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AIRCRAFT METALS

TECHNOLOGY



CAREER FIELD EDUCATION

AND TRAINING PLAN

**CAREER FIELD EDUCATION AND TRAINING PLAN
AIRCRAFT METALS TECHNOLOGY SPECIALTY
AFSC 2A7X1**

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Approved By: HQ USAF/ILMM (CMSgt Matthew McMahan)
 OPR: 361 TRS/TRR (Dr. Donna A. Hyde)
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**CAREER FIELD EDUCATION AND TRAINING PLAN
AIRCRAFT METALS TECHNOLOGY SPECIALTY
AFSC 2A7X1**

PART I

Preface

1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources, and minimum core task requirements for this specialty. The CFETP will provide personnel a clear career path to success and instill rigor in all aspects of career field training. To read, review, or print a copy of the current CFETP, go to the Aircraft Maintenance Homepage at: <http://140.185.52.73/ilm/ilmm/acmaint/>.

NOTE: Civilians occupying associated positions will use Part II to support duty position qualification training.

2. The CFETP consists of two parts; supervisors use both parts to plan, manage, and control training.

2.1. Part I provides information necessary for overall management of the specialty. Section A explains how everyone will use the plan. Section B identifies career field progression information, duties and responsibilities, training strategies, and career field path. Section C associates each level with specialty qualifications (knowledge, education, training, and other). Section D indicates resource constraints. Some examples are funds, manpower, equipment, and facilities. Section E identifies transition training guide requirements to SSgt through MSgt.

2.2. Part II includes the following: Section A identifies the Specialty Training Standard (STS) and includes duties, tasks, and technical references to support training, Air Education and Training Command (AETC) conducted training, wartime course requirements, core task, and correspondence course requirements. Section B contains the course objective list and training standards supervisors use to determine if airmen satisfied training requirements. Section C identifies available support materials. An example is a Qualification Training Package (QTP) developed to support proficiency training. Section D identifies a training course index supervisors use to determine resources available to support training. Included here are both mandatory and optional courses. Section E identifies MAJCOM unique training requirements supervisors use to determine additional training requirements unique to the MAJCOM. At the unit level, supervisors and training will use Part II to identify, plan, and conduct training commensurate with the overall goals of this plan.

3. Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their career. This plan will enable us to train today's work force for tomorrow's jobs.

ABBREVIATIONS/TERMS EXPLAINED

Advanced Training (AT). Formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

Air Force Job Qualification Standard (AFJQS). A comprehensive task list that describes a particular job type or duty position. Supervisors use this to document task qualifications. The tasks on an AFJQS are common to all persons serving in the described duty position.

Career Field Education and Training Plan (CFETP). A CFETP is a comprehensive, multipurpose document covering the entire spectrum of education and training for a career field. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, to eliminate duplication, and to ensure this training is budget defensible.

Certification. A formal indication of an individual's ability to perform a task to required standards.

Certification Official. A person the commander assigns to determine an individual's ability to perform a task to required standards.

Continuation Training. Additional training that exceeds requirements with emphasis on present or future duty assignments.

Core Task. A task Air Force Career Field Managers (AFCFMs) identify as a minimum qualification requirement within an Air Force specialty regardless of duty position. Core tasks identified with an */R are optional for AFRC and ANG.

Critical Task. Additional tasks, identified by MAJCOM Functional Managers, commanders, and supervisors as being required for skill-level upgrade training. When designated, certify these core tasks using normal core task certification procedures.

Course Objective List (COL). A publication identifying the tasks and knowledge requirements and respective standards provided to achieve a 3-/7-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, *Developing, Managing, and Conducting Training*.

Enlisted Specialty Training (EST). A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in each skill level of a specialty.

Exportable Training. Additional training via computer assisted, paper text, interactive video, or other necessary means to supplement training.

Field Technical Training (Type 4). Special or regular on-site training conducted by a training detachment (TD) or by a mobile training team (MTT).

Initial Skills Training. A formal resident course resulting in award of a 3-skill level AFSC.

Instructional System Development (ISD). A deliberate and orderly process for developing, validating, and reviewing instructional programs that ensures personnel are taught the knowledge and skills essential for successful job performance.

Mission Ready Airman. A formal course which results in an airman receiving hands-on training and task certification of selected tasks so the individual will be immediately productive upon arrival at their first duty section.

Occupational Survey Report (OSR). A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

On-the-Job Training (OJT). Hands-on, over-the-shoulder training at the duty location used to certify personnel for both skill level upgrade and duty position qualification.

Qualification Training (QT). Actual hands-on task performance training designed to qualify an airman in a specific duty position. This training occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge required to do the job.

Qualification Training Package (QTP). An instructional package designed for use at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. It may be printed, computer-based, or in other audiovisual media.

Resource Constraints. Resource deficiencies, such as money, facilities, time, manpower, and equipment, that preclude desired training from being delivered.

Specialized Training Package and COMSEC Qualification Training Package. A composite of lesson plans, test material, instructions, policy, doctrine, and procedures necessary to conduct training. These packages are prepared by AETC, approved by the National Security Agency (NSA), and administered by qualified communications security (COMSEC) maintenance personnel.

Specialty Training Standard (STS). An Air Force publication that describes an Air Force Specialty in terms of tasks and knowledge an airman may be expected to perform or to know on the job. It serves as a contract between Air Education and Training Command and the functional user to show which of the overall training requirements for an Air Force Specialty are taught in formal schools, career development courses, and exportable courses.

Training Impact Decision System (TIDES). A computer-based decision support technology being designed to assist AFCFMs in making critical judgments relevant to: (1) what training should be provided personnel within career fields, (2) when training should be provided (at what career points), and (3) where training should be conducted (training setting).

Upgrade Training (UGT). A mixture of mandatory courses, task qualification, QTPs, and CDCs required for award of the 3-, 5-, 7-, or 9-skill level.

Utilization and Training Workshop (U&TW). A forum, co-chaired by the AFCFM and Training Pipeline Manager, of MAJCOM Air Force Specialty Code (AFSC) functional managers, Subject Matter Experts (SMEs), and AETC training personnel that determines career ladder training requirements.

Section A - General Information

1. Purpose. This CFETP provides information necessary for Air Force Career Field Managers (AFCFMs), MAJCOM functional managers (MFM), commanders, training managers, supervisors, and trainers to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training that individuals in AFSC 2A7X1 should receive to develop and progress throughout their career. This plan identifies initial skills, upgrade, qualification, advanced, and proficiency training. Initial skills training is the AFS specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one or more of the technical training centers. Upgrade training identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 3-, 5-, 7-, and 9-skill levels. Qualification training is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge required to do the job. Advanced training is formal training that provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Supplemental training is either in-residence or exportable advanced training courses, or on-the-job training. The CFETP has several purposes, some are:

- 1.1.** Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. Also, it is used to help supervisors identify training at the appropriate point in an individual's career.
- 1.2.** Identifies task and knowledge training requirements for each skill level in the specialty and recommends education/training throughout each phase of an individual's career.
- 1.3.** Lists training courses available in the specialty, identifies sources of training, and identifies the training delivery method.
- 1.4.** Identifies major resource constraints that impact full implementation of the desired career field training process.

2. Uses. The plan will be used by MFMs and supervisors at all levels to ensure comprehensive and cohesive training programs are available for each individual in the specialty.

2.1. AETC training personnel will develop/revise formal resident, non-resident, field, and exportable training based on requirements established by the users and documented in Part II of the CFETP. They will also work with the AFCFM to develop acquisition strategies for obtaining resources needed to provide the identified training.

2.2. MFMs will ensure their training programs complement the CFETP mandatory initial, upgrade, and proficiency requirements. OJT, resident training, contract training, or exportable course can be used to satisfy the identified requirements. MAJCOM-developed training to support this AFS must be identified for inclusion into the plan.

2.3. Each individual will complete the mandatory training requirements specified in this plan. The lists of courses in Part II will be used as a reference to support training.

3. Coordination and Approval. The AFCFM is the approval authority. MAJCOM representatives and AETC training personnel will identify and coordinate on the career field training requirements. The AETC training manager for this specialty will initiate an annual review of this document by AETC and MFMs to ensure currency and accuracy. Using the list of courses in Part II, they will eliminate duplicate training.

Section B - Career Progression and Information

4. Specialty Description.

4.1. Specialty Summary. Refer to AFMAN 36-2108, *Airman Classification*, paragraph 1. Designs, welds, heat treats, repairs, fabricates, and machines special tools, components, and assemblies for aerospace weapon systems and related support equipment (SE). Related DoD Occupational Subgroup: 700.

4.2. Duties and Responsibilities. Refer to AFMAN 36-2198, paragraph 2.

4.2.1. Advises on metals machining, welding, designing, and production problems. Designs, manufactures, or modifies special precision tools, gauges, dies, and fixtures to facilitate metal working operations. Interprets blueprints and shop drawings. Performs shop calculations such as determining cutting speeds and settings, calculating materiel requirements, welding processes, and pre-heat and post-heat treatment requirements. Welds, brazes, solders, and heat treats metals. Uses manual and computer numerical controlled (CNC) metal working machines such as mills, lathes, hydraulic presses, drill presses, and saws to manufacture or repair parts and special tools for aircraft components and support equipment. Utilizes equipment accessories such as boring heads, indexing heads, rotary tables, tool post grinders and taper attachments. Programs CNC machines using manual and Computer Aided Design-Computer Aided Manufacturing (CAD-CAM) methods. Checks completed components and determines serviceability in accordance with drawings and specifications.

4.2.1.1. Disassembles assemblies, and fits component parts using machine screws, bolts, rivets, press fits, and welding techniques. Uses metal working equipment, tools, and supplies to produce surface finishing specifications for components. Extracts broken or damaged hardware. Checks components for wear tolerances using measuring devices.

4.2.1.2. Inspects and maintains hand tools and metal working machinery. Performs operator maintenance and service inspections on shop equipment and tools. Ensures lock out and tag out procedures are accomplished prior to maintenance on all equipment. Uses and disposes of hazardous waste and materials according to environmental standards.

4.2.2. Plans and schedules metals technology activities. Interprets technical publications, blueprints, and drawings to resolve problems related to aircraft systems and support equipment. Establishes priorities for completion of maintenance tasks and provides assistance in solving maintenance, supply, and personnel issues. Provides training, feedback, and task certification for

skill level advancement. Establishes performance standards and improves work methods. Supervises and evaluates job performance and maintenance techniques. Ensures maintenance and safety policy compliance for all metals technology activities. Maintains and documents equipment, supply, certification, training, and aircraft forms. Evaluates requirements and prepares quality deficiency reports. Ensures hazardous materials and waste are handled, stored, and disposed of according to environmental standards.

4.2.3. Plans, organizes, and directs aircraft fabrication maintenance activities. Manages maintenance and staff functions for Aircraft Metals Technology, Aircraft Structural Maintenance, Survival Equipment, and Non-Destructive Inspection elements. Establishes production controls. Interprets directives and publications pertaining to fabrication maintenance. Analyzes maintenance management reports. Interprets and evaluates directives and publications, inspection findings, records, and reports and recommends corrective actions. Establishes safety and training guidelines. Plans, organizes, directs, and controls troubleshooting and repair activities of fabrication personnel. Manages and controls fabrication flight resources including personnel, facilities, funds, supplies, and equipment. Manages handling, storing, and disposing of hazardous materials and waste according to environmental standards.

5. Skill/Career Progression. Adequate training and timely progression from the apprentice to the superintendent skill level play an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training do their part to plan, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure each individual receives necessary training at appropriate points in their career.

5.1. Apprentice (3) Level. Following Basic Military Training, initial skills training will be provided in a resident course at Detachment 1, 361 Training Squadron, Aberdeen Proving Ground, Maryland. The course will lay the foundation for additional training at the graduate's first duty assignment. Trainees will utilize the career development courses (CDCs), task qualification training, and other exportable courses to progress in their career field. Once the trainer task certifies the trainee, the trainee may perform the task unsupervised.

5.2. Journeyman (5) Level. Once upgraded to the 5-level, the journeyman will enter into continuation training to broaden their experience base by increasing their knowledge and skill in troubleshooting and solving more complex problems. Five-levels may be assigned job positions such as quality assurance and various other staff positions. After having 48 months in the Air Force, 5-levels will attend Airman Leadership School (ALS) to enhance their Professional Military Education (PME). Five-levels will be considered for appointment as unit trainers. Individuals will use their CDCs to prepare for Weighted Airman Promotion testing. They should also consider continuing their education toward a Community College of the Air Force (CCAF) degree.

5.3. Craftsman (7) Level. A craftsman can expect to fill various supervisory and management positions such as shift leader, element chief, task certifier, and various other staff positions. Exportable MDS specific courses and MAJCOM/unit directed courses are also available. Seven-levels should take courses or obtain added knowledge in management of resources and personnel. Continued academic education through CCAF and higher degree programs is encouraged. In addition, prior to assuming the rank of MSgt, individuals will attend the Noncommissioned Officer Academy.

5.4. Superintendent (9) Level. A 9-level can be expected to fill positions such as flight chief, production supervisor, and various staff NCOIC jobs. Additional training in the areas of budget,

manpower, resources, and personnel management should be pursued through continuing education. Individuals promoted to SMSgt will attend the Senior Noncommissioned Officer Academy. Additional higher education and completion of courses outside their career AFS is also recommended.

6. Training Decisions. The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Aircraft Metals Technology career field. The spectrum includes a strategy for when, where, and how to meet these training requirements. The strategy must ensure we develop affordable training, eliminate duplication, and prevent a fragmented approach to training. The following training decisions were made at the career field utilization and training workshop held at Aberdeen Proving Ground Maryland from 15 to 19 July 2002.

6.1. Initial Skills. The initial skills course was revised as a result of MAJCOM requirements. MAJCOMs agreed the benefit/return on investment did not justify the mission ready airman (MRA) training. It was determined students have difficulty passing the MRA block of instruction which contributed to an unusually high washback and elimination rates. Based on the deletion of the MRA block of instruction (lowering proficiency levels from 3c to 2b), it was estimated the course length would be reduced from 99 to 90 days. Training development element (TDE) and course personnel scrubbed the course and determined that it would require 97 days to fulfill the MAJCOMs training requirements established at the U&TW; therefore, the revised course length will be 97 days. It was also determined that the +/- .002 tolerances for pocket milling are too stringent for training purposes. U&TW members agreed that the schoolhouse should use +/- .005 for training purposes on all STS items trained to the 3c proficiency level.

6.2. Five Level Upgrade Requirements. There are now 68 5-level core tasks. The 5-level CDC was reviewed. The following changes resulted: Training requirements for CAMS, GO81, and SBSS were deleted; brazing of non-ferrous metals and discussion of different types were deleted/reduced to match the revised CFETP; coverage of die making was reduced to reflect the decreased training emphasis on this infrequently performed task; coverage of the universal shear and punching machine was expanded; MIG welding, operation of portable welding equipment, abrasive sanding operations, use of nitrogen/dry ice during bearing installation, and CAM were added; and coverage of conventional milling machine, lathe taper turning, toolmaker's knee, maintenance of Rockwell Hardness tested, abrasive media blaster, and abrasive cutoff saw will be reworded to match the revised CFETP.

6.3. Seven Level Upgrade Requirements. The following changes were made to training requirements for the craftsman course: requirements for prioritize and schedule maintenance, logistics maintenance management, maintenance equipment accountability, and accident/incident investigation were deleted; weld inspection was added; blueprint interpretation was reduced from 18 to 8 hours and changed to 3c proficiency level, providing a much needed 7-level involvement in defective weld quality control and corrective measures; advance tooling was reduced from 13 to 8 hours. The lessons on craftsman critical tasks covering carbides, cermets/ceramics, and tool troubleshooting were retained. Blueprint interpretation becomes a part of the new Block I laboratory section of Design and Manufacture Jigs/Fixtures covering types, materials, and actually designing a jig/fixture from the blueprint of a part. The new Block II will include practical, hands-on application where students actually manufacture a jig/fixture from the blueprint. This increased hands-on training will increase the craftsman's skills to be more commensurate with the training needs of field units.

6.4. Continuation Training. Any additional knowledge and skill requirements that were not taught through initial or upgrade training are assigned to unit training or Training Detachments. The purpose of the continuation training program is to provide additional training exceeding minimum upgrade training requirements with emphasis on present and future duty positions. MAJCOMs develop a proficiency training program that ensures individuals in the Aircraft Metals Technology career field receive the necessary training at the appropriate point in their career. The program identifies both mandatory and optional training requirements.

7. Community College of the Air Force (CCAF). CCAF offers and award job-related associate in applied science degrees and other academic credentials that enhance mission readiness, contribute to recruiting, assist in retention and support the career transitions of Air Force enlisted members. The college works with Air Force training centers, regional accrediting agencies, and hundreds of cooperating civilian colleges and universities. Since the technical nature of most Air Force courses places them on a level with college study, airmen earn fully recognized college credits for most of what they learn in formal coursework and on-the-job training. In addition to its associate degree program, CCAF offers the following:

7.1. Degree Requirements. All airmen are enrolled in the CCAF degree program applicable to his/her AFSC upon completion of basic military training. Prior to completing an associate degree, the member must be awarded their AFSC 5-skill level and fulfill the following academic requirements:

Semester Hours

Technical Education	24
Leadership, Management & Military Studies	6
Physical Education	4
General Education	15
Program Elective	15
Technical Education; Leadership, Management, and Military Studies; or General Education	
Total	64

7.1.1. Technical Education (24 Semester Hours): Twenty-four semester hours are required to fulfill the Technical Education requirement. Twelve semester hours must be applied from the Technical Core area with the remaining twelve applied from either the Technical Core or the Technical Elective areas. Technical Education requirements are generally satisfied by entry-level and advanced degree-applicable courses at CCAF affiliated schools and through internship. However, additional Technical Education requirements may be satisfied by degree applicable courses accepted in transfer, testing credit, independent study or correspondence, certification, licensure or registry.

7.1.2. Leadership, Management, and Military Studies (6 Semester Hours): The Leadership, Management and Military Studies (LMMS) requirement may be satisfied by professional military education, civilian courses accepted in transfer and/or by testing credit. However, the preferred method of completing LMMS is through attending an airman leadership school, the NCO academy and/or the Air Force Senior NCO Academy.

7.1.3. **Physical Education** (4 Semester Hours): Completing basic military training satisfies the 4-semester-hour Physical Education requirement. Civilian courses do not apply to this requirement.

7.1.4. **General Education** (15 Semester Hours): The General Education requirement is satisfied by applying courses accepted in transfer or by testing credit. Courses that satisfy the General Education requirement are: oral communications, written communications, mathematics, social science and humanities. Courses must meet the specific criteria provided in the CCAF General Catalog.

7.1.5. **Program Elective** (15 Semester Hours): The Program Elective requirement is satisfied by courses applicable to Technical Education; LMMS; or General Education areas, including acceptable Natural and Physical Science courses. Six semester hours of CCAF degree applicable technical course credit otherwise not applicable specific degree program may be used. See the CCAF General Catalog for details regarding the Associates of Applied Science for this specialty.

7.2. **Occupational Instructor Certification.** CCAF offers the Occupational Instructor Certification (OIC) program for qualified instructors currently teaching at CCAF affiliated schools. The purpose of the certification is to recognize the excellent instructor qualification training provided to prepare our instructors to teach a CCAF course and to formally acknowledge instructor experience. To qualify for the OIC, the instructor must: Be a full-time instructor teaching a CCAF course at the time of nomination; Have at least 2 years of teaching experience from the date of teaching practicum completion; Hold an associates degree or higher; Complete a instructor methodology course of at least 3 semester hours; Complete a teaching practicum course of at least 5 semester hours; Hold the 5-skill level; And be nominated by the affiliated school commander, commandant or PME flight chief.

7.3. **FAA Airframe and Powerplant Certification.** Air Force aircraft maintenance technicians are eligible to pursue FAA A&P certification based on training and experience in accordance with Federal Aviation Regulation Part 65. The DoD established the Joint Service Aviation Maintenance Technician Certification Council (JSAMTCC) to standardize the eligibility and certification process for the military and provide direction and resources necessary to fill the gaps within military training and experience. Completing the 3 A&P Specialty Training Courses, 7 Computer Based Training modules, and OJT requirements contained in a Qualification Training Package (QTP) will fill training and experience gaps. CCAF manages the AF A&P Certification Program. Technicians may enroll in the program and begin training once they have been awarded their 5-skill level. To learn more and enroll in the program, visit CCAF's website at <http://www.maxwell.af.mil/au/ccaf/student.htm>. CCAF awards 30 Semester hours for the FAA A&P certification and 18 Semester hours for the FAA Airframe or Powerplant certification.

7.4. **Other Certification Programs.** CCAF is actively pursuing other licensure and certification opportunities related to specific career fields. To learn more about other certification opportunities visit CCAF's website at <http://www.maxwell.af.mil/au/ccaf>.

7.5. **AETC Instructor Requirements.** Additional off-duty education is a personal choice and is encouraged for all. Individuals desiring to become an Air Education and Training Command instructor should be actively pursuing their CCAF degree. A degreed faculty is required for CCAF to maintain accreditation through the Southern Association of Colleges and Schools.

7.6. **Trade Skill Certification.** When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The college uses a competency based assessment process for trade skill certification at one of four proficiency levels:

Apprentice, Journeyman, Craftsman (Supervisor), or Master Craftsman (Manager). All are transcribed on the CCAF transcript.

7.7. To learn more about CCAF and what CCAF has to offer to assist you in your career development, visit their website at <http://www.maxwell.af.mil/au/ccaf/>.

8. Career Field Path

Table 8.1 Enlisted Career Path				
Education and Training Requirements	Grade Requirements			
	Rank	Average Sew-On	Earliest Sew-On	High Year Of Tenure
Basic Military Training School				
Apprentice Technical School (3-Skill Level)	Amn A1C	6 months 16 months		
Upgrade To Journeyman (5-Skill Level) - Minimum 15 months on-the-job training - Minimum 9 months OJT for retrainees - Complete all 5-level core tasks on one MDS - Complete appropriate CDC if/when available	Amn A1C SrA	6 months 16 months 3 years	28 months	12 years
Airman Leadership School (ALS) - Must be a SrA with 48 months time in service or is a SSgt Selectee. - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	<u>Trainer</u> - Qualified and certified to perform the task to be trained. - Have attended the formal OJT Trainers course and appointed in writing by Commander.			
Upgrade To Craftsman (7-Skill Level) - Minimum rank of SSgt. - 12 Months OJT - 6 Months OJT for retrainees - Complete all 5- and 7-level core tasks on one MDS - Complete appropriate CDC if/when available. - Advanced Technical School.	SSgt	7.5 years	3 years	20 years
	<u>Certifier</u> - Be at least a 5-skill level SSgt; and qualified and certified to perform the task being certified - Attend formal OJT Trainer course and appointed in writing by Commander - Be a person other than the trainer			
Noncommissioned Officer Academy (NCOA) - Must be a TSgt or TSgt Selectee - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only)	TSgt MSgt	12.5 years 16 years	5 years 8 years	24 years 26 years
USAF Senior NCO Academy (SNCOA) - Must be a SMSgt or SMSgt Selectee. - A percentage of top nonselect (for promotion to E-8) MSgts attend the SNCOA each year. - Resident graduation is a prerequisite for CMSgt sew-on (Active Duty Only)	SMSgt	19.2 years	11 years	28 years
Upgrade to Superintendent (9-skill Level) -- Minimum rank of SMSgt	CMSgt	21.5 years	14 years	30 years

8.2. Base/Unit Education and Training Manager Checklist:

Table 8.2. Base/Unit Education and Training Manager Checklist		
Requirements for Upgrade to:	Y	N
<p>Journeyman</p> <ul style="list-style-type: none"> - Has the apprentice completed mandatory CDCs, if available? - Has the apprentice completed all appropriate 5-level core tasks identified in the CFETP? - Has the apprentice completed all other duty position tasks identified by the supervisor? - Has the apprentice completed 15 months training (9 months for retrainees) for award of the 5-skill level? - Has the apprentice met mandatory requirements listed in specialty description AFMAN 36-2108 (Airman Classification) and the CFETP? - Has the apprentice been recommended by their supervisor? 		
<p>Craftsman</p> <ul style="list-style-type: none"> - Has the journeyman achieved the rank of SSgt? - Has the journeyman completed mandatory CDCs? - Has the journeyman completed all core tasks identified in the CFETP? - Has the journeyman completed all other duty position tasks identified by the supervisor? - Has the journeyman attended 7-skill level Craftsman Course - Has the journeyman completed a minimum 12 months UGT for award of the 7-skill level (6 months for retrainees)? 		

TO: Squadron/CC

FROM: Squadron Training Manager

SUBJECT: Upgrade Trainee

Trainee is prepared to be upgraded and has completed all training requirements.

Training Manager

Supervisor

Section C - Skill Level Training Requirements

9. Purpose. Skill level training requirements in the 2A7X1 career field are defined in terms of tasks and knowledge requirements. This section outlines the specialty qualification requirements for each skill level in broad, general terms and establishes the mandatory requirements for entry, award, and retention of each skill level. The specific task and knowledge training requirements are identified in the STS at Part II, Sections A and B of this CFETP.

10. Specialty Qualification:

10.1. Apprentice Level Training:

10.1.1. Specialty Qualification. This information is located in the official specialty description in AFMAN 36-2108, paragraph 3.

10.1.1.1. Knowledge. Knowledge is mandatory of: metal repair processes; composition of metals and machinable materials; weld specifications; metal heat treatment; blueprints and drawings; use of precision measuring devices and tools; familiarization with oxyacetylene, metallic arc, and inert gas shielded arc; operation of metal working and welding equipment; use of layout tools and fixture devices; safety codes and practices regarding equipment and supplies; hazards of explosive and compressed gasses; hazardous rays and fumes; and proper handling, use, and disposal of hazardous waste and materials.

10.1.1.2. Education. For entry into this specialty, completion of high school with courses in mathematics, algebra, geometry, trigonometry, metal working, and mechanical drawing, along with basic computer knowledge is desirable.

10.1.1.3. Training. For award of AFSC 2A731, completion of the Aircraft Metals Technology Apprentice Course is mandatory.

10.1.1.4. Experience. None.

10.1.1.5. Other. For entry into this specialty, normal depth perception as defined in AFI 48-143 is mandatory.

10.1.2. Training Sources and Resources. The initial skills course will provide the required knowledge, qualification, and, if applicable, certification.

10.1.3. Implementation. Upon graduation from Basic Military Training (BMT), completion of the Aircraft Metals Technology Apprentice course is mandatory. This course satisfies the knowledge and training resource requirements for award of the 3-skill level.

10.2. Journeyman Level Training:

10.2.1. Specialty Qualification. This information is located in the official specialty description in AFMAN 36-2108, paragraph 3.

10.2.1.1. Knowledge. A 5-skill level must possess knowledge of: metal repair and fabrication processes; composition of metals and machinable materials; weld specifications; metal heat treatment; blueprints and drawings; use of precision measuring devices and tools; fabrication using oxyacetylene, metallic arc, and inert gas shielded arc; operation and capacity of metal working and welding equipment; use and fabrication of layout tools and fixture devices; safety codes, and practices regarding equipment and supplies; hazards of explosive and compressed gasses; hazardous rays and fumes; and proper handling, use, and disposal of hazardous waste and materials.

10.2.1.2. Education. There are no additional education requirements beyond those defined for the apprentice level. However, completion of a CCAF degree is desirable.

10.2.1.3. Training. For award of AFSC 2A751, the 5-level CDC provides the career knowledge training required. Qualification training and OJT will provide training and qualification on the core tasks identified in the STS. The CDC is written to build from the trainee's current knowledge base, and provides more in-depth knowledge to support OJT requirements.

Completion of required computer based instruction (CBI) math program is also mandatory.

10.2.1.4. Experience. Qualification in and possession of AFS 2A731. Also, experience in functions such as gas and electric welding, boring, milling, shaping, grinding metal, or using precision measuring devices. Completion of all 5-level core tasks on one MDS aircraft identified in the STS is mandatory.

10.2.2. Training Sources and Resources. A minimum of 15 months on-the-job training, completion of the 2A751 CDC, CBI math program, and completion of the 5-level core tasks represent the resources needed for award of the 5-skill level.

10.2.3. Implementation. Training to the 5-level is performed by the units utilizing this STS, exportable courses, and CDCs. Upgrade to the 5-level requires completion of the 2A751 CDC, completion of all core tasks, CBI math program, and 15 months upgrade training.

10.3. Craftsman Level Training:

10.3.1 Specialty Qualification. This information is located in the official specialty description in AFMAN 36-2108, paragraph 3.

10.3.1.1. Knowledge. A 7-level must possess knowledge of: metal repair and fabrication processes; composition of metals and machinable materials; weld specifications; metal heat treatment; blueprints and drawings; use of precision measuring devices and tools; fabrication using oxyacetylene, metallic arc, and inert gas shielded arc; operation and capacity of metal working and welding equipment; use of layout tools and fixtures; safety codes, and practices regarding equipment and supplies, to include hazards of rays, fumes, and compressed gases; and proper handling, use, and disposal of hazardous waste and materials.

10.3.1.2. Education. There are no additional education requirements beyond those defined for the apprentice level. However, completion of a CCAF degree is desirable.

10.3.1.3. Training. Completion of mandatory CDCs, 7-level core tasks, and the resident 7-level course are mandatory for upgrade to 2A771.

10.3.1.4. Experience. Qualification in and possession of AFS 2A751. Also, experience supervising functions dealing with welding, using precision measuring devices, and machining.

10.3.2. Training Sources and Resources. Completion of the Aircraft Metals Technology Craftsman course at Aberdeen Proving Ground, Maryland, completion of CDCs 2AX7X, along with certification of Air Force directed core tasks, represent the sources required for award of the 7-skill level. The Course Objective List (COL) in Part II lists the training rendered at the 7-level resident course at Aberdeen Proving Ground, Maryland.

10.3.3. Implementation. Upgrade to the 7-level will require 12 months OJT and completion of all AF core tasks, the 2AX7X CDC, and the resident, 7-level course at Aberdeen Proving Ground, Maryland.

10.4. Superintendent Level Training:

10.4.1 Specialty Qualification. This information is located in the official specialty description in AFMAN 36-2108, paragraph 3.

10.4.1.1. Knowledge. Knowledge is mandatory of: aircraft structural repair, metals processing, corrosion control, fabric and rubber repair, and non-destructive inspection methods; characteristics of metals identification; concepts and application of maintenance directives;

maintenance data reporting; and proper use, handling, and disposal of hazardous waste and materials.

10.4.1.2. Education. There are no additional education requirements beyond those defined for the apprentice level. However, completion of a CCAF degree is desirable.

10.4.1.3. Training. For award of AFSC 2A790, promotion to SMSgt is mandatory.

10.4.1.4. Experience. For award of AFSC 2A790, qualification in and possession of AFSC 2A771, 2A772, 2A773, or 2A774 is mandatory. Also, experience is mandatory managing aircraft metals technology, nondestructive inspection, aircraft structural maintenance, or survival equipment specialties and functions.

10.4.1.5. Other. Not Used.

10.4.2. Training Sources and Resources. Instruction received at the Senior NCO Academy and duty position qualification represent the required sources for upgrade to the 9-skill level.

10.4.3. Implementation. The 9-level will be awarded after promotion to SMSgt.

Section D - Resource Constraints

11. Purpose. This section identifies known resource constraints that preclude optimal/desired training from being developed or conducted, including information such as cost and manpower. Narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training are included. Also included in this section are actions required, office of primary responsibility, and target completion dates. Resource constraints will be, as a minimum, reviewed and updated annually.

12. Apprentice Level Training: No manpower/man-year constraints were identified. Initially, equipment constraints included 12 MIG Welders and 1 Plasma Cutter (estimated cost of \$35,000). Subsequent to the U&TW, the equipment was funded and purchased; therefore, there are no constraints for apprentice level training.

13. Five-Level Training: No 5-level resource constraints were identified by the U&TW.

14. Seven-Level Training. No 7-level resource constraints were identified by the U&TW

Section E. - Transitional Training Guide. There are no transition training requirements. This area is reserved.

PART II

Section A - Specialty Training Standard

1. Implementation. This STS will be used for technical training provided by Air Education and Training Command and implemented with the apprentice class beginning 10 July 2003 and graduating 1 December 2003 and the craftsman class beginning 28 July 2003 and graduating 8 August 2003.

2. Purpose. As prescribed in AFI 36-2201, this STS:

2.1. Lists in column 1 (Tasks, Knowledge, and Technical References) the most common tasks, knowledge, and technical references (TR) necessary for airmen to perform duties in the 3-, 5-, and 7-skill level.

2.2. Identifies in column 2 (Core Tasks), by asterisk (*), specialty-wide training requirements. Core tasks identified with an */R are optional for the AFRC and ANG. MAJCOM Functional Managers, commanders, and supervisors may designate additional critical tasks as necessary. When designated, certify these core tasks using normal core task certification procedures. As a minimum, certification on all AFCFM directed core tasks applicable to the specialty must be completed for skill level upgrade. Exemptions:

2.2.1. Core tasks, which are not applicable to base assigned aircraft or equipment, are not required for upgrade (units are not required to send personnel TDY for core task training).

2.2.2. For units with more than one mission design (e.g. A-10) aircraft, upgrade trainees need only complete core tasks on a single mission design. MFMs, unit commanders, and/or supervisors may require trainees to complete core task training on additional mission design aircraft, if desired. If some of these core tasks involve training in another unit on base, trainees must still complete all core tasks relevant to at least one mission design aircraft. All units are bound by the requirements in this CFETP and will accommodate core task trainees from other units.

2.2.3. Units that use the GO81 maintenance data collection system do not need to complete Core Automated Maintenance System (CAMS) Computer Based Training (CBT) core tasks. However, these units must be capable of training CAMS related CBT core tasks for deployment preparation. This capability ensures GO81 users are capable of operating CAMS prior to deploying to CAMS using units.

2.3. Provides certification for OJT. Column 3 is used to record completion of tasks and knowledge training requirements. Use automated training management systems to document technician qualifications, if available. Task certification must show a certification or completed date.

2.4. Shows formal training and correspondence course requirements. Column 4 shows the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the correspondence course. When two codes are used in columns 4A and 4C (e.g. 2b/b), the first code is the established requirement for resident training on the task/knowledge, and the second code indicates the level of training provided in the course due to equipment shortages or other resource constraints. See CADRE/AFSC/CDC listing maintained by the unit training manager for current CDC listing.

2.5. Qualitative Requirements. Attachment 1 contains the proficiency code key used to indicate the level of training and knowledge provided by resident training and career development courses.

2.6. Job Qualification Standard. Becomes a job qualification standard (JQS) for on-the-job training when placed in AF Form 623, **On-The-Job Training Record**, and used according to AFI 36-2201. For OJT, the tasks in column 1 are trained and qualified to the go/no go level. "Go" means the individual can perform the task without assistance and meets local requirements for accuracy, timeliness, and correct procedures. When used as a JQS, the following requirements apply:

2.6.1. Documentation. Document and certify completion of training IAW AFMAN 36-2201, volume 35. Automated records, utilizing Core Automated Maintenance System (CAMS) , reflecting this STS may be used and is highly encouraged.

2.6.1.1. Converting from Old Document to CFETP. All AFJQSs and previous CFETPs are replaced by this CFETP; therefore, conversion of all training records to this CFETP STS is mandatory. Transcribe all previously qualified tasks IAW AFI 26-2201, volume 3

2.7. Is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests (SKTs) are developed at the USAF Occupational Measurement Squadron by senior NCOs with extensive practical experience in their career fields. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are outlined in AFI 36-2502, *Airman Promotion Program*. WAPS is not applicable to the Air National Guard or Air Force Reserve.

3. Recommendations: Report unsatisfactory performance of individual course graduates to the AETC training manager at 361 TRS/TRR, 501 Missile Road, Sheppard AFB TX, 76311-2264, DSN 736-3539. Reference specific STS paragraphs. A customer service information line has been installed for the supervisor's convenience to identify graduates who may have received over or under training on task/knowledge items listed in this training standard. For a quick response to problems, call our customer service information line, DSN 736-5236, any time, day or night.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

MICHAEL E. ZETTLER, Lieutenant General, USAF
DCS/Installations and Logistics

3 Attachments

1. Proficiency Code Key
2. Specialty Training Standard (STS)
3. 2AX7X CDC STS

PROFICIENCY CODE KEY

CFETP 2A7X1, June 2003

<i>This Block Is For Identification Purposes Only</i>		
Name Of Trainee		
Printed Name (Last, First, Middle Initial)	Initials (Written)	SSAN
Printed Name Of Training/Certifying Official And Written Initials		
N/I	N/I	

QUALITATIVE REQUIREMENTS

Proficiency Code Key		
	Scale Value	Definition: The individual
Task Performance Levels	1	IS EXTREMELY LIMITED (Can do simple parts of the task. Needs to be told or shown how to do most of the task.)
	2	IS PARTIALLY PROFICIENT (Can do most parts of the task. Needs only help on hardest parts.)
	3	IS COMPETENT (Can do all parts of the task. Needs only a spot check of completed work.)
	4	IS HIGHLY PROFICIENT (Can do the complete task quickly and accurately. Can tell or show others how to do the task.)
*Task Knowledge Levels	a	KNOWS NOMENCLATURE (Can name parts, tools, and simple facts about the task.)
	b	KNOWS PROCEDURES (Can determine step by step procedures for doing the task.)
	c	KNOWS OPERATING PRINCIPLES (Can identify why and when the task must be done and why each step is needed.)
	d	KNOWS ADVANCED THEORY (Can predict, isolate, and resolve problems about the task.)
**Subject Knowledge Levels	A	KNOWS FACTS (Can identify basic facts and terms about the subject.)
	B	KNOWS PRINCIPLES (Can identify relationship of basic facts and state general principles about the subject.)
	C	KNOWS ANALYSIS (Can analyze facts and principles and draw conclusions about the subject.)
	D	KNOWS EVALUATION (Can evaluate conditions and make proper decisions about the subject.)
<p>Explanations</p> <p>* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Example: b and 1b)</p> <p>** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.</p> <p>- This mark is used alone instead of a scale value to show that no proficiency training is provided in the courses or CDCs.</p> <p>/ This mark is used in course columns to show that training is required but not given due to limitations in resources (3c/b, 2b/b etc.).</p>		

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course

ATTACHMENT 2

NOTE 1: Users are responsible for annotating training references to identify current references pending STS revision.

NOTE 2: All knowledge and tasks identified as training requirements in column 4A will be taught during wartime. The 7-level course will not be taught during wartime.

NOTE 3: Items in column 2A/2B marked with an asterisk (*) identify core tasks. Core tasks identified with */R are optional for ANG and AFRC.

NOTE 4: Item A2.5.4. with proficiency code 2b/X in column 4A indicates a future requirement that cannot currently be trained until TOs for career field become available via electronic media.

NOTE 5: Address comments and recommended changes through the MAJCOM Functional Managers to the AETC Training Manager, DSN 736-3539.

A2.1.	OPERATION SECURITY (OPSEC) VULNERABILITIES of AFSC 2A7X1 TR: AFI 10-1101								A	-	-	-
A2.2.	AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM TR: AFI 91-301; Applicable OSHA/AFOSH Standards; TO 00-25-252 and 42B5-1-2											
A2.2.1.	Hazards of AFSC 2A7X1								A	B	-	-
A2.2.2.	Conduct safety inspections											
A2.2.2.1.	Work area TR: AFOSH STD 91-501	*							2b	B	-	-
A2.2.2.2.	Equipment TR: AFOSH STD 91-501; TO 34-1-3 and 42B5-1-2	*							2b	-	-	-
A2.2.3.	Hazardous materials and waste handling IAW environmental standards TR: AFOSH STD 48-22 and 161-21											
A2.2.3.1.	Types of hazardous materials/fluids								B	-	-	-
A2.2.3.2.	Handling/disposal procedures TR: Applicable MSDS								B	-	-	-
A2.2.3.3.	Storage and labeling								-	-	-	-
A2.2.4.	Classes of fire extinguishers								A	B	-	-
A2.2.5.	HAZCOM								B	-	-	-
A2.2.6.	AF Form 55 (Employee Safety and Health Record) TR: AFOSH STD 91-301, 161-21, and 161-21.1W								-	B	-	-
A2.2.7.	Lockout/tagout TR: AFOSH STD 91-501	*							B	B	-	-
A2.2.8.	Respiratory protection equipment TR: AFOSH STD 48-137								-	-	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.3. SUPERVISION AND TRAINING TR: AFI 21-101 and 36-2201; AFMAN 36-2108											
A2.3.1. Supervise personnel											
A2.3.1.1. Orient new personnel								-	-	-	-
A2.3.1.2. Counsel personnel								-	-	-	-
A2.3.1.3. Evaluate personnel											
A2.3.1.3.1. Perform feedback								-	-	-	-
A2.3.1.3.2. Recommend personnel actions								-	-	-	-
A2.3.2. Train personnel											
A2.3.2.1. Determine training requirements								-	-	-	-
A2.3.2.2. OJT trainer requirements											
A2.3.2.2.1. Prepare teaching outlines/task breakdowns								-	-	-	-
A2.3.2.2.2. Provide training								-	-	-	-
A2.3.2.2.3. Provide feedback								-	-	-	-
A2.3.2.3. OJT task certifier requirements											
A2.3.2.3.1. Develop methods of evaluation								-	-	-	-
A2.3.2.3.2. Evaluate trainee								-	-	-	-
A2.3.2.3.3. Provide feedback on training results								-	-	-	-
A2.3.2.4. Maintain records		*						-	-	-	3c
A2.3.2.5. Transcribe records								-	-	-	-
A2.3.3. Plan/schedule maintenance and repair work											
A2.3.3.1. Analyze workload requirements								-	-	-	-
A2.3.3.2. Coordinate with other agencies								-	-	-	-
A2.3.4. Manage resources TR: AFMAN 23-110											
A2.3.4.1. Maintain equipment accountability								-	-	-	-
A2.3.4.2. Establish/maintain supply levels								-	-	-	-
A2.3.4.3. Interpret supply computer products								-	-	-	-
A2.4. DOCUMENTATION TR: AFMAN 23-110; TOs 00-20-5, 00-25-252, and 34-1-3											
A2.4.1. Annotate forms											

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.4.1.1. Aircraft Form (AFTO Form 781A)	*							b	B	-	-
A2.4.1.2. Equipment Form (AFTO Form 244)	*							2b	B	-	-
A2.4.1.3. Supply								-	-	-	-
A2.4.1.4. Welding certification								-	B	-	-
A2.4.2. Core Automated Maintenance System TR: AFSCM 21-263; TO 00-20 series and Applicable -06											
A2.4.2.1. Use								-	-	-	-
A2.4.2.2. Standard Base Supply System (SBSS) interface								-	-	-	-
A2.4.3. Core Automated Maintenance System for Mobility (GO-81) TR: 8081/SBSS System Interface Users Guide											
A2.4.3.1. Use								-	-	-	-
A2.4.3.2. SBSS interface								-	-	-	-
A2.5. TECHNICAL PUBLICATIONS TR: Applicable Maintenance TOs; Machinery's Handbook											
A2.5.1. Types								A	-	-	-
A2.5.2. Maintain								-	-	-	-
A2.5.3. Use	*							2b	-	-	-
A2.5.4. Use Interactive Electronic Technical Manuals (IETMs)								2b/X	-	-	-
A2.6. SHOP MATHEMATICS TR: Machinery's Handbook											
A2.6.1. Calculate	*							2b	B	-	-
A2.6.2. Complete Course J6ANU2A7X1 000, Shop Mathematics	*							-	-	-	-
A2.7. DRAWINGS AND LAYOUT TR: Machinery's Handbook											
A2.7.1. Interpret blueprints/shop drawings	*							3c	B	-	3c
A2.7.2. Construct manual drawings		*						2b	B	-	3c
A2.7.3. Construct drawings using computer aided drafting (CAD) software								-	B	-	-
A2.7.4. Computer aided manufacturing (CAM)											
A2.7.4.1. Construct 2D geometry								-	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.7.4.2. Construct 3D geometry								-	-	-	-
A2.7.4.3. Construct surfaces								-	-	-	-
A2.7.4.4. Construct solid models								-	-	-	-
A2.7.4.5. Generate 2D toolpaths/programs								-	B	-	-
A2.7.4.6. Generate 3-axis surface toolpaths/programs								-	-	-	-
A2.7.4.7. Generate 4-Axis Surface Toolpaths/Programs								-	-	-	-
A2.7.4.8. Create part geometry for lathes								-	B	-	-
A2.7.4.9. Generate toolpaths for lathes								-	B	-	-
A2.7.5. Perform layout operations	*							2b	B	-	-
A2.8. DESIGN/MANUFACTURE TR: Machinery's Handbook											
A2.8.1. Tools								-	B	-	-
A2.8.2. Fixtures/jigs		*						-	B	-	3c
A2.8.3. Parts (manufacture only)								2b	B	-	3c
A2.8.4. Dies								-	A	-	-
A2.9. FIT MACHINED PARTS TR: Machinery's Handbook, TO 1-1A-8, TO 44B and 44H Series											
A2.9.1. System of Fits								A	B	-	-
A2.9.2. Remove defective											
A2.9.2.1. Plugs								-	B	-	-
A2.9.2.2. Screws								b	B	-	-
A2.9.2.3. Bolts								b	B	-	-
A2.9.3. Remove/Install											
A2.9.3.1. Studs								b	B	-	-
A2.9.3.2. Inserts											
A2.9.3.2.1. Locking ring inserts	*							2b	B	-	-
A2.9.3.2.2. Heli-coil inserts	*							2b	B	-	-
A2.9.3.2.3. Slim inserts	*							2b	B	-	-
A2.9.3.3. Pins								b	B	-	-
A2.9.3.4. Bushings	*							b	B	-	-
A2.9.3.5. Bearings											

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.9.3.5.1. Roller staking								b	B	-	-
A2.9.3.5.2. Swaged								b	B	-	-
A2.9.3.6. Use liquid nitrogen/dry ice to install bushings								-	B	-	-
A2.10. METALS PROCESSING TR: MIL-H-81200B; SAE-AMS-6088, -6875 and -7199; TOs 1-1A-1, 1-1A-8, 1-1A-9, 42C2-1-7, and 42B5-1-2; Unified Numbering System											
A2.10.1. Metals Properties and Identification								A	B	-	-
A2.10.2. Identify metals by											
A2.10.2.1. Mechanical testing								-	B	-	-
A2.10.2.2. Standard codes	*							-	B	-	-
A2.10.3. Determine metal properties											
A2.10.3.1. Physical								-	B	-	-
A2.10.3.2. Mechanical	*							-	B	-	-
A2.10.4. Hardness tester											
A2.10.4.1. Operate	*							-	B	-	-
A2.10.4.2. Maintain								-	B	-	-
A2.10.5. Heat Treat											
A2.10.5.1. Ferrous metals											
A2.10.5.1.1. Carbon steels								-	B	-	-
A2.10.5.1.2. Alloy steels	*							-	B	-	-
A2.10.5.1.3. Corrosion resistant steels	*							-	B	-	-
A2.10.5.2. Nonferrous metals											
A2.10.5.2.1. Aluminum alloys	*							-	B	-	-
A2.10.5.2.2. Titanium alloys								-	B	-	-
A2.10.5.2.3. Copper Alloys								-	B	-	-
A2.10.5.2.4. Heat and corrosion resistant alloys								-	B	-	-
A2.10.5.3. Maintain equipment								-	A	-	-
A2.10.6. Electroplating								-	-	-	-
A2.11. TOOLS TR: Applicable 32-Series TOs											
A2.11.1. Use											
A2.11.1.1. Handtools								2b	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.11.1.2. Precision measuring devices	*							3c	B	-	-
A2.11.2. Maintain											
A2.11.2.1. Handtools								2b	B	-	-
A2.11.2.2. Precision measuring devices								2b	B	-	-
A2.11.3. Sharpen drill bits	*							2b	B	-	-
A2.11.4. Composite tool kits (CTKs) TR: AFI 21-101											
A2.11.4.1. Inventory	*							2b	-	-	-
A2.11.4.2. Maintain								-	-	-	-
A2.11.5. Advanced Tooling								-	-	-	C
A2.12. MEDIA BLASTER TR: Operator's Manual											
A2.12.1. Operate								-	B	-	-
A2.12.2. Maintain								-	B	-	-
A2.13. PRESS TR: Machinery's Handbook; TO 34-1-10											
A2.13.1. Arbor press											
A2.13.1.1. Operate								-	B	-	-
A2.13.1.2. Maintain								-	B	-	-
A2.13.2. Hydraulic press											
A2.13.2.1. Operate								-	B	-	-
A2.13.2.2. Maintain								-	B	-	-
A2.14. COOLANTS/CUTTING FLUIDS TR: Machinery's Handbook								-	B	-	-
A2.15. DRILL PRESS TR: Machinery's Handbook; Operator's Manual; T.O. 32-1-151 and 34-1-10											
A2.15.1. Operate	*							2b	B	-	-
A2.15.2. Maintain								1a	B	-	-
A2.16. LATHE TR: Machinery's Handbook; Operator's Manual; T.O. 34-1-10											
A2.16.1. Manual equipment											
A2.16.1.1. Turn/face	*							3c	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.16.1.2. Taper turn using											
A2.16.1.2.1. Tailstock offset								2b	B	-	-
A2.16.1.2.2. Compound rest								2b	B	-	-
A2.16.1.2.3. Taper attachment								1a	B	-	-
A2.16.1.3. Bore								3c	B	-	-
A2.16.1.4. Knurl								2b	B	-	-
A2.16.1.5. Thread											
A2.16.1.5.1. Systems								A	B	-	-
A2.16.1.5.2. Internal	*							2b	B	-	-
A2.16.1.5.3. External	*							2b	B	-	-
A2.16.1.5.4. Geometric die								-	B	-	-
A2.16.1.6. File								2b	B	-	-
A2.16.1.7. Polish								-	B	-	-
A2.16.1.8. Parting	*							2b	B	-	-
A2.16.1.9. Grind with tool post grinder								-	B	-	-
A2.16.1.10. Maintain								1a	B	-	-
A2.16.2. Computer Numerical Controlled (CNC) equipment TR: Machinery's Handbook; Operator's Manual											
A2.16.2.1. Operate								-	B	-	-
A2.16.2.2. Program								-	B	-	-
A2.16.2.3. Maintain								-	B	-	-
A2.17. MILL TR: Machinery's Handbook; Operator's Manual; TO 34-1-10											
A2.17.1. Manual equipment											
A2.17.1.1. Squaring and steps	*							3c	B	-	3c
A2.17.1.2. Slotting								2b	B	-	-
A2.17.1.3. Pocket milling	*							2b	B	-	-
A2.17.1.4. Boring	*							2b	B	-	-
A2.17.1.5. Keyseat milling								2b	B	-	-
A2.17.1.6. Fly cutting								2b	B	-	-
A2.17.1.7. Angle milling		*						2b	B	-	3c

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.17.1.8. Form Milling								2b	B	-	-
A2.17.1.9. Gang milling								-	B	-	-
A2.17.1.10. Use Milling attachments											
A2.17.1.10.1. Offset boring head								-	B	-	-
A2.17.1.10.2. Indexing head								2b	B	-	-
A2.17.1.10.3. Rotary table		*						-	B	-	3c
A2.17.1.10.4. Toolmaker's knee								-	B	-	-
A2.17.1.10.5. Slotting Attachment								-	B	-	-
A2.17.1.10.6. Tracer Attachment								-	-	-	-
A2.17.1.11. Maintain equipment								1a	B	-	-
A2.17.2. Computer Numerical Controlled (CNC) equipment TR: Machinery's Handbook; Operator's Manual											
A2.17.2.1. Operate								-	B	-	-
A2.17.2.2. Program								-	B	-	-
A2.17.2.3. Maintain								-	B	-	-
A2.18. CONTOUR SAW TR: Operator's Manual											
A2.18.1. Operate	*							2b	B	-	-
A2.18.2. Maintain								1a	B	-	-
A2.19. POWER CUTOFF SAW TR: Operator's Manual											
A2.19.1. Operate	*							2b	B	-	-
A2.19.2. Maintain								1a	B	-	-
A2.20. ABRASIVE CUTOFF SAW TR: Operator's Manual											
A2.20.1. Operate								-	B	-	-
A2.20.2. Maintain								-	B	-	-
A2.21. WATER/ABRASIVE JET TR: Operator's Manual											
A2.21.1. Operate								-	-	-	-
A2.21.2. Maintain								-	-	-	-
A2.22. GRINDER TR: Machinery's Handbook; Operator's Manual; TO 34-1-10											

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.22.1. Grinding wheels											
A2.22.1.1. Identify								-	B	-	-
A2.22.1.2. Inspect								1b	B	-	-
A2.22.1.3. Maintain								1a	B	-	-
A2.22.2. Pedestal/bench grinders											
A2.22.2.1. Operate								2b	B	-	-
A2.22.2.2. Maintain								1a	B	-	-
A2.22.3. Tool and cutter grinders											
A2.22.3.1. Operate								-	B	-	-
A2.22.3.2. Maintain								-	B	-	-
A2.22.4. Surface grinders											
A2.22.4.1. Operate								-	B	-	-
A2.22.4.2. Maintain								-	B	-	-
A2.23. ABRASIVE SANDING MACHINE											
A2.23.1. Operate								-	B	-	-
A2.23.2. Maintain								-	B	-	-
A2.24. ELECTRONIC DISCHARGE MACHINE TR: Operator's Manual											
A2.24.1. Operate								-	-	-	-
A2.24.2. Maintain								-	-	-	-
A2.25. UNIVERSAL PUNCHING AND SHEARING MACHINE TR: Operator's Manual											
A2.25.1. Operate								-	B	-	-
A2.25.2. Maintain								-	B	-	-
A2.26. OXYACETYLENE OPERATIONS TR: Operator's Manual; TOs 00-25-252 and 42B5-1-2											
A2.26.1. Weld ferrous metal											
A2.26.1.1. Groove welds in position											
A2.26.1.1.1. Flat								2b	B	-	-
A2.26.1.1.2. Horizontal								-	B	-	-
A2.26.1.1.3. Vertical								-	B	-	-
A2.26.1.2. Fillet welds in position											

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.26.1.2.1. Flat								2b	B	-	-
A2.26.1.2.2. Horizontal								-	B	-	-
A2.26.1.2.3. Vertical								-	B	-	-
A2.26.2. Soft solder											
A2.26.2.1. Ferrous metals								-	B	-	-
A2.26.2.2. Nonferrous metals								-	B	-	-
A2.26.3. Silver solder											
A2.26.3.1. Ferrous metals	*							2b	B	-	-
A2.26.3.2. Nonferrous metals	*							2b	B	-	-
A2.26.4. Braze											
A2.26.4.1. Ferrous metals								2b	B	-	-
A2.26.4.2. Nonferrous metals								-	-	-	-
A2.26.4.3. Castings								-	B	-	-
A2.26.5. Cut	*							2b	B	-	-
A2.26.6. Forge								-	B	-	-
A2.26.7. Torch heat treat								b	B	-	-
A2.26.8. Equipment											
A2.26.8.1. Assemble	*							3c	B	-	-
A2.26.8.2. Disassemble	*							3c	B	-	-
A2.26.8.3. Maintain								1a	B	-	-
A2.27. SHIELDED METAL ARC WELDING TR: Operator's Manual; TO 00-25-252											
A2.27.1. Weld ferrous metal											
A2.27.1.1. Groove welds in position											
A2.27.1.1.1. Flat	*							2b	B	-	-
A2.27.1.1.2. Horizontal								-	B	-	-
A2.27.1.1.3. Vertical								2b	B	-	-
A2.27.1.1.4. Overhead								-	B	-	-
A2.27.1.2. Fillet welds in position											
A2.27.1.2.1. Flat								-	B	-	-
A2.27.1.2.2. Horizontal	*							2b	B	-	-
A2.27.1.2.3. Vertical								-	B	-	-
A2.27.1.2.4. Overhead								-	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.27.2. Maintain equipment								1a	B	-	-
A2.28. GAS METAL ARC WELDING TR: Operator's Manual; TO 00-25-252 and 42B5-1-2											
A2.28.1. Weld ferrous metals											
A2.28.1.1. Groove welds in position											
A2.28.1.1.1. Flat								2b	B	-	-
A2.28.1.1.2. Horizontal	*							2b	B	-	-
A2.28.1.1.3. Vertical								2b	B	-	-
A2.28.1.1.4. Overhead								-	-	-	-
A2.28.1.2. Fillet welds in position											
A2.28.1.2.1. Flat								-	B	-	-
A2.28.1.2.2. Horizontal	*							2b	B	-	-
A2.28.1.2.3. Vertical								-	-	-	-
A2.28.1.2.4. Overhead								-	-	-	-
A2.28.2. Weld nonferrous metal											
A2.28.2.1. Groove welds in position											
A2.28.2.1.1. Flat								-	B	-	-
A2.28.2.1.2. Horizontal								-	-	-	-
A2.28.2.1.3. Vertical								-	-	-	-
A2.28.2.1.4. Overhead								-	-	-	-
A2.28.2.2. Fillet welds in position											
A2.28.2.2.1. Flat								-	B	-	-
A2.28.2.2.2. Horizontal								-	-	-	-
A2.28.2.2.3. Vertical								-	-	-	-
A2.28.2.2.4. Overhead								-	-	-	-
A2.28.3. Maintain equipment								1a	B	-	-
A2.29. GAS TUNGSTEN ARC WELDING TR: AMS-STD-1595; Operator's Manual; TOs 00-25-252 and 42B5-1-2											
A2.29.1. Weld Group I (steel)											
A2.29.1.1. Groove welds in position											
A2.29.1.1.1. Flat								-	B	-	-
A2.29.1.1.2. Horizontal								-	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.29.1.1.3. Vertical								-	B	-	-
A2.29.1.1.4. Overhead								-	B	-	-
A2.29.1.1.5. Inclined fixed tube to tube (6G)	*							-	B	-	-
A2.29.1.2. Fillet welds in position											
A2.29.1.2.1. Flat								-	B	-	-
A2.29.1.2.2. Horizontal								-	B	-	-
A2.29.1.2.3. Vertical								-	B	-	-
A2.29.1.2.4. Overhead								-	B	-	-
A2.29.1.2.5. Multiple fixed tube to plate								-	B	-	-
A2.29.2. Weld Group II (Stainless Steel)											
A2.29.2.1. Groove welds in position											
A2.29.2.1.1. Flat	*							2b	B	-	-
A2.29.2.1.2. Horizontal	*							-	B	-	-
A2.29.2.1.3. Vertical	*							2b	B	-	-
A2.29.2.1.4. Overhead								-	B	-	-
A2.29.2.1.5. Inclined fixed tube to tube (6G)	*							-	B	-	-
A2.29.2.2. Fillet welds in position											
A2.29.2.2.1. Flat								-	B	-	-
A2.29.2.2.2. Horizontal	*							2b	B	-	-
A2.29.2.2.3. Vertical	*							-	B	-	-
A2.29.2.2.4. Overhead								-	B	-	-
A2.29.2.2.5. Multiple fixed tube to plate								2b	-	-	-
A2.29.3. Weld Group III (Nickel)											
A2.29.3.1. Groove welds in position											
A2.29.3.1.1. Flat								-	B	-	-
A2.29.3.1.2. Horizontal								-	B	-	-
A2.29.3.1.3. Vertical								-	B	-	-
A2.29.3.1.4. Overhead								-	B	-	-
A2.29.3.1.5. Inclined fixed tube to tube (6G)	*							-	B	-	-
A2.29.3.2. Fillet welds in position											
A2.29.3.2.1. Flat								-	B	-	-
A2.29.3.2.2. Horizontal								-	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.29.3.2.3. Vertical								-	B	-	-
A2.29.3.2.4. Overhead								-	B	-	-
A2.29.3.2.5. Multiple fixed tube to plate								-	B	-	-
A2.29.4. Weld Group IV (aluminum)											
A2.29.4.1. Groove welds in position											
A2.29.4.1.1. Flat	*							2b	B	-	-
A2.29.4.1.2. Horizontal	*							-	B	-	-
A2.29.4.1.3. Vertical	*							2b	B	-	-
A2.29.4.1.4. Overhead								-	B	-	-
A2.29.4.1.5. Inclined fixed tube to tube (6G)	*							2b	B	-	-
A2.29.4.2. Fillet welds in position											
A2.29.4.2.1. Flat								-	B	-	-
A2.29.4.2.2. Horizontal	*							2b	B	-	-
A2.29.4.2.3. Vertical	*							-	B	-	-
A2.29.4.2.4. Overhead								-	B	-	-
A2.29.4.2.5. Multiple fixed tube to plate								-	B	-	-
A2.29.5. Weld Group V (magnesium)											
A2.29.5.1. Groove welds in position											
A2.29.5.1.1. Flat								-	B	-	-
A2.29.5.1.2. Horizontal								-	B	-	-
A2.29.5.1.3. Vertical								-	B	-	-
A2.29.5.1.4. Overhead								-	B	-	-
A2.29.5.1.5. Inclined fixed tube to tube (6G)	*							-	B	-	-
A2.29.5.2. Fillet welds in position											
A2.29.5.2.1. Flat								-	B	-	-
A2.29.5.2.2. Horizontal								-	B	-	-
A2.29.5.2.3. Vertical								-	B	-	-
A2.29.5.2.4. Overhead								-	B	-	-
A2.29.5.2.5. Multiple fixed tube to plate								-	B	-	-
A2.29.6. Weld Group VI (titanium)											
A2.29.6.1. Groove welds in position											
A2.29.6.1.1. Flat	*							2b	B	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.29.6.1.2. Horizontal	*							-	B	-	-
A2.29.6.1.3. Vertical	*							2b	B	-	-
A2.29.6.1.4. Overhead								-	B	-	-
A2.29.6.1.5. Inclined fixed tube to tube (6G)	*							-	B	-	-
A2.29.6.2. Fillet welds in position											
A2.29.6.2.1. Flat	*							-	B	-	-
A2.29.6.2.2. Horizontal	*							2b	B	-	-
A2.29.6.2.3. Vertical	*							-	B	-	-
A2.29.6.2.4. Overhead								-	B	-	-
A2.29.6.2.5. Multiple fixed tube to plate								-	B	-	-
A2.29.7. Weld Group VII (cobalt)											
A2.29.7.1. Groove welds in position											
A2.29.7.1.1. Flat								-	B	-	-
A2.29.7.1.2. Horizontal								-	B	-	-
A2.29.7.1.3. Vertical								-	B	-	-
A2.29.7.1.4. Overhead								-	B	-	-
A2.29.7.1.5. Inclined fixed tube to tube (6G)	*							-	B	-	-
A2.29.7.2. Fillet welds in position											
A2.29.7.2.1. Flat								-	B	-	-
A2.29.7.2.2. Horizontal								-	B	-	-
A2.29.7.2.3. Vertical								-	B	-	-
A2.29.7.2.4. Overhead								-	-	-	-
A2.29.7.2.5. Multiple fixed tube to plate								-	B	-	-
A2.29.8. Maintain equipment								1a	B	-	-
A2.30. VISUALLY INSPECT WELDS TR: TO 00-25-252		*						-	B	-	3c
A2.31. PLASMA ARC OPERATIONS TR: Operator's Manual											
A2.31.1. Weld								-	A	-	-
A2.31.2. Cut	*							b	B	-	-
A2.31.3. Maintain equipment								a	A	-	-
A2.32. RESISTANCE WELDER TR: Operator's Manual											
A2.32.1. Operate								-	-	-	-

SPECIALTY TRAINING STANDARD

CFETP 2A7X1, June 2003

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided (See Atch 1)			
	A	B	A	B	C	D	E	A 3 Skill Level	B CDC		C 7 Skill Level
	5	7	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	Course	5	7	Course
A2.32.2. Maintain								-	-	-	-
A2.33. PORTABLE WELDING MACHINE TR: Operator's Manual											
A2.33.1. Operate	*							-	B	-	-
A2.33.2. Maintain								-	-	-	-
A2.34. REPAIRS TR: Applicable Maintenance TOs; 44B Series TOs; Machinery's Handbook											
A2.34.1. Aircraft											
A2.34.1.1. Engine parts											
A2.34.1.1.1. Clean								-	B	-	-
A2.34.1.1.2. Repair								-	B	-	-
A2.34.1.1.3. Inspect		*						-	B	-	-
A2.34.1.2. Structural											
A2.34.1.2.1. Clean								-	B	-	-
A2.34.1.2.2. Repair								-	B	-	-
A2.34.1.2.3. Inspect		*						-	B	-	-
A2.34.2. Support Equipment											
A2.34.2.1. Clean								-	B	-	-
A2.34.2.2. Repair								-	B	-	-
A2.34.2.3. Inspect		*						-	B	-	-

2AX7X CDC

CFETP 2A7X1, June 2003

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)			
	A	B	A	B	C	D	E	A 3 Skill Level	B 5 Skill Level	C 7 Skill Level	
	5	7	Training Start	Training Complete	Trainee Initials	Trainer Initials	Cert Initials	(1) Crse	(1) CDC	(1) Crse	(2) CDC

NOTE 1: Users are responsible for annotating training references to identify current references pending STS revision.

NOTE 2: This attachment is to be used in conjunction with other attachments in applicable CFETPs.

NOTE 3: Personnel must complete CDC requirements on all MDSs/attachments.

NOTE 4: This attachment is to be used as a correlation document for the 2AX7X 7-level Aerospace Maintenance Craftsman CDC's.

NOTE 5: All items are SUBJECT KNOWLEDGE LEVELS only and require no certification on this STS.

A3.1.	MANAGEMENT WITHIN THE MAINTENANCE COMPLEX TR: AFI 21-101, AFI 21-118 and specific MAJCOM guidance										
A3.1.1.	Functions of the Maintenance Complex							-	-	-	B
A3.1.2.	Operations / Logistics Group Commander Responsibilities TR: AFI 38-101, AFPD 38-1							-	-	-	B
A3.1.3.	Accountability and Core Values							-	-	-	B
A3.1.4.	Aircraft Maintenance Management Information Systems							-	-	-	B
A3.1.5.	Maintenance Analysis							-	-	-	B
A3.1.6.	Compliance and Standardization Requirements Listings							-	-	-	A
A3.1.7.	Maintenance Quality Performance Measures (QPM) Relationships							-	-	-	B
A3.1.8.	Health-of-the-Fleet Metrics							-	-	-	B
A3.1.9.	Foreign Object Damage (FOD) Program Manager TR: AFI 21-101							-	-	-	A
A3.1.10.	Joint Oil Analysis Program TR: TO 33-1-37-1							-	-	-	B
A3.1.11.	Mobility							-	-	-	A
A3.1.12.	Hazard Declarations for Mobility Packages TR: AFMAN 24-204							-	-	-	A
A3.1.13.	Hazardous Material Handling Procedures TR: AFJMAN 24-204, AFI 91-301, AFI 24-202, AFMAN 23-110							-	-	-	B
A3.1.14.	Production Supervisor, Flight Chief and Expediter Duties and Responsibilities							-	-	-	B
A3.1.15.	Special Certification Rosters							-	-	-	B
A3.1.16.	Maintenance Incident Investigation and Prevention TR: AFI 91-204							-	-	-	B
A3.1.17.	Aircraft Impoundment TR: AFI 91-204							-	-	-	A

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)				
	A	B	A	B	C	D	E	A 3 Skill Level	B 5 Skill Level	C 7 Skill Level		
	5	7	Training Start	Training Complete	Trainee Initials	Trainer Initials	Cert Initials	(1) Crse	(1) CDC	(1) Crse	(2) CDC	
A3.1.18. Operational Risk Management (ORM) TR: AFPD 90-9, AFI 90-901, AFPAM 90-902									-	-	-	B
A3.1.19. Restricted Maintenance Areas									-	-	-	A
A3.1.20. Force Protection TR: AFDD 2-4.1									-	-	-	A
A3.1.21. Classification Info, Access to Classified, COMSEC, OPSEC, COMPUSEC TR: AFI 33-211, AFI 10-1101, AFI 33-202									-	-	-	B
A3.1.22. Proper Handling of Classified Assets TR: AFI 31-101									-	-	-	A
A3.1.23. Aircraft Inspection Concepts TR: TO 00-20-5									-	-	-	B
A3.2. ENLISTED SPECIALTY TRAINING TR: AFI 36-2201 and MAJCOM directives												
A3.2.1. Training Management and Records									-	-	-	B
A3.2.2. Automated Training Records									-	-	-	B
A3.2.3. Career Field Education and Training Plan (CFETP)									-	-	-	B
A3.2.4. Specialty Training Standard (STS)									-	-	-	B
A3.2.5. Occupational Survey Report (OSR)									-	-	-	B
A3.2.6. Utilization and Training Workshop (U&TW)									-	-	-	B
A3.2.7. Training Forecast / Request									-	-	-	A
A3.2.8. Training Waiver Process									-	-	-	B
A3.2.9. Field Evaluation Questionnaire (FEQ) and Graduate Assessment Survey									-	-	-	A
A3.3. ACCOUNTABILITY FOR RECORDS, REPORTS, AND FORMS TR: AFI 21-109, TO 00-35D-54, TO 00-20 Series and applicable MAJCOM guidance												
A3.3.1. Historical Records									-	-	-	B
A3.3.2. Minimum Essential Configuration Management (MESL)									-	-	-	B
A3.3.3. Automated Maintenance Systems									-	-	-	A
A3.3.4. Reliability Availability, Maintainability, Logistics Engineering Support System for Electronic Attack Pods and Integrated Systems (RAMPOD), Core Automated Maintenance System for Airlift (GO 81)									-	-	-	A

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)				
	A	B	A	B	C	D	E	A 3 Skill Level	B 5 Skill Level	C 7 Skill Level		
	5	7	Training Start	Training Complete	Trainee Initials	Trainer Initials	Cert Initials	(1) Crse	(1) CDC	(1) Crse	(2) CDC	
A3.3.5. Core Automated Maintenance System (CAMS) TR: AFM 66-279 Vol. I-XXVII, TO 00-20-2									-	-	-	B
A3.3.6. Job Data Documentation (JDD)									-	-	-	B
A3.3.7. Air Force Technical Order (AFTO) Forms 781 and 244 / 245									-	-	-	B
A3.3.8. Configuration Management									-	-	-	B
A3.3.9. Aircraft / Equipment Modifications									-	-	-	B
A3.3.10. Nuclear Surety TR: AFI 91-101									-	-	-	B
A3.3.11. Dull Sword Reporting TR: AFI 91-204									-	-	-	B
A3.4. SUPPLY MANAGEMENT TR: DOD 7200-10, AFM 67-1, AFMAN 23-220, AFMAN 23-110 and applicable MAJCOM guidance												
A3.4.1. Maintenance Supply Concept TR: AFMAN 23-110									-	-	-	B
A3.4.2. Supply Documents Management									-	-	-	B
A3.4.3. Precious Metal Program TR: AFMAN 23-110									-	-	-	A
A3.4.4. Bench Stock									-	-	-	A
A3.4.5. Air Force Technical Order (AFTO) 375									-	-	-	A
A3.4.6. Quick Reference List (QRL)									-	-	-	A
A3.4.7. Standard Base Supply System (SBSS) TR: AFMAN 23-110									-	-	-	B
A3.4.8. Integrated Logistic System-Supply (ILS-S) and Global Combat Support System (GCSS) TR: AFMAN 23-110									-	-	-	A
A3.4.9. Priority Systems									-	-	-	B
A3.4.10. Repair Cycle Assets									-	-	-	B
A3.4.11. Report of Survey, Statement of Charges									-	-	-	B
A3.4.12. Equipment Account Management									-	-	-	B
A3.4.13. Custodian Authorization/Custody Receipt Listing (CA/CRL)									-	-	-	A
A3.4.14. Precision Measurement Equipment Laboratory (PMEL)									-	-	-	A
A3.4.15. Computer System Management TR: AFI 33-112									-	-	-	A

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)				
	A	B	A	B	C	D	E	A 3 Skill Level	B 5 Skill Level	C 7 Skill Level		
	5	7	Training Start	Training Complete	Trainee Initials	Trainer Initials	Cert Initials	(1) Crse	(1) CDC	(1) Crse	(2) CDC	
A3.4.16. Special Purpose Recoverable Authorized Maintenance (SPRAM) TR: AFMAN 23-110									-	-	-	A
A3.4.17. Air Force Management System (AFEMS)									-	-	-	A
A3.4.18. Status of Resources and Training (SORTS)									-	-	-	A
A3.4.19. Land Mobile Radios, Pagers, Cell Phones TR: AFI 33-106									-	-	-	A
A3.4.20. Shelf Life Program TR: AFMAN 23-110									-	-	-	A
A3.4.21. Hazardous Materials (HAZMAT) TR: Applicable AFOSH STD's, AFI's and MAJCOM guidance									-	-	-	B
A3.4.22. Qualified Products Listing									-	-	-	B
A3.5. MAINTENANCE AND RESOURCE MANAGEMENT TR: AAFP 21-1												
A3.5.1. Maintenance Management									-	-	-	B
A3.5.2. Agile Logistics									-	-	-	A
A3.5.3. Two-Level Maintenance (2LM)									-	-	-	A
A3.5.4. Execution and Prioritization of Repair System (EXPRESS)									-	-	-	A
A3.5.5. Readiness Based Leveling (RBL) TR: AFMAN 23-110									-	-	-	A
A3.5.6. Resource Management									-	-	-	B
A3.5.7. Air Force Government-Wide Purchase Card Program and Air Force Form 9 TR: AFI 67-117									-	-	-	A
A3.5.8. Air Force Enhancement Program (AFREP) TR: AFI 21-123									-	-	-	A
A3.5.9. Financial Plan (FIN Plan)									-	-	-	A
A3.5.10. Appropriation (APPN) 3400 and 3080 Budgeting									-	-	-	A
A3.5.11. Budget Line 3010									-	-	-	A
A3.5.12. Air Force Materiel Command (AFMC) Responsibilities									-	-	-	A
A3.5.13. Developmental Test and Evaluation (DT&E) Operational Test and Evaluation (OT&E)									-	-	-	A
A3.5.14. Defense Logistics Agency									-	-	-	A
A3.5.15. Special Experience Identifier (SEI) TR: AFMAN 36-2108									-	-	-	B

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)			
	A	B	A	B	C	D	E	A 3 Skill Level	B 5 Skill Level	C 7 Skill Level	
	5	7	Training Start	Training Complete	Trainee Initials	Trainer Initials	Cert Initials	(1) Crse	(1) CDC	(1) Crse	(2) CDC
A3.5.16. Unit Manpower Document (UMD) and Unit Management Personnel Roster (UMPR)								-	-	-	A
A3.5.17. Manning Standards, and Logistics Composite Model (LCOM) TR: AFI 38-201, AFMAN 38-208								-	-	-	A
A3.5.18. Technical Order Management								-	-	-	B
A3.5.19. Technical Order Distribution Office (TODO), Technical Order Distribution Account (TODA), Technical Order Distribution Control Activity (TODCA), Technical Order Review Board (TORB) TR: TO 00-5-1, TO 00-5-2								-	-	-	A
A3.5.20. Air Force Technical Order Forms 22, 27, 110, 158								-	-	-	A
A3.5.21. Automated Technical Order Management System (ATOMS) TR: TO 00-5-2								-	-	-	A
A3.5.22. Time Compliance Technical Orders (TCTO) TR: TO 00-5-15								-	-	-	A
A3.5.23. Centralized Technical Order Management Organization (CTOM) TR: TO 00-5-1								-	-	-	A
A3.5.24. Joint Computer –aided Acquisition and Logistic Support (JCALS)								-	-	-	A
A3.5.25. Electronic Technical Orders								-	-	-	A
A3.5.26. Deficiency Reporting (Hardware and Software) Product Quality Deficiency Reporting System (PQDR), TR: TO 00-35D-54								-	-	-	B
A3.5.27. Reporting of Deficiency (ROD)								-	-	-	B
A3.5.28. Bad Actor Program TR: TO 00-20-1, TO 00-35D-54								-	-	-	A
A3.5.29. Technical Improvement Product Working Group (TIPWG), System Training Plan (STP), Program Management Review (PMR)								-	-	-	A
A3.5.30. Corrosion Prevention Advisory Board (CPAB) TR: AFI 21-105								-	-	-	A
A3.6. COMPUTER APPLICATION											
A3.6.1. Using Applications								-	-	-	B
A3.6.2. Form Flow								-	-	-	B

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1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)			
	A	B	A	B	C	D	E	A 3 Skill Level	B 5 Skill Level	C 7 Skill Level	
	5	7	Training Start	Training Complete	Trainee Initials	Trainer Initials	Cert Initials	(1) Crse	(1) CDC	(1) Crse	(2) CDC
A3.6.3. Air Force Electronic Publishing Library (AFEPL)								-	-	-	B
A3.6.4. World Wide Web (WWW), Internet								-	-	-	B
A3.6.5. Local Area Networks (LAN)								-	-	-	B

Section B - Course Objective List

4. Measurement. Each proficiency coded STS task or knowledge item taught at the technical school is measured through the use of an objective. An objective is a written instruction for the student so he or she knows what is expected of them to successfully complete training on each task. Each objective is comprised of a condition, behavior, and standard that states what is expected of the student for each task. The condition is the setting in which the training takes place. The behavior is the action a student must demonstrate to accomplish a task (i.e. remove and install wheel and tire assembly). The standard is the level of performance that is measured to ensure the STS proficiency code level is attained. Each objective uses letter code(s) to identify how it is measured. All objectives use the **PC** code that indicates a progress check is used to measure subject or task knowledge. Progress checks are also used to measure student accomplishment of performance objectives. **W** indicates a comprehensive written test and is used to measure the subject and/or task knowledge at the end of a block of instruction. **PC/W** indicates separate measurement of both knowledge and performance elements using a written test and a performance progress check.

5. Standard. The standard is 70% on written examinations. Standards for performance measurement are indicated in the objective and delineated on the individual's progress checklist. The instructor documents each students' progress for the on the checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or part of the behavior until satisfactory performance is attained. Students must satisfactorily complete all PCs prior to taking the written test.

6. Proficiency Level. Most task performance is taught to the "2b" or "3c" proficiency level. The "2b" means the student can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step by step procedures for doing the task. The "3c" means the student can do all parts of the task but may need a spot check of completed work (competent). The student should be able to identify why and when the task must be done and why each step is needed.

7. Course Objectives. If you require detailed course descriptions and objectives, please provide a written request to the AETC Training Manager, 361 TRS/TRR, 501 Missile Road, Sheppard AFB TX 76311-2264.

Section C - Support Material

8. The following list of support material is not all inclusive; however, it covers the most frequently referenced areas. Support material is any training package designed to enhance the learning process at any level of training. Refer to the Air Force Education and Training Course Announcements (ETCA) for information on AETC formal courses. ETCA can be accessed at: <https://etca.randolph.af.mil/>.

8.1. Interactive Courseware (ICW) courses are available from (or under development by) 367 TRS/TRSS, Hill AFB, Utah. Their course catalog is available on the Internet at <http://www.hill.af.mil/367TRSS/findex.htm>. Ordering information is found in the General Information area of the catalog. Descriptions of courses are found under General Courses in the “Available Courseware” section. Questions should be referred to the customer service number at DSN 777-0160.

Section D - Training Course Index

9. Purpose. This index lists Air Force resident, Air Force Institute for Distributed Learning, (AFIDAL), and exportable courses used to support training for this specialty. Refer to the Air Force Educational and Training Course Announcement (ETCA) for information on AETC formal courses listed below.

9.1 Air Force In-Resident Courses

COURSE NO.	COURSE TITLE	LOCATION	OPR
J3ABP2A731 003	Aircraft Metals Technology Apprentice	Aberdeen Proving Ground MD	361TRS/DET 1
J3ACP2A771 001	Aircraft Metals Technology Craftsman	Aberdeen Proving Ground MD	361TRS/DET 1
J3AZP2A751 000	Computer Numerical Control (CNC) and Computer Aided Manufacturing (CAM)	Aberdeen Proving Ground MD	361TRS/DET 1
J3AZP2A751 002	Principles of Metallurgy (formerly Heat Treatment)	Aberdeen Proving Ground MD	361TRS/DET 1

9.2. Air Force Institute for Advanced Distributed Learning (AFIDAL) Courses.

COURSE NO.	COURSE TITLE	OPR
CDC2A751	Aircraft Metals Technology Journeyman	361TRS/DET 1
CDC2AX7X	Aerospace Maintenance Craftsman	HQ USAF/ ILMM

9.3. Exportable Courses.

COURSE NO.	COURSE TITLE	OPR
J6ANU00066-044	AF Technical Order System (General)	362 TRS
J6ANU00066-045	AF Technical Order System (Advanced)	362 TRS
*J6ANU00066-043	CAMS for Flightline and Backshop	362 TRS
**J6ANU2A751 000	Shop Mathematics	361 TRS

*Under revision

**Under development

Section E - MAJCOM Unique Requirements.**10.** For MAJCOM unique requirements, refer to the following web sites:CAF: <https://lg.acc.af.mil/lgq/lgqt/NEWLGQTHOME.htm>MAF <https://amclg.scott.af.mil/lgm/lgmm/lgmmt/docs/mcl.pdf>