and have the IP perform the recovery when the stall pilot initiates a reaction recovery at the simulated ground rush altitude. Compare and validate the effectiveness of the recovery procedures.

4.12.4.3.7. Approach/Landing Stall Scenario. During the following demonstrations, the stall pilot will simulate the hazards of reactionary responses involving abrupt control inputs low to the ground, and the effects of IP complacency. This recovery will be performed at a prebriefed altitude simulating the ground. Following each demonstration, the stall pilot will repeat the setup and allow the IP the opportunity to intervene on his or her own to prevent a high sink rate from developing. Focus training on timely IP intervention.

4.12.4.3.7.1. Duck Under. This maneuver demonstrates the hazards of sink rates from duck under glidepath corrections in visual or instrument approaches. The stall pilot will enter the maneuver with gear, full flaps, final approach speed, and normal glidepath (VVI). While flying an instrument glidepath, simulate a correction to a contact glidepath for a shorter touchdown point. At about 200 feet above the simulated ground rush altitude, lower the nose slightly and decrease power to maintain final approach speed. At about 100 feet above the simulated ground altitude, recognize the error and attempt to flare or go around, using the reaction recovery. A late decision to correct will result in simulated ground impact at a high sink rate or an improper attempt to hold the aircraft off the runway. Simulating a late transition past the visual descent point on a nonprecision approach would be an alternative demonstration. Repeat the entry scenario, and allow the IP to intervene to prevent a sink rate from developing. Focus training on timely IP intervention.

4.12.4.3.7.2. High Flare. This maneuver demonstrates the hazards of flaring high during the landing phase when ground effect would mask the classic buffet feel. The stall pilot will enter the maneuver with gear, 60 percent flaps, approximately 200 knots indicated airspeed (KIAS), and approximately 90 percent revolutions per minute (RPM), and establish a 25-degree wings-level, nose-high pitch attitude. As airspeed decreases through 140 KIAS, lower the nose to achieve an approximate landing attitude. Simulate a late decision to go around, using the reaction recovery that will result in ground impact or an improper attempt to hold the aircraft off the runway. Repeat the entry scenario and allow the IP to intervene to prevent a sink rate from developing. Focus training on timely IP intervention and the lack of noticeable buffet or a definite increase in buffet intensity presence.

Table 4.1. T/AT-38 Letter of Xs (Squadron Aircrew Qualifications).

ITEM	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
	Position	**Contact Instructor**	**Navigation**	**Low-Level**	**Formation**	**Two-Ship Lead**	**Four-Ship Lead**	**500' Low-Level**	**Low-Level Flight Lead**	**Fluid Maneuvering**	**Introduction to Fighter Fundamentals**	**Progress Check Pilot**	**Elimination Check Pilot**	**Check Pilot**	**Flight Examiner (FE)**	**NTAP Instructor Navigator**	**NTAP Instructor Nav**	**Stall Pilot**	**FCF Pilot**	**Observer**	**Monitor**	**Controller**	**Upgrade Controller**	**Squadron Supervisor**
1	SQ CC	X	X	X	X	X	X	X	X	X	X		X	X	X									X
2	OPS	X	X	X	X	X	X	X	X	X			X	X	X									X
3	A/OPS	X	X	X	X	X	X	X	X	X			X	X										X
4	A Flt CC	X	X	X	X	X	X	X	X	X	X	X											X	
5	IP	X	X	X	X	X	X	X												X	X			
6	Attached IP	X	X	X	X	X	X	X	X	X												X		
7	B Flt CC																							
8	IP																							
9	Attached IP																							
10	Wing CC																							
11	Wing CV																							
12	OG CC																							
13	OG CD																							

Chapter 5

AT-38 CONTINUATION TRAINING

5.1. General. There are two aspects of CT. The first consists of pilot training in the basic flying skills, which ensures safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions or taskings. Taskings may be locally generated, higher headquarters directed, or as a response to support other fighter units.

5.2. Mission Qualification Training (MQT):

5.2.1. IPs will complete local sorties in basic fighter maneuvers (BFM), surface attack, low-level operations, and instruments (not applicable for IPs trained locally). The instrument sortie must be flown prior to flying with a student. Additionally, the new IP will fly the MQT sortie prior to flying that type mission with a student. These sorties will include normal operations and emergency situations in the local area such as diversions, single runway operations, and emergency airfields. Sorties will be flown with an experienced IP.

5.2.2. Record MQT in the training folder.

5.3. Air-to-Ground Weapons Delivery. The following events and parameters form the basic framework for air-to-ground weapons delivery training. All air-to-ground weapons delivery training conducted during formal training will follow the appropriate syllabus and phase manuals. CT air-to-ground weapons deliveries will be according to the AT-38 syllabus or tactical simulations taking into consideration such factors as safe escape and recovery using published TO IT-38A-34, *Weapons Delivery Manual,* procedures. Air-to-ground weapons delivery training will be accomplished on scoreable ranges to the maximum extent possible.

5.3.1. Visual level bomb (VLB) is a delivery with less than 5 degrees of climb or dive at weapons release (nonmaneuvering) using any means of delivery with visual target acquisition or designation. Skip targets may be used as alternate targets. Minimum altitude is that required for safe separation of ordnance being delivered or simulated or 100 feet AGL, whichever is higher. Hit criteria: 250 feet (76 meters) or within target area or impacting the vertical panel on a skip target.

5.3.2. Low-angle high-drag (LAHD) is a delivery with less than 30 degrees dive angle. Skip targets may be used as alternate targets. Minimum recovery altitude is safe escape for ordnance being simulated or delivered, as required to recover above 100 feet AGL (300 feet AGL on a Class B/C or over water range), one-half the computed altitude loss from bomb release to recovery, whichever is higher. Hit criteria: 105 feet (32 meters) or within the target area or impacting the vertical panel on a skip target.

5.3.3. Low-angle low-drag (LALD) is a delivery with less than 30 degrees dive angle. Minimum recovery altitude is safe escape for ordnance being simulated or delivered or as required to recover above 1,000 feet AGL, whichever is higher. Hit criteria: 175 feet (53 meters).

5.3.4. Dive bomb (DB) is a delivery with a dive angle of 30 degrees or greater. Minimum recovery altitude is safe escape for ordnance being simulated or delivered or as required to recover above 1,500 feet AGL, whichever is higher. Hit criteria: 145 feet (44 meters).

5.3.5. Airspeeds will be according to T.O. 1T-38A-1, *Flight Manual USAF Series T-38 Aircraft,* and TO 1T-38A-34, restrictions.

5.4. Air-to-Air Weapons Employment:

5.4.1. Simulated air-to-air weapons employment is the culmination of effective maneuvering against airborne targets. Such maneuvers and weapons deliveries form the basic framework for aerial combat training. All air-to-air weapons employment training conducted during formal training will follow the appropriate syllabus and phase manuals. CT simulated air-to-air weapons employment will be according to either the syllabus or tactical simulations.

5.4.2. Simulated weapons employed from the AT-38 include the gun and versions of the AIM-9 missile. The squadron weapons officer will establish weapons parameters according to appropriate weapons delivery manuals (such as TO 1T-38A-34) and shot/kill criteria for each simulated weapon.

5.4.3. An audio/video tape recorder (AVTR) will be used to validate simulated air-to-air weapons employment.

5.5. Weapons and Tactics Academic Training. Units will establish a weapons and tactics academic training program to satisfy CT requirements. Training is required once per cycle. Audiovisual programs may be used in place of academic instruction. The program will require successful completion of an examination (85 percent minimum to pass). Use testing to validate qualification to the maximum extent possible throughout the training program. Pilots successfully scoring 85 percent or greater may be given training credit in lieu of ground CT where authorized by the governing publication. Instruction and tests should include the following, as applicable, but are not limited to:

5.5.1. Conventional air-to-surface employment and tactics.

5.5.2. ACBT. Principles of aerodynamics, maneuverability, AHC formations, visual lookout capability (VLC), radio terminology (RT), tactical intercept principles, use of ground control intercept (GCI)/ airborne warning and control system (AWACS), and adversary capabilities are addressed.

5.5.3. Low-altitude flying academics review according to paragraph **5.4.2.** and LASDT.

5.6. Flying Training. Off-station CT will support AETC FTUs to the maximum extent practical. Squadron supervisors must balance the need for FTU support with limited resources, programmed flying training (PFT), sortie allocation, and FTU requirements.

5.7. Continuation Training (CT) Upgrade Program. Use syllabuses of instruction for upgrades in the following areas: (D)ACM, (D)ACT, SAT/close air support (CAS) and LOWAT. The squadron commander may waive any flying portion of the upgrade training. Pilots will only fly events they are qualified for or as part of an upgrade syllabus leading to qualification. Document all training in the upgrade pilot's training folder.

5.7.1. Supervision. Flight commanders recommend AT-38 IPs for upgrade. Upon completion of the appropriate training syllabus, the squadron commander will certify CT upgrades by documenting the letter of Xs. Example: FPs to fly BFM or surface attack require evaluations IAW AFI 11-202, Volume 2, and AFI 11-T/AT-38, Volume 2. Subsequent evaluation may include any mission the examinee is certified to fly. Advanced CT certifications (such as ACM, dissimilar air combat tactics [DACT], etc.) must be documented on the letter of Xs.

5.7.2. Academic Training. Upgrading pilots will complete academics a minimum of 24 hours prior to first flight briefing in the program. The instructor will document this training in the upgrade pilot's training folder. CT IPs qualified in the applicable mission type will teach academics using the appropriate academic guide. They may tailor the academics to meet the individual's needs based on previous experience. An academic outline is as follows:

5.7.2.1. Air Combat Maneuvering (ACM). Communications (directive/descriptive commentary); formation and visual lookout (mutual support); element employment against a single bandit; engaged/support fighter responsibilities; initial moves; engaged maneuvering (techniques and problems); flight management (setups); midair deconfliction; training rules (AFI 11-214, *Aircrew, Weapons Director, and Terminal Attack Controller Procedures for Air Operations*); flight lead/instructor responsibilities and techniques; training objectives, briefing, flight management, and debriefing; and squadron policies and commander interest items.

5.7.2.2. Air Combat Tactics (ACT). Communication plan; scenarios and mission type (offensive counterair [OCA] and defensive counterair [DCA]); AT-38 specifics (air-to-air [A/A] tactical air navigation [TACAN]), Introduction to Fighter Fundamentals, engine envelope, flight deconfliction); formations; element maneuvering and mutual support; adversary tactics; low-altitude considerations (formation, navigation, offensive/defensive maneuvering); AWACS/GCI procedures (capabilities and limitations); tactical game plan (targeting, engagement considerations, flow plan, deconfliction, and midair collision potential); flight lead and instructor responsibilities and techniques (objectives, briefing, flight management, and debriefing); training rules (AFI 11-214); and squadron policies and commander interest items.

5.7.2.3. Close Air Support (CAS). Planning considerations (threat, terrain, etc.); low-level map preparation (minimum enroute altitude [MEA] selection, chart update manual [CHUM] requirements); route abort procedures (VMC/IMC contingencies, rendezvous techniques); low-altitude tactical formation (LATF); low-altitude tactical navigation (LATN); low-altitude threat reactions; enemy defense capabilities; weapons selection (munitions types, effectiveness, fusing, etc.); holding; initial contact techniques; target attack options (low, medium, and high altitude); coordinated two-ship attack options (target deconfliction plan); reattack options and techniques; target area egress, rendezvous techniques, and deconfliction; radio procedures (authentication, forward air controller [FAC] brief, fighter-to-fighter); flight lead and instructor responsibilities and techniques (objectives, briefing, flight management, and debriefing); training rules (AFI 11-214); and squadron policies and commander interest items.

5.7.2.4. LOWAT A/A. AHC (low altitude, fuel consumption, maneuvering, terrain avoidance, turning, video "How Low Can You Go?"); environmental factors; task management; LATN; LATF; defensive reactions; factors affecting low-level awareness; training rules (AFI 11-214); low-altitude A/A employment (level, low-to-high, and high-to-low intercepts; conversion aborts); and squadron policies and commander interest items.

5.7.3. Flying Training. IPs will occupy the cockpit from which they can best monitor the mission.

5.7.3.1. Air Combat Maneuvering. Any ACM-qualified FL may fly as the bandit. With SQ/CC approval, ACM wingmen may fly as the bandit. Emphasize engaged and support responsibilities and role exchanges, directive and descriptive commentary, engaged maneuvering, mutual support, weapons employment considerations, quick kills, and separations. Setups will include offensive, defensive, high aspect, and beyond visual range (BVR) engagements.

5.7.3.1.1. ACM-1 (Wingman) and ACM - 4 (Flight Lead). *Mission Objectives:* Introduce and practice 2 versus (v) 1 element maneuvering from offensive and defensive positions. *Mission Tasks:* Briefing (FL only), commentary - directive/descriptive, engaged maneuvering, mutual support, weapons employment, separations, and debriefing (FL only).

5.7.3.1.2. ACM-2 (Wingman) and ACM - 5 (Flight Lead). *Mission Objectives:* Introduce and practice 2 v 1 element maneuvering from high aspect and BVR positions. *Mission Tasks:* Briefing (FL only), commentary - directive/descriptive, engaged maneuvering, mutual support, weapons employment, separations, and debriefing (FL only).

5.7.3.1.3. ACM-3 (Wingman) and ACM - 6 (Flight Lead). *Mission Objective:* Certify 2 v 1 element maneuvering. *Mission Tasks:* Briefing (FL only), commentary - directive/descriptive, engaged maneuvering, mutual support, weapons employment, separations, and debriefing (FL only).

5.7.3.1.4. ACM-7 (Instructor Certification). *Mission Objective:* Certify instruction of 2 v 1 element maneuvering. *Mission Tasks:* Briefing, commentary - directive/descriptive, engaged maneuvering, mutual support, weapons employment, separations, and debriefing.

5.7.3.2. Air Combat Tactics (ACT). Reference the applicable volume of AFTTP 3-1, *Mission Employment*, when planning adversary tactics. Emphasize mutual support within and between elements. Plans should also include lateral and altitude deconfliction. Individuals will not go below 1,000 feet AGL unless LOWAT qualified and current.

5.7.3.2.1. ACT-1 (Wingman). *Mission Objectives:* Introduce and practice 2 v X maneuvering. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

5.7.3.2.2. ACT-2 (Wingman Certification). *Mission Objective:* Certify ACT employment. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

5.7.3.2.3. ACT-3 (Flight Lead). *Mission Objectives:* Introduce and practice two-ship maneuvering. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

5.7.3.2.4. ACT-4 (Flight Lead). *Mission Objectives:* Introduce and practice two- or four-ship maneuvering. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

5.7.3.2.5. ACT-5 (FL Certification). *Mission Objective:* FL certification. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

5.7.3.2.6. ACT-6 (Instructor Certification). *Mission Objective:* Certify ACT instruction. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

5.7.3.3. Close Air Support (CAS). Reference AFTTP 3-1.

5.7.3.3.1. CAS-1 (Wingman) and CAS-4 (Flight Lead). *Mission Objectives:* Introduce and practice medium- and high-altitude tactics. *Mission Tasks:* Briefing (FL only), tactics and

game plan, coordinated attacks, mutual support; weapons employment, and debriefing (FL only).

5.7.3.3.2. CAS-2 (Wingman) and CAS-5 (Flight Lead). *Mission Objectives:* Introduce and practice low-altitude tactics. *Mission Tasks:* Briefing (FL only), tactics and game plan, coordinated attacks, mutual support, weapons employment, and debriefing (FL only).

5.7.3.3.3. CAS-3 (Wingman), CAS-6 (Flight Lead), and CAS-7 (Instructor). *Mission Objective:* Certify CAS procedures. *Mission Tasks:* Briefing (FL only), tactics and game plan, coordinated attacks, mutual support, weapons employment, and debriefing (FL only).

5.7.3.4. Low-Altitude Step-Down Training (LASDT). To conduct low-altitude operations safely, pilots need to be knowledgeable of aircraft handling and performance characteristics, formation, and navigation in the low-altitude environment. This environment requires a well-supervised LASDT program, including initial certification and currency requirements. The LASDT program incrementally qualifies T/AT-38 pilots to conduct LOWAT down to 500 feet AGL.

5.7.3.4.1. Entry into LASDT requires SQ/CC approval.

5.7.3.4.2. Demonstrated proficiency in the 500 to 1,000 feet AGL block is required for LASDT-2 completion.

5.7.3.4.3. Upon successful completion of LASDT, the SQ/CC will certify the pilot as LOWAT qualified (LASDT-3 is not required for single-ship LOWAT certification).

5.7.3.4.4. LASDT will be scheduled and briefed as the primary portion of the mission. LASDT will not be flown as an alternate mission. IPs and FLs must be aware of the added stress and task loading associated with low-altitude operations and provide breaks in training above the training altitude. Training profiles will be developed to avoid overtasking the upgrading pilot, and upgrade sortie continuity should be emphasized.

5.7.3.4.5. LASDT Outline. The following outline is applicable to all LASDT. All academic training will be completed prior to flight training/briefing:

5.7.3.4.5.1. AHC. Discussion of aircraft performance as it applies to the low-altitude environment, to include: control response (low/high speed, over-G potential, speed brake use); afterburner (fuel considerations, selection techniques), acceleration/deceleration, level turns, vertical maneuvering, climb/dive/slice, recoveries, effects of gross weight, power settings, density altitude, G-loading, and bank angles; terrain avoidance (ridge crossings), terrain clearance versus turning room, dangers inherent in overbanking during turns, and importance of frequent cross check of aircraft attitude relative to horizon; and the videotape "How Low Can You Go?"

5.7.3.4.5.2. Environmental Factors. Discussion of out-of-cockpit visibility and field of view (FOV) restrictions, sun angle, terrain and G-excess illusions and perceptions, and weather (WX) considerations.

5.7.3.4.5.3. Task Management. Discussion of low-altitude tasks and task management or prioritization concept.

5.7.3.4.5.4. Low-Altitude Tactical Navigation (LATN). Discussion of system's use, low-level (LL) map preparation, dead reckoning, pilotage, etc.

5.7.3.4.5.5. Low-Altitude Tactical Formation (LATF). Discussion of formations (including line abreast and wedge), hazards at low altitudes, task prioritization, tactical turns, and visual lookout.

5.7.3.4.5.6. Low-Level Awareness. Discussion of factors affecting LL awareness: airspeeds and maneuverability; formation size and design; formation and pilot responsibilities; environmental effects on visibility; factors influencing individual proficiency and airmanship; route familiarity and complacency; air turbulence, jet wash, bird strike, and route obstacles; terrain features; planning and CHUM responsibilities; and route abort procedures, techniques, and considerations.

5.7.3.4.5.7. Special Subjects. WX abort procedures and aircraft emergencies.

5.7.3.4.6. Flying Training. An IP or SQ supervisor who has completed LASDT and is current in LOWAT will supervise LASDT upgrade missions.

5.7.3.4.6.1. LASDT-1 (Single Ship). *Mission Objectives:* Demonstrate proficiency in single-ship maneuvering in the low-altitude environment between 5,000 and 1,000 feet AGL. Introduce low-altitude operations down to a minimum altitude of 500 feet AGL. *Specific Mission Tasks:* AHC (low-altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; LL navigation; airspeed control; fuel management; LL turns; maneuvering techniques for level, rolling, and rough terrain; visual lookout; low-altitude awareness; and LL abort practices. ***NOTE:*** At the discretion of the OG/CC, LASDT-1 not required if the upgrading pilot has previously been certified down to 500 feet AGL in another noncrew aircraft.

5.7.3.4.6.2. LASDT-2 (Single Ship). *Mission Objective:* Demonstrate proficiency in single-ship maneuvering in the low-altitude environment down to a minimum altitude of 500 feet AGL. *Specific Mission Tasks:* AHC (low-altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers; nose low recoveries; attitude awareness maneuvers; G-awareness exercise; LL navigation; airspeed control; fuel management; LL turns; terrain maneuvering techniques for level, rolling, and rough terrain; visual lookout; altitude awareness and control; and LL abort practices. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot LOWAT qualified, single ship only.

5.7.3.4.6.3. LASDT-3. *Mission Objective:* Demonstrate proficiency in 2-ship maneuvering in the low-altitude environment down to a minimum altitude of 500 feet AGL. *Specific Mission Tasks:* AHC (low-altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; LL navigation; fuel management; LL turns; LATF; navigation maneuvering techniques for level, rolling, and rough terrain; visual lookout; altitude awareness and control; weather abort and rejoin practices. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot LOWAT qualified. ***NOTE:*** If LASDT-3 is completed before LASDT-2, formation operations will only be accomplished above 1,000 feet AGL. If subsequently certified to 500 feet AGL, LASDT-3 will be reaccomplished down to 500 feet AGL.

Chapter 6

UPGRADE/SPECIALIZED TRAINING

6.1. General. This chapter establishes the basic requirements for upgrade and special training programs in the T/AT-38.

6.2. Formation/Flight Lead (FL) Upgrade. The following establishes the general guidelines for formation/FL upgrade programs. Because of vastly differing backgrounds of pilots flying the T/AT-38, particular requirements of the formation/FL upgrade programs will be at the discretion of the individual OG/CCs. If following a formal course syllabus, this section is not applicable (NA).

6.2.1. Entry may occur immediately after initial qualification.

6.2.2. Ground training will consist of locally developed instruction as defined in the following areas:

6.2.2.1. FL responsibilities. FL and wingman relationship in the T/AT-38 as compared to other aircraft and unit training objectives.

6.2.2.2. Mission preparation. Mission objectives, wingman requirements and responsibilities, currencies, capabilities, delegation of mission planning duties, and briefing preparation.

6.2.2.3. Conduct of flight briefings and debriefings. Objectives, use of briefing guides and audio-visual aids, flight member involvement, briefing techniques, and debriefing techniques. Ensure that CRM core curriculum items are incorporated IAW AFI 11-290, AFI 11-290/AETC Sup 1, or other MAJCOM guidance.

6.2.2.4. Conduct of missions. Control of flight, flight discipline, training rules, and responsibilities.

6.2.2.5. In-flight emergency procedures.

6.2.2.6. Emergency diverts.

6.3. LOWAT:

6.3.1. General. Pilots will be trained to operate below 5,000 feet using a MAJCOM-approved training program. To operate safely in the low-altitude environment (500 to 1,000 feet AGL), each CAF MDS incorporates a tailored LASDT program to train and certify pilots to perform LL operations. T-38 and AT-38 IPs are certified to fly and instruct low-altitude navigation and formation (not including aerial attack or threat reactions) down to 500 feet AGL upon completion of upgrading instructor pilot (UIP) or PIT.

6.3.2. LOWAT Restrictions. Missions below 1,000 feet AGL may only be conducted in military operating areas (MOA), restricted airspace, warning areas, or on LLNAV instrument rules (IR) and visual rules (VR) routes.

6.3.3. Certification and Currency. LASDT certification incrementally qualifies a pilot to fly LOWAT or LLNAV down to 500 feet AGL. Currency only applies for operations in the 500 feet to 1,000 feet AGL block. LASDT certification levels are as follows:

6.3.3.1. LASDT-1. Qualifies a pilot to perform unsupervised single-ship operations below 5,000 feet AGL and above 1,000 feet AGL.

6.3.3.2. LASDT-2. Qualifies a pilot to perform unsupervised single-ship operations down to 500 feet AGL.

6.3.3.3. LASDT-3. Qualifies a pilot to perform unsupervised formation operations down to 500 feet AGL.

6.4. Anti-G Straining Maneuver (AGSM) Training:

6.4.1. General. SQ/CCs will ensure all pilots are familiar with the information concerning anti-G procedures.

6.4.2. G-Awareness. When maneuvers of five Gs or more are anticipated on any particular flight, attention will be given to G-awareness during the flight prebrief. On these flights, a G-awareness exercise will be performed IAW AFI 11-214.

6.4.3. G-Awareness Continuation Training. Units will develop a CT program that provides feedback to pilots and imprints a proper AGSM so that it becomes an integral part of pulling Gs.

6.4.3.1. The basis of this program is to give each FL, squadron supervisor, and flight surgeon (FS) the skills needed to evaluate a flight member's AVTR, if available, to ensure a proper AGSM is being performed. This program makes assessment of the AGSM a normal debrief item after every flight. The intent of this training is not to force FLs, supervisors, and FSs to spend excessive amounts of time assessing the AGSM. The assessment should be done as a normal part of AVTR assessment while reviewing other tactical portions of the mission.

6.4.3.2. Use the following minimum guidance to implement the unit's program:

6.4.3.2.1. AGSM technique and assessment will be incorporated into the squadron CT program. Emphasis will be placed on briefing, debriefing, and assessing the AGSM, using the AVTR, if available, in the debrief on a daily basis. FLs, IPs, SQ supervisors, and FSs should become adept at assessing and instructing the correct AGSM. The video "Anti-G Strain Technique Reinforcement and Assessment," already an integral part of FL and IP upgrade, will be presented annually to all pilots as part of weapons CT academics. A/A weapons academics will include a discussion of the limitations imposed on aircraft performance as a result of an ineffective AGSM.

6.4.3.2.2. FLs will emphasize G-awareness during appropriate portions of the flight briefing. For air-to-surface sorties, two 90-degree turns are required. The second turn of the G-awareness exercise for A/A sorties will be a minimum of 180 degrees of turn.

6.4.3.2.3. (AT-38 Only) The tactical portion of all basic missions will be flown in hot mic to enable assessment of the AGSM. Intercom volume will be set at a comfortable level for the pilot, but still allow assessment of breathing and AGSM technique in the debrief.

6.4.3.2.4. FLs will assess the AGSM effectiveness of flight members during mission debriefings. This assessment should not be limited to the G-awareness exercise.

6.4.3.2.5. Pilots identified as having poor AGSM technique or low G-tolerance will be identified to the flight commander or appropriate operations supervisor. The operations officer or appropriate operations supervisor will determine what action is required to improve the pilot's G-tolerance. The SQ/CC will determine if refresher training is required.

6.4.3.2.6. (AT-38 Only) The involvement of the aerospace medical team is important to the success of this program. All squadron FSs assigned to fighter units will be trained to review tapes for performance of a proper AGSM. The squadron will develop a program to ensure an A/A mission tape for each pilot, if available, is reviewed each training cycle by the SQ FS and (or) a SQ supervisor.

6.5. Instruments. For dual-qualified pilots with a primary MDS other than the T/AT-38, the instrument training program developed for the primary MDS will suffice for this program if T/AT-38 differences and specifics are included.

6.6. (CTP) Instructor Pilot Upgrade. This paragraph outlines the formal CTP Instructor Pilot Upgrade Program for the T-38A. Upon completion, the pilot will be qualified IAW AFI 11-401 and AFI 11-202, Volume 2, as supplemented, and applicable grading volumes. IP upgrade will normally be conducted using the Companion Trainer Program Instructor Upgrade Course (ACC course T3800IXXAZ) syllabus tracks, flow programs, and requirements. An AETC T-38 instructor pilot course (PIT) may also be used for IP qualification. Dual-qualified pilots upgrading to T-38 IP will be removed from primary MDS flying duties when the flying portion of the T-38 IP course begins. The pilot will remain in this status until completion of or removal from the course. OG/CC is the waiver authority.

6.6.1. Course prerequisites will be IAW the CTP Instructor Upgrade Course (T3800IXXAZ) and individual MDS chapters of this instruction.

6.6.2. Ground training may be tailored to the individual background, experience, and local conditions. However, available and current reference materials such as AFI 11-2T/AT-38, Volume 3, *T-38 and AT-38 Operations Procedures,* CTP qualification course handbooks, phase manuals, instructor guides, and audiovisual programs should be used as supporting materials.

6.6.3. Formal course syllabus mission objectives and tasks are minimum requirements for IP certification. However, additional training events, based on student proficiency and background, may be incorporated into the IP upgrade program with authorization of the SQ/CC. Additional training due to student nonprogression is available within the constraints of the formal course syllabus and may be added at the discretion of the SQ/CC.

6.6.4. Following satisfactory completion of upgrade requirements, the OG/CC will personally interview the upgrading IP and review IP responsibilities, scope of duties, authority, and philosophy. Failure to complete scheduled training events need not delay certification. The SQ/CC will certify the upgrading IP by providing the necessary documentation, including any restrictions, in appropriate written format.

6.7. (AETC) Functional Check Flight (FCF) Training. Aircrew receiving initial FCF certification will complete a local check-out program covering as a minimum: AFI 13-201, AFI 11-401, TO 1-1-300, *Acceptance/FCF and Maintenance Operational Checks;* TO 1T-38A–6CF-1, and local FCF procedures. Pilots will fly a representative sample of FCF profiles as a trainee prior to being designated a "qualified" FCF pilot. Upon completion of the training program, the FCF IP will complete an AF Form 4287, **Functional Check Flight Certification Record T-38 Aircraft.**

Chapter 7

F-117 COMPANION TRAINER PROGRAM

7.1. General. The T-38 is used to support the training, test, supervisory, and evaluation requirements of the F-117 program.

7.2. Eligibility Requirements. Participants will normally be pilots on active flying status assigned to HQ ACC, 12 AF, 49 FW, or 57 WG. Generally, the number of dual-qualified F-117 pilots depends on flying hour availability and will be determined by the OG/CC.

7.3. T-38 Support and Qualifications. To support the F-117 program, numerous T-38 qualifications are required to meet the instructor, upgrade training, supervisory, and evaluation needs of the 49 FW and 57 WG. T-38 missions primarily support F-117 operations, but because the T-38 program is self-sustaining (that is, all T-38 pilots and IPs are locally trained), many T-38 sorties are flown to qualify assigned and attached pilots in the T-38. The T-38 program consists of five different T-38 qualifications. Four other wing duties that also require a T-38 qualification are:

7.3.1. CTP Instructor:

7.3.1.1. General. To be a CTP instructor, pilots must have completed a MAJCOM-approved IP upgrade program and be qualified to instruct all phases of T-38 training. This includes:

7.3.1.1.1. ACC syllabus course T3800QYXAZ (T-38 IQT).

7.3.1.1.2. T-38 CTP Instructor Upgrade Course--ACC syllabus course T3800IXXAZ.

7.3.1.1.3. Jet landing currency flights in ACC syllabus course F117ATXAPA (F-117 IQT).

7.3.1.1.4. CT upgrade programs.

7.3.1.2. Entry Prerequisites. To qualify, pilots must:

7.3.1.2.1. Be T-38 flight-lead qualified.

7.3.1.2.2. Be LLNAV qualified.

7.3.1.2.3. Have 50 hours in T-38 since initial or requalification (waiverable by HQ ACC/DOT).

7.3.1.3. Training Program. ACC syllabus course T3800IXXAZ or AETC's PIT is used for training.

7.3.2. Formal F-117 FTU Instructor:

7.3.2.1. General. These pilots are assigned or attached to the F-117 FTU and primary T-38 duty is syllabus support for ACC syllabus course F117ATXAPA (F-117 IQT).

7.3.2.2. Entry Prerequisites. To qualify, pilots must have:

7.3.2.2.1. Current F-117 qualification.

7.3.2.2.2. F-117 flight lead.

7.3.2.2.3. Current T-38 qualification.

7.3.2.2.4. T-38 flight lead.

7.3.2.2.5. Twenty-five hours in the T-38 since initial qualification or requalification.

7.3.2.3. Training Program. ACC syllabus course F117AIOXAA (F-117A Formal Training Unit (FTU) Instructor Pilot Upgrade Training Course) is used for training.

7.3.3. T-38 SEFE/Chase Pilot:

7.3.3.1. General. These pilots have completed the local 49 FW T-38 SEFE/Chase Pilot upgrade training and support the program with:

7.3.3.1.1. Chase F-117 CT checkrides.

7.3.3.1.2. Special upgrades.

7.3.3.1.3. Operational test and evaluation (OT&E) missions.

7.3.3.1.4. Other supervisory or instructor requirements.

7.3.3.2. Upgrade Entry Prerequisites. To qualify, pilots must:

7.3.3.2.1. Be highly qualified and selected by the SQ/CC.

7.3.3.2.2. Be T-38 FL qualified.

7.3.3.2.3. Complete OT&E missions.

7.3.3.2.4. Have 50 hours in T-38 since initial or requalification (waiverable by the OG/CC).

7.3.3.3. Training Program. Chase IP/standardization/evaluation flight examiner (SEFE) upgrade training is used for training.

7.3.4. Basic Dual-Qualified:

7.3.4.1. General. These pilots are checked out in the T-38 in order to build experience in the T-38. The other dual-qualified positions require specified experience and proficiency levels in the T-38. These dual-qualified pilots are the individuals who will eventually replace or succeed the pilots in the IP, SEFE, supervisors, and test positions. The basic T-38 qualification allows these pilots to perform basic instrument, transition, AHC, cross-country, and contact flights. With CT upgrade training, T-38 pilots may be qualified to fly LLNAV and formation sorties from both lead and wing positions.

7.3.4.2. Upgrade Entry Prerequisites. Pilots must be current and qualified in the F-117.

7.3.4.3. Training Program. ACC syllabus course T3800QYXAZ is used for training.

7.4. Other Duties Requiring T-38 Qualification:

7.4.1. F-117A SEFEs and Squadron SELOs. These pilots are assigned to OGV (SEFE) or to individual flying squadrons (SELO) and maintain T-38 CTP IP and T-38 SEFE/Chase qualified status. Primary T-38 flight duties are to administer:

7.4.1.1. F-117 initial instrument/qualification flight evaluations (chase).

7.4.1.2. F-117 instrument qualification flight evaluations (chase).

7.4.1.3. T-38 periodic instrument/qualification flight evaluation.

7.4.2. Operations Group/Squadron Supervisors. These pilots usually are in Top-3 or flight commander positions in the OG or flying squadrons. They are, as a minimum, T-38 SEFE/Chase pilot qualified (see paragraph **7.3.3.**) and fly the T-38 to supervise the conduct of flying operations within the units (F-117 and T-38 operations).

7.4.3. FOT&E Support. These pilots are assigned to the 57 WG and provide chase support for F-117 FOT&E missions. They have completed, as a minimum, ACC course T3800QYXAZ, T-38 Companion Trainer Program Qualification.

7.5. Continuation Training. Pilots assigned or attached to the F-117 program are upgraded in the T-38 in separate phases. One phase of training is not necessarily a prerequisite of another phase. This training is accomplished IAW the 49 FW T -38 dual qualification training course. The objective of this course is to produce pilots proficient and qualified in T-38 formation, tactical formation maneuvering, and LL operations as wingmen and as FLs. The phases are formation, FL, and LLNAV.

7.6. Sortie Requirements. The annual sortie requirements are depicted in **Table 7.1.**

7.7. Multiple Qualification Requirements. Pilots authorized to maintain multiple MDS (F-117/T-38) currency IAW AFI 11-401, as supplemented, and this instruction, will satisfy both MDS minimum sortie requirements in full unless otherwise noted.

Table 7.1. T-38 Annual Sortie Requirements (F-117).

ITEM	A	B	C	D
	Category	**Minimum**	**Maximum**	**Lookback**
1	T-38 IPs	60	As required by PFT	Maintain currencies
2	Formal F-117 IPs	60	As required by PFT	Maintain currencies
3	Det 1, 57 WG Pilots	60	As required by test programs	Maintain currencies
4	F-117 Chase IPs, Supervisors, and SEFEs	48	72	Maintain currencies
5	Basic Dual-Qualified	48	72	Maintain currencies

Chapter 8

U-2 COMPANION TRAINER PROGRAM

8.1. General. The T-38 is used to support the proficiency, instrument, evaluation, off-station training (OST) requirements, and other mission support duties as directed by the wing (WG) and operations group (OG) leadership.

8.1.1. Basic Proficiency. The primary purpose of T-38 flying in the U-2 program is to provide a level flying proficiency and continuity due to limited number of training sorties and hours available in the U-2.

8.1.2. Instrument Training. The majority of instrument training for U-2 pilots is accomplished in the T-38 because the U-2 is not equipped to effectively simulate instrument conditions.

8.1.3. Pilot Evaluation. Because of limited U-2 training resources, pilot flying evaluations are administered in the T-38. This provides supervisors with first-hand knowledge of pilot capability.

8.1.4. OST. Due to complex U-2 launch and recovery procedures and the multiple TDY locations required by the U-2 mission, the T-38 provides valuable training in strange-field procedures.

8.2. Eligibility Requirements. T-38 pilots will be on active flying status assigned to an RPI-1/6/8 U-2 flying position. Additionally, selected pilots assigned to RPI-6/8 flying positions not flying the U-2 must be approved by HQ ACC/DIS. The OG/CC must request approval for each pilot by name and position via message to HQ ACC/DIS (info to HQ ACC/DOT and NAF/DO). Staff pilots will not be entered into the flying portion of the T-38 program until approval is granted.

8.3. T-38 Support and Qualifications. There are two T-38 qualifications required to meet the instructor, upgrade, supervisory, and evaluation support needs of the U-2 program. They are:

8.3.1. CTP Instructor:

8.3.1.1. General. These are pilots who have completed a MAJCOM-approved IP upgrade pro-gram and are qualified to instruct all phases of T-38 training, to include:

8.3.1.1.1. ACC syllabus course T3800QYXAZ (T-38 IQT).

8.3.1.1.2. T-38 CTP Instructor Upgrade Course--ACC Syllabus Course T3800IXXAZ.

8.3.1.1.3. CT upgrade programs.

8.3.1.2. Entry Prerequisites. The following prerequisites are required:

8.3.1.2.1. LLNAV qualified.

8.3.1.2.2. T-38 FL qualified.

8.3.1.2.3. Fifty hours in T-38 since initial/requalification (waiverable by ACC/DOT).

8.3.1.3. Training Program. Use ACC syllabus course T3800IXXAZ or AETC's PIT for training.

8.3.2. Basic T-38 Qualified:

8.3.2.1. General. The basic T-38 qualified pilot is checked out in order to build flying experience. This qualification allows a pilot to perform basic instruments, AHC, transition, cross-country, and

contact flights. With CT upgrade training, the pilot is qualified to fly formation and LLNAV. Basic qualification allows pilots to fly traffic pattern stalls and AHC demonstrations described in MCMAN 11-238, Volume 1, except for low-speed stability exercises and full aft-stick stalls, which require an IP. The required AHC sorties stipulated in **Table 3.4.** will be flown with an IP.

8.3.2.2. Training Program. Use ACC syllabus course T3800QYXAZ for training.

8.4. Other Duties Requiring T-38 Qualification:

8.4.1. T-38 SEFE or SELO. These pilots are assigned to OG/OGV (SEFE) or to individual flying squadrons (SELO) and maintain CTP IP qualification. Their primary duties are to administer initial instrument/qualification (I/Q) and periodic I/Q flight evaluations.

8.4.2. OG and SQ Supervisors. These pilots are usually in Top-3 and flight commander positions. They provide the basic supervision of flying operations within both the T-38 and U-2 squadrons.

8.5. Continuation Training. Pilots assigned or attached to the U-2 program are upgraded in the T-38 in separate phases. One phase of training is not necessarily a prerequisite of another phase. This training is accomplished IAW 9 RW T-38 qualification course. The objective of this course is to produce pilots proficient and qualified in T-38 formation, tactical formation maneuvering, and LLNAV as a wingman and as an FL. The phases are: formation, FL, LLNAV, and night.

8.6. Sortie Requirements. The annual sortie requirements are depicted in **Table 8.1.**

8.7. Multiple Qualification Requirements. Pilots authorized to maintain multiple MDS (U-2/T-38) currency IAW AFI 11-401 as supplemented, and this instruction, will satisfy both MDS minimum sortie requirements in full unless otherwise noted.

Table 8.1. T-38 Annual Sortie Requirements (U-2).

ITEM	A	B	C	D
	Event	**Minimum**	**Maximum**	**Lookback**
1	T-38 IPs	72	As required by PFT	Maintain currencies
2	RPI-1 Dual Qualified	60	N/A	Maintain currencies
3	RPI-6/8 Dual Qualified	48	72	Maintain currencies
4	T-38 Only	48	60	Maintain currencies

Chapter 9

B-2 COMPANION TRAINER PROGRAM

9.1. General. The T-38 is used to support the training, proficiency, instrument, chase, and other mission support duties as directed by the WG and OG leadership.

9.2. Eligibility Requirements. Participants must be pilots on active flying status assigned to HQ ACC, 8 AF, 509 BW, or attached units.

9.3. T-38 Support and Qualifications. To support the B-2 program, several T-38 qualifications are required to meet the instructor, chase, training, supervisory, and evaluation needs of the 509 BW. The T-38 program consists of the following T-38 qualifications:

9.3.1. T-38 CTP Instructor:

9.3.1.1. General. These are pilots who have completed a MAJCOM-approved upgrade program and are qualified to instruct all phases of T-38 training. This includes:

9.3.1.1.1. ACC syllabus course T3800QYXAZ (T-38 IQT).

9.3.1.1.2. ACC syllabus course T3800IXXAZ (ACC Companion Trainer Program Instructor Upgrade course).

9.3.1.1.3. CT upgrade programs (formation and LLNAV).

9.3.1.2. Entry Prerequisites. To qualify, the pilot must:

9.3.1.2.1. Be T-38 FL qualified.

9.3.1.2.2. Be LLNAV qualified.

9.3.1.2.3. Have 50 hours in T-38 since initial/requalification (waiverable by HQ ACC/DOT).

9.3.1.3. Training Program. Use ACC syllabus course T3800IXXAZ or AETC's PIT course for training.

9.3.2. Basic T-38 Qualified:

9.3.2.1. General:

9.3.2.1.1. These pilots are qualified in the T-38 to supplement proficiency training received in the mission aircraft due to limited number of training sorties and hours available in the B-2 program. Additionally, pilots in flying billets not qualified in the B-2 receive their sole proficiency training in the T-38.

9.3.2.1.2. The basic T-38 qualification allows pilots to perform basic instrument, cross-country, and transition sorties. With appropriate CT upgrade training, pilots may become qualified to fly LLNAV, chase, and formation sorties (from both the lead and wing position).

9.3.2.1.3. Basic qualification allows pilots to fly traffic pattern stalls and all AHC demonstrations described in MCMAN 11-238, Volume 1, except for low-speed stability exercises and full aft-stick stalls, which require an IP. The required AHC sorties stipulated in **Table 3.4.** will be flown with an IP.

9.3.2.2. Training Program. Use ACC syllabus course T3800QYXAZ for training.

9.4. Other Duties Requiring T-38 Qualification. ACC T-38 SEFE and squadron SELOs will be assigned IAW AFI 11-202, Volume 2/ACC Sup 1.

9.5. Continuation Training. Pilots assigned or attached to the B-2 program are upgraded in the T-38 in separate phases. One phase of training is not necessarily a prerequisite of another phase. This training is accomplished IAW 509 BW T-38 CTP specialized training courses. The objectives of these courses are to produce pilots proficient and qualified in T-38 formation, tactical formation maneuvering, and LLNAV. The phases are: formation, FL, LLNAV, chase, and night.

9.6. Sortie Requirements. The annual sortie requirements are depicted in **Table 9.1.** References to experience levels refer to T-38 experience and not primary MDS.

Table 9.1. T-38 Annual Sortie Requirements (B-2).

ITEM	A	B	C	D
	Category	**Minimum**	**Maximum**	**Lookback**
1	T-38 IPs	72	As required by PFT	Maintain currencies
2	T-38 Only	60	NA	Maintain currencies
3	RPI-1 Dual Qualified	60	NA	Maintain currencies
4	RPI-6 Dual Qualified	48	84	Maintain currencies

9.7. Multiple Qualification Requirements. Pilots authorized to maintain multiple MDS (B-2/T-38) currency IAW AFI 11-401, as supplemented, and this instruction will satisfy both MDS minimum sortie requirements in full unless otherwise noted.

9.8. Forms Prescribed. AF Form 4061, **Record of Training;** AF Form 4290, **Aircraft Functional Check Flight/Supersonic Event Log and Flight Order;** and AF Form 4287, **Functional Check Flight Certification Record T-38 Aircraft.**

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons, November 22, 1943*

Title 37, United States Code, Section 301a

Public Law 92-204, Section 715, *Appropriations Act for 1972, December 18, 1971*

Public Law 93-294, *Aviation Career Incentives Act of 1974, May 31, 1974*

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DoDD 7730.57, *Aviation Career Incentive Act and Required Annual Report, February 5, 1976*

AFTTP 3-1, *Mission Employment*

AFPD 11-2, *Aircraft Rules and Procedures*

AFI 11-2T/AT-38, Volume 2, *T-38 and AT-38 Aircrew Evaluation Criteria*

AFI 11-2T/AT-38, Volume 3, *T-38 and AT-38 Operations Procedures*

AFI 11-202, Volume 1, *Aircrew Training*

AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*

AFI 11-202, Volume 3, *General Flight Rules*

AFI 11-218, *Aircraft Operations and Movement on the Ground*

AFMAN 11-210, *Instrument Refresher Course (IRC) Program*

AFI 11-214, *Aircrew, Weapons Director, and Terminal Attack Controller Procedures for Air Operations*

AFI 11-290, *Cockpit/Crew Resource Management Training Program*

AFI 11-301, *Aircrew Life Support (ALS) Program*

AFI 11-401, *Flight Management*

AFI 11-403, *Aerospace Physiological Training Program*

AFI 13-201, *Air Force Airspace Management*

AFI 21-101, *Maintenance Management of Aircraft*

AFI 36-2201, *Developing, Managing, and Conducting Training*

AFI 36-2209, *Survival and Code of Conduct Training*

AFI 36-2238, *Self-Aid and Buddy Care Training*

AFPD 36-27, *Social Actions*

AFMAN 37-139, *Records Disposition Schedule*

AFPD 51-4, *Compliance With the Law of Armed Conflict*

AFI 51-401, *Training and Reporting to Ensure Compliance With the Law of Armed Conflict*

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*

MCMAN 11-238, Volume 1, *(A)T-38 Flying Fundamentals*

TO 1-1-300, *Acceptance/Function Check Flights and Maintenance Operational Checks*

TO 1T-38A-1, *Flight Manual USAF Series T-38 Aircraft*

TO 1T-38A-6CF-1, *Acceptance and Functional Check Flight Procedures*

TO 1T-38A-34, *Weapons Delivery Manual*

AETCI 11-301, *AETC Aircrew Life Support (ALS) Program*

AETCI 21-101, Volume 2, *Maintenance Management of Aerospace Equipment*

Abbreviations and Acronyms

A/A —air-to-air

ACBT —air combat training

ACM —air combat maneuvering

ACT —air combat tactics

AF —Air Force

AFI —Air Force instruction

AFORMS —Air Force operations resource management system

AFTTP —Air Force tactics, techniques, and procedures

AGL —above ground level

AGSM —anti-G straining maneuver

AHC —aircraft handling characteristics

ALS —aircrew life support

AOA —angle of attack

ASDD —advanced spatial disorientation demonstrator

AVTR —audio/video tape recorder

AWACS —airborne warning and control system

BFM —basic fighter maneuver

BIP —buddy instructor pilot

BVR —beyond visual range

CAF —combat air forces

CAP —Commander Awareness Program

CAS —close air support

CBT —computer-based training

CFC —combined federal campaign

CFT —cockpit familiarization trainer

CHUM —chart update manual

COMSEC —communications security

CPT —cockpit procedures trainer

CR —commander review

CRM —cockpit/crew resource management

CSI —certified simulator instructor

CT —continuation training

CTP —Companion Trainer Program

CTS —course training standard

(D) —dissimilar

DACT —dissimilar air combat tactics

DB —dive bomb

DCA —defensive counterair

DNIF —duty not involving flying

ENJJPT —Euro-NATO joint jet pilot training

EP —emergency procedure

EPE —emergency procedures evaluation

FAC —forward air controller

FAIP —first assignment instructor pilot

FCF —functional check flight

FCIF —flight crew information file

FCP —front cockpit

FE —flight examiner

FEB —flying evaluation board

FL —flight lead

FM —fluid maneuvering

FOD —foreign object damage

FOT&E —follow-on test and evaluation

FOV —field of view

FP —first pilot (Air Force only)

FS —flight surgeon

FSO —flying safety officer

FTU —formal training unit

GCI —ground control intercept

HHQ —higher headquarters

I/Q —instrument/qualification

IAW —in accordance with

IFR —instrument flight rules

ILS —instrument landing system

IMC —instrument meteorological conditions

IP —instructor pilot

IQT —initial qualification training

IR —instrument rules

IRC —instrument refresher course

JSUPT —joint specialized undergraduate pilot training

KIAS —knots indicated airspeed

LAHD —low-angle high-drag

LALD —low-angle low-drag

LASDT —low-altitude step-down training

LATF —low-altitude tactical formation

LATN —low-altitude tactical navigation

LL —low-level

LLNAV —low-level navigation

LOAC —law of armed conflict

LOWAT —low-altitude training

MAJCOM —major command (USAF)

MASS —Merit Assignment Selection System

MDS —mission design series

MEA —minimum en route altitude

MOA —military operating area

MP —mission pilot

MQF —master question file

MQT —mission qualification training

MWS —major weapon system

NA —not applicable

NAF —numbered Air Force

NAV —navigation

NF —no flap

NG —no grade

OCA —offensive counterair

OFT —operational flight trainer

OG —operations group

OG/OGV —operations group stan/eval

OIF —operational information file

OPR —office of primary responsibility

OPSEC —operations security

OST —off-station training

OT&E —operational test and evaluation

PAA —primary aircraft authorized

PAI —primary aircraft inventory

PAR —precision approach radar

PFT —programmed flying training

PIT —pilot instructor training

PQI —professional quality index

PWC —pilot weather category

RCP —rear cockpit

RPI —rated position indicator

RPM —revolutions per minute

RSU —runway supervisory unit

RT —radio terminology

SA —surface attack

SAT —surface attack tactics

SE —single engine

SEFE —standardization/evaluation flight examiner

SELO —standardization/evaluation liaison officer

SEPT —situational emergency procedures training

SOF —supervisor of flying

SQ —squadron

SSE —simulated single engine

stan/eval —standardization/evaluation

TACAN —tactical air navigation

TDY —temporary duty

TIMS —Training Integration Management System

TMS —Training Management System

TP —traffic pattern

TRIM —Time Related Instruction Management

UIP —upgrading instructor pilot

UMD —unit manning document

USEM —unit stan/eval monitor

v —versus

VLB —visual level bomb

VLC —visual lookout capability

VFR —visual flight rules

VMC —visual meteorological conditions

VR —visual rules

VVI —vertical velocity indicator

WG —wing

WX —weather

Terms

Aircraft Handling Characteristics (AHC) —Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints, including, but not limited to, high/maximum AOA maneuvering, energy management, minimum time turns, maximum/optimum acceleration and deceleration techniques and confidence maneuvers (AFI 11-214).

Cockpit Familiarization Trainer (CFT) —A training device in which the controls, switches, and instruments do not have to respond to trainee inputs. Used for checklist use, normal procedures, and

emergency procedures.

Cockpit Procedures Trainer (CPT) —A training device in which instruments and displays are activated to respond to trainee inputs. Used for safety of flight, instrument, normal, and emergency procedures.

Collateral Sorties —Sorties not directly related to combat employment training but necessary for accomplishment of unit training programs, such as ferry flights, deployments, noneffective sorties, etc.

Continuation Training (CT) —Training to maintain proficiency and improve aircrew capabilities to perform unit missions and aircrew proficiency sorties not flown in formal syllabus missions, tests, or evaluations. Applicable to mission ready and mission support aircrews.

Currency —A measure of how frequently and (or) recently a task is completed. Currency requirements should ensure the average aircrew member maintains a minimum level of proficiency in a given event.

Demanding Sortie —Sorties that task the aircrew to the extent that flying frequency and continuity are most critical. Authorized sorties/events requiring demanding mission currency are: BFM, (D)ACM, (D)ACT, LOWAT (below 1,000 feet AGL), CAS, SAT (except dry level passes at or above 500 feet), etc. SQ/CCs may add sorties/events to the demanding sortie list depending on unit tasking.

Emergency Procedures Evaluation (EPE) —An evaluation of aircrew knowledge and responsiveness to critical and noncritical EPs conducted by a SEFE orally or in a cockpit training device.

Experienced Pilot (EXP) —Types of EXPs are:

> **Fighter Pilot —**Hours are FP/IP/MP and time is defined as FP/IP/MP hours logged in aircraft with an assigned AFSC of 11FX. OA-10 is considered fighter time. An experienced fighter pilot has 500 hours primary aircraft authorized (PAA), or 1,000 hours (FP/IP/MP), of which 300 are PAA, or 600 fighter hours, of which 200 hours are PAA, or previously fighter experienced and 100 hours PAA, and certified by the squadron commander on the letter of Xs.
>
> **Other Pilot —**Hours are FP/IP/MP and time is defined as FP/IP/MP hours. An experienced other pilot has 1,500 hours total with 750 PAA or 1,800 total with 500 hours PAA, or previously experienced and 100 hours PAA, and certified by the squadron commander on the letter of Xs.
>
> **Companion Trainer Program —**For the purpose of this instruction, an experienced CTP pilot has 100 hours of FP/IP/MP time in the T-38 if previously experienced in another aircraft, or 500 hours of FP/IP/MP time in the T-38 if not previously experienced in another aircraft, and certified by the squadron commander on the letter of Xs.
>
> **AETC —**All AETC pilots, regardless of previous experience, must, as a minimum, meet criteria for Pilot Weather Category (PWC) 1 as defined in AFI 11-2T/AT-38, Volume 3/AETC Sup 1, **Table 4.1.** , and certified by the squadron commander on the letter of Xs.

Flight Lead (FL) —As designated on flight orders, the individual responsible for overall conduct of mission from preflight preparation/briefing to postflight debriefing, regardless of actual position within the formation. A certified 4-ship FL may lead formations and missions in excess of four aircraft, unless restricted by the unit CC. A two-ship FL is authorized to lead an element in a larger formation.

Formal Course —Training courses listed in AFCAT 36-2223, USAF Formal Schools.

Inexperienced Pilot (INEXP) —A pilot who does not qualify as experienced or who is not certified as such by the squadron commander.

Initial Qualification —An aircrew member engaged in training needed to qualify for basic aircrew

duties in an assigned position for a specific aircraft, without regard for the unit's operational mission.

Initial Qualification Training (IQT) —Training to qualify the aircrew in basic aircraft flying duties without specific regard to the unit's operational mission. The minimum requirement for mission support status.

Low-Altitude Tactical Navigation (LATN) —Low-altitude training using the fundamental aspects of dead reckoning and point-to-point low-altitude navigation, with or without prior route planning (AFI 11-214).

Low-Altitude Training (LOWAT) —Mission-oriented operations in the certified low-altitude block (500 feet to 1,000 feet).

Low-Level Navigation (LLNAV) —VFR point-to-point navigation in the 500 feet to 5,000 feet AGL altitude block.

Mission Qualification —An aircrew member engaged in training to qualify in an assigned aircrew position to perform the command or unit mission.

Night Sortie —A sortie in which either takeoff or landing and at least 50 percent of flight duration or 1 hour, whichever is less, occur between the period of official sunset to official sunrise.

Nondemanding Sortie —A sortie that provides the aircrew with the opportunity to regain basic flying proficiency without excessively tasking those skills unused during the nonflying period. Authorized sorties/events flown for or on a nondemanding sortie are: instruments, AHC, aerobatics, formation, LLNAV at or above 500 feet AGL, basic weapons deliveries (not to include pop-up attacks), etc.

Office of Primary Responsibility (OPR) —Any headquarters, agency, or activity having the primary functional interest in, and responsibility for, a specific action, project, plan, program, or problem.

Operational Flight Trainer (OFT) —A training device that dynamically simulates flight characteristics. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training.

Primary Aircraft Inventory (PAI) —Aircraft authorized for performance of the operational mission. The PAI forms the basis for allocation of operating resources to include manpower, support equipment, and flying-hour funds. The operating command determines the PAI required to meet their assigned missions.

Professional Qualification Index (PQI) —AFI 11-401 index used to identify aircrews who fail to complete basic training minimums and requirements that have not been waived.

Proficiency —A measure of how well a task is completed. Aircrew members are considered proficient when they can perform tasks at the minimum acceptable levels of speed, accuracy, and safety. For purposes of this instruction, proficiency also requires currency in the event, if applicable.

Situational Emergency Procedures Training (SEPT) —A discussion and review of abnormal/emergency procedures and aircraft systems operations/limitations based on realistic scenarios.

Squadron Supervisor —Squadron commander, operations officer, assistant operations officers, flight commanders, and weapons officer are squadron supervisors for purposes of this instruction.