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AFSC 2A7X1

AIRCRAFT METALS TECHNOLOGY

CAREER FIELD EDUCATION AND TRAINING PLAN

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AIRCRAFT METALS TECHNOLOGY SPECIALTY
AFSC 2A7X1
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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 the 2A7X1, Aircraft Metals Technology 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 current copy, the CFETP, is available on the e-Publishing website at **www.e-publishing.af.mil**.

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 to accomplishing this plan, such as funds, manpower, equipment, and facilities. Section E identifies transition training guide requirements for SSgt through MSgt.

2.2. Part II includes the following: Section A contains the course objective list and training standards supervisors use to determine if airmen satisfied training requirements. Section B identifies available support materials. An example is a Qualification Training Package (QTP) developed to support proficiency training. Section C identifies a training course index supervisors use to determine resources available to support training. Included here are both mandatory and optional courses. Section D identifies MAJCOM-unique training requirements supervisors use to determine additional training requirements unique to the MAJCOM. Section E 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. At the unit level, supervisors and training managers 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.

Contract Training. Type 1 training that receives the same priority funding as Air Force directed training. It supports initial groups of instructors, operators, etc., that the Air Force requires for new or modified weapon systems.

Core Task. A task that the Air Force Career Field Manager (AFCFM) identifies as minimum qualification requirements within an Air Force Specialty regardless of duty position. Only a percentage of critical tasks for each system are listed as mandatory core tasks. This gives units needed flexibility to manage their workforce training.

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, *Air Force Training Program.*

Course Training Standard (CTS). Training standard that identifies the training members will receive in a specific course not covered in the CFETP.

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.

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 or Mobile Technical Training (Type 7). Special or regular on-site training conducted by a training detachment (TD) or by a mobile training team (MTT).

Initial Skills Training (IST). 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 is taught the knowledge and skills essential for successful job performance.

MAJCOM Mandatory Course Listing (MMCL). Identifies mandatory maintenance training requirements for initial technical school graduates, retrainees, and personnel with no experience on assigned mission design series (MDS) aircraft. It also ensures maintenance personnel receive training commensurate to their current duty position.

Mission Design Series (MDS). Aircraft (i.e., A-10, F-16, C-130)

Occupational Analysis Report (OAR) 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 program occurs both during and after the upgrade training process. It is designed to provide the performance skill/knowledge training 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, or equipment, that preclude desired training from being accomplished.

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 AETC and the functional user to show which of the overall training requirements for an AFSC are taught in formal schools, Career Development

Courses, and exportable courses.

Training Business Area (TBA). TBA is a Net_Centric GCSS-AF IF Web-Based application providing Air Force Warfighters with global, real_time visibility into the technical qualifications, certifications and training status of logistics, communications and information professionals Air Force wide. TBA supports base, wing and work center level training management activities by automating training management business processes.

Training by Other Government Agencies. This training includes training conducted by the Army, Navy, Air Force agency or unit other than AETC, and other government agencies inside or outside of the Department of Defense (DoD).

Training Setting. The type of forum in which training is provided (formal resident school, on-the-job, field training, mobile training team, self-study, etc.).

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, and consisting of MAJCOM Air Force Specialty Code (AFSC) functional managers, Subject Matter Experts (SMEs), and AETC training personnel who determine career ladder training requirements.

Web Site Links

Air Force Career Development Academy http://www.airuniversity.af.mil/Barnes/CCAF
CCAF http://www.airuniversity.af.mil/Barnes/CCAF/
ETCA https://etca.randolph.af.mil/
HQ USAF/A4LM (Portal) https://cs3.eis.af.mil/sites/OO-LG-AF-35/default.aspx
361 TRS (Portal) https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?command=org&channelPageId=s6925EC1349430FB5E044080020E329A9
982 MXS/ LGMS https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?command=org&channelPageId=s6925EC1353200FB5E044080020E329A9

Section A - General Information

1. Purpose of the CFETP. This CFETP provides the information necessary for Air Force Career Field Manager (AFCFM), MAJCOM functional managers (MFMs), 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 CFETP identifies initial skills, upgrade, qualification, advanced, and proficiency training. Initial skills training is the AFSC 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 Sheppard AFB, TX. 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 specialty training used for selected Airmen. Proficiency training is additional training, either in-residence or exportable advanced training courses, or on-the-job training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade. 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. Use of the CFETP. 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 or revise formal resident, non-resident, Training Detachment (TD), and exportable training based upon 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 the 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 courses can satisfy these identified requirements. MAJCOM developed training, to support this AFSC, must be identified for inclusion in this plan and must not duplicate other available training resources.

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 of the CFETP. The AFCFM is the approval authority. The AETC Training Manager for AFSC 2A7X1 will initiate an annual review of this document by AETC and MFM to ensure currency and accuracy. The using MAJCOM representatives and AETC training personnel will identify and coordinate on the career field training requirements. Use the list of courses in Part II to eliminate duplicate training.

Section B - Career Progression and Information

4. Specialty Description.

4.1. Specialty Summary. Refer to Air Force Enlisted Classification Directory (AFECD), paragraph 1. Designs, welds, heat treats, repairs, fabricates, and machines precision tools, components, and assemblies for aerospace weapon systems and related support equipment (SE). Related DoD Occupational Subgroup: 170000.

4.2. Duties and Responsibilities. Refer to Air Force Enlisted Classification Directory (AFECD), paragraph 2.

4.2.1. Advises on machining, welding, designing, and fabrication. Designs, manufactures, or modifies precision tools, gauges, dies, and fixtures to facilitate metal working operations. Performs shop functions such as: determining machine calculations and settings, welding processes, and heat treatment requirements. Uses manual and computer numerical controlled (CNC) metal working machines such as mills, lathes, water and plasma equipment and 3D laser scanners to manufacture and repair aircraft components and SE. Writes programs for CNC machines using Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM), along with manual data input.

4.2.1.1. Inspects and repairs components on SE, aircraft and space systems. Uses metal working equipment, tools, and supplies to meet precision specifications and tolerances.

4.2.1.2. Maintains and inspects 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 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 qualification 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 local and federal environmental standards.

4.2.3. Upon assumption of Flight Chief position, plans, organizes, and directs aircraft fabrication maintenance activities. Manages maintenance and staff functions for Aircraft Metals Technology, Aircraft Structural Maintenance, Low Observable Aircraft Structural Maintenance, 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 local and federal 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 361 Training Squadron, Sheppard Air Force Base, Texas. 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 qualifies 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. Prior to assuming the rank of SSgt, 5-levels will complete 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. An NCO can expect to fill various supervisory and management positions such as shift leader, element chief, task certifier, and other various 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 TSgt, individuals will complete the Phase 2 EMPE Distance Learning Noncommissioned Officer Academy, Course 15, prior to the AFPC suspense date.

5.4. Superintendent (9) Level. A 9-level can be expected to fill positions such as flight chief, production superintendent, and various staff NCOIC jobs. Additional training in the areas of budget, manpower, resources, and personnel management should be pursued through continuing education. Additional higher education and completion of courses outside their career AFS is also recommended. Airmen pending promotion consideration to the rank of SMSgt must complete Phase 3 EPME Distance Learning Senior Noncommissioned Officer Academy (SNCOA), Course 14, on or before the Promotion Eligibility Cut-off Date (PECD).

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 Sheppard Air Force Base, Texas from 23-26 Jan 2017.

6.1. Initial Skills. The initial skills course was reviewed and only one minor change will be needed. Braze of Ferrous metals will replace the Flat weld procedure.

6.2. Five-Level Upgrade Requirements. 5-level and the 7-level core tasks have increased slightly. CDCs will require rewrite and will remain with four volumes. The CDC were reviewed and found to contain significant amounts of outdated material.

6.3. Seven-Level Upgrade Requirements. Core task for 7-level have increased slightly.

6.4. Supplemental Training. The Advanced Metallurgy and Computer Numeric Control (CNC) Manufacturing, J3AZP2A751 0M1B will be reducing the length of time (6 Hours) spent on heat treating and moving that time into the CNC area. The course length will remain at 19 days.

6.5. 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 is one of several federally chartered degree-granting institutions and the only 2-year institution serving only military enlisted personnel. The college is a multi-campus institution and is regionally accredited through Air University by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) to award AAS degrees designed for specific Air Force occupational specialties. The college offers 68 technical degree programs serving more than 355,000 students at more than 100 worldwide affiliated technical training schools. Enrollment in CCAF occurs upon completion of basic military training. CCAF provides the opportunity to obtain an Associate in Applied Sciences technical degree.

7.1. CCAF Degree Requirements. All enlisted airmen are automatically entered into the CCAF program. Prior to completing an associate degree, the 5-level must be awarded and the following requirements must be met:

Semester Hours

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

7.1.1. Technical Education (24 Semester Hours): Completion of the career field apprentice course satisfies some semester hours of the technical education requirements. A minimum of 24 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective courses.

7.1.2. Leadership, Management, and Military Studies (6 Semester Hours): Enlisted Professional Military Education (EPME) and/or civilian management courses.

7.1.3. **Physical Education** (4 Semester Hours): This requirement is satisfied by completion of Basic Military Training.

7.1.4. General Education (15 Semester Hours): Applicable courses must meet the criteria for application of courses to the General Education Requirements (GER) and be in agreement with the definitions of applicable General Education subjects/courses as provided in the CCAF General Catalog.

7.1.5. Program Elective (15 Semester Hours): Satisfied with applicable Technical Education; Leadership, Management, and Military Studies; or General Education subjects/courses, including natural science courses meeting GER application criteria. Six semester hours of CCAF degree applicable technical credit otherwise not applicable to this program may be applied. See the CCAF General Catalog for details regarding the Associates of Applied Science for this specialty.

7.2. Professional Certifications. Certifications assist the professional development of our Airmen by broadening their knowledge and skills. Additionally, specific certifications may be award collegiate credit by CCAF and civilian colleges, saving time and Air Force tuition assistance funds. It also helps airmen to be better prepared for transition to civilian life. To learn more about professional certifications and certification programs offered by CCAF, visit http://www.au.af.mil/au/ccaf/certifications.asp. In addition to its associate degree program, CCAF offers the following certification programs and resources:

7.2.1. CCAF Instructor Certification (CIC) Program. CCAF offers the three-tiered CIC Program for qualified instructors teaching at CCAF affiliated schools who have demonstrated a high level of professional accomplishment. The CIC is a professional credential that recognizes the instructor's extensive faculty development training, education and qualification required to teach a CCAF course, and formally acknowledges the instructor's practical teaching experience.

7.2.2. CCAF Instructional Systems Development (ISD) Certification Program. CCAF offers the ISD Certification Program for qualified curriculum developers and managers who are formally assigned at CCAF affiliated schools to develop and manage CCAF collegiate courses. The ISD Certification is a professional credential that recognizes the curriculum developer's or manager's extensive training, education, qualifications and experience required to develop and manage CCAF courses. The certification also recognizes the individual's ISD qualifications and experience in planning, developing, implementing and managing instructional systems.

7.2.3. CCAF Professional Manager Certification (PMC). CCAF offers the PMC Program for qualified Air Force NCO's. The PMC is a professional credential awarded by CCAF that formally recognizes an individual's advanced level of education and experience in leadership and management, as well as professional accomplishments. The program provides a structured professional development

track that supplements Enlisted Professional Military Education (EPME) and Career Field Education and Training Plan (CFETP).

7.2.4. Federal Aviation Administration (FAA) Airframe and Powerplant (A&P) 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 Air Force A&P Certification Program, managed by CCAF, will fill training and experience gaps, ensuring FAA eligibility. The program consists of three Air University Online A&P Specialized Courses, OJT and experience requirements contained in a Qualification Training Package (QTP). Technicians may enroll in the program once they have been awarded the 5-skill level. To learn more, visit CCAF at http://www.au.af.mil/au/ccaf/certifications.asp . CCAF awards 30 semester hours for FAA A&P certification and 18 semester hours for FAA Airframe or Powerplant certification.

7.2.5. CCAF Credentialing and Education Research Tool (CERT). CCAF implemented CERT to increase awareness of professional development opportunities applicable to Air Force occupational specialties. It is a valuable resource for Air Force enlisted personnel and provides information related to specific AFSCs, such as: AFSC description; civilian occupation equivalencies (US Department of Labor); CCAF degree programs; national professional certifications; certifying agencies; DANTES testing; and professional organizations.

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

8. Career Field Path

8.1. Enlisted Career Path. Table 8.1 identifies career milestones for the 2A7X1 AFSC.

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 12 months OJT - Minimum 9 months OJT for retrainees - Complete all 5-level core tasks - Complete appropriate CDC if/when available	Amn A1C SrA	6 months 16 months 3 years	28 months	8 years

Phase 1 EPME Airman Leadership School (ALS) - Must be a SrA with 3-6 years time in service or be a SSgt Selectee. - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	**Trainer** -Trained and qualified to perform the task to be trained -Must attend the Air Force Training Course (AFTC)			
	Certifier -Minimum rank of SSgt with a 5-skill level, or civilian equivalent, capable of evaluating the task being certified, and have completed the AFTC. - Attend formal AF Trainer Course. - Be a person other than the trainer except for AFSCs, duty positions, units, and/or work centers with specialized training standardization and certification requirements.			
Upgrade To Craftsman (7-Skill Level) - Minimum rank of SSgt - Minimum 12 Months OJT - Minimum 6 Months OJT for retrainees - Complete all 5- and 7-level core tasks - Complete appropriate CDC if/when available	SSgt	5.3 years	3 years	15 years
Phase 2 EPME NCOA (Course 15) Distance Learning, - Must be an NCO with 7-12 years TIS, DL completion is required prior to assuming the rank of TSgt - Intermediate Leadership Experience (ILE), in-residence course for selected TSgts, TSgt selects, and highly qualified promotion eligible SSgts	TSgt MSgt	10.8 years 15.6 years	5 years 8 years	20 years 24 years
Upgrade to Superintendent (9-Skill Level) - Minimum rank of SMSgt **Phase 3 EPME Senior NCOA (Course 14) Distance Learning**", - Must be an NCO with 12-18 years TIS, DL completion is required prior to the PECD to be eligible for promotion to SMSgt - Advanced Leadership Experience (ALE), in-residence course for SMSgts, SMSgt selects, and highly qualified promotion eligible MSgts	SMSgt	19.5 years	11 years	26 years
Chief Enlisted Manger (CEM) Chief Leadership Course – required for all CMSgts across the Total Force	CMSgt	23.1 years	14 years	30 years

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 Part II, Section E, Specialty Training Standard (STS).

10. Specialty Qualification Requirements. The various skill levels in this career field are defined in terms of tasks and knowledge proficiency requirements for each skill level. They are stated in broad general terms and establish the standards of performance. Unit work centers must develop a structured training program to ensure the following requirements are met.

10.1. Apprentice Level Training:

10.1.1. Specialty Qualification. This information is located in the official specialty description in Air Force Enlisted Classification Directory (AFECD), paragraph 3.

10.1.1.1. Knowledge. Knowledge is mandatory of: metal repair and fabrication processes; composition of metals and machinable materials; weld specifications; metal tempering; forging; mechanical drawings; use of precision measuring devices and tools; metal fabricating by oxyacetylene, metallic arc, and inert gas shielded arc; operation and capacity of metal working and welding equipment; use and fabrication of layout and fixture devices; safety codes and practices regarding equipment and supplies; hazards of explosive gasses, hazardous dust, rays, and fumes; and proper handling, use, and disposal of hazardous materials.

10.1.1.2. Education. For entry into this specialty, completion of high school with courses in mathematics, metal working, and CAD 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 48-123 and Air Force Enlisted Classification Directory (AFECD) is mandatory.

10.1.2. Training Sources and Resources. The initial skills course will provide the required knowledge and 3-skill level apprentice qualification.

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 Air Force Enlisted Classification Directory (AFECD), 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, technical orders and drawings; initiation of engineering disposition for aircraft and support equipment repairs; 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, dust 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.

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 identified in the STS is mandatory.

10.2.2. Training Sources and Resources. A minimum of 12 months on-the-job training (9 months for retrainees), completion of the 2A751 CDC and completion of the 5-level core tasks represent the requirements for award to the Journeyman 5-skill level.

10.2.3. Implementation. N/A

10.2.4. Welding Certification. Journeyman will be certified NLT 12 months (24 months ARC) following award of 5-skill level.

10.3. Craftsman Level Training:

10.3.1 Specialty Qualification. This information is located in the official specialty description in Air Force Enlisted Classification Directory (AFECD), 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, technical orders and drawings; validation of engineering disposition for aircraft and support equipment repairs; 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, dust, 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 and 7-level core tasks 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. Completion of all 5 and 7 level core tasks identified in the STS is mandatory.

10.3.2. Training Sources and Resources.
A minimum of 12 months on-the-job training (6 months for retrainees), completion of the 2AX7X CDC and completion of the 7-level core tasks represent the requirements for award to the 7-skill level.

10.3.3. Implementation. Upgrade to the 7-level requires completion of the 2AX7X CDC and 12 months upgrade training (6 months for retrainees).

10.4. Superintendent-Level Training:

10.4.1 Specialty Qualification. This information is located in the official specialty description in Air Force Enlisted Classification Directory (AFECD), paragraph 3.

10.4.1.1. Knowledge. Knowledge is mandatory of: aircraft structural repair, low observable (where applicable), metals technology, corrosion control, 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. CCAF degree is mandatory for promotion to SMSgt.

10.4.1.3. Training. For promotion to SMSgt and award of 2A790, completion of SNCOA by correspondence or in-residence is mandatory.

10.4.1.4. Experience. For award of AFSC 2A790, qualification in and possession of AFSC 2A771, 2A772, 2A773, or 2A775 is mandatory. Also, experience in managing or directing repair activities for aircraft structural maintenance, metals technology, corrosion control, low observable aircraft structural maintenance, or non-destructive inspection specialties and functions is mandatory.

10.4.1.5. **Other.** Not Used.

10.4.2. **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.

13. Journeyman -Level Training: No 5-level resource constraints were identified by the STRT/U&TW**.**

14. Supplemental Training. No resource constraints were identified by the STRT/U&TW**.**

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

PART II

Section A - Course Objective List

1. 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.

2. Standard. The minimum 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 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.

3. Proficiency Level. Most task performance is taught to the "2b" 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.

4. 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 or email to UDG_361TRS_TRAININGMANAGERS@us.af.mil.

Section B - Support Material

5. 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 and can be accessed at: https://etca.randolph.af.mil/.
Metals Technology (AFMTO) SharePoint link: https://org4.eis.afmc.af.mil/sites/2133/default.aspx

5.1. Interactive Courseware (ICW) courses are available from (or under development by) 367 TRS/TRSS, Hill AFB, Utah. Questions should be referred to the customer service number at DSN 777-0160.

Section C - Training Course Index

6. Purpose. This section of the CFETP identifies Air Force resident, Air Force non-resident (Air Force Career Development Academy or AFCDA) and exportable courses used to support training for the 2A7X1 Aircraft Metals specialty. Refer to the Air Force Education and Training Course Announcements (ETCA) at https://etca.randolph.af.mil for information on AETC formal courses listed below. For further information on the following courses, contact the OPR at:

361 TRS/TRR
501 Missile Road
Sheppard AFB, TX 76311-2264
DSN 736-3545
UDG_361TRS_TRAININGMANAGERS@us.af.mil

7. Air Force In-Resident Courses

COURSE NO.	COURSE TITLE	LOCATION	OPR
J3ABR2A731 048B	Aircraft Metals Technology Apprentice	Sheppard AFB TX	361TRS/ TRR
J3AZR2A751 0M1B	Advanced Metallurgy and Computer Numeric Control (CNC) Manufacturing	Sheppard AFB TX	361TRS/ TRR

8. Air Force Career Development Academy (AFCDA) Courses.

COURSE NO.	COURSE TITLE	OPR
CDC2A751	Aircraft Metals Technology Journeyman	361TRS/TRR
CDC2AX7X	Aerospace Maintenance Craftsman	HQ USAF/A4LM

Interactive Courseware (ICW) courses are available from or are under development by 367 TRS/TRSS at Hill AFB, Utah and 982 MXS/LGMS at Sheppard AFB, Texas.

For further information contact the OPRs at:

367 TRSS
6058 Aspen Ave
Hill AFB, UT 84056-5805
DSN 777-7830/8741

982 MXS/LGMS
912 I Ave Ste 4
Sheppard AFB, TX 76311-2334
DSN 736-3001

Section D - MAJCOM-Unique Requirements.

10. For MAJCOM-unique requirements, refer to the following web sites: All removed

Section E - Specialty Training Standard

11. Implementation. This STS will be used for technical training provided by Air Education and Training Command. It was approved by MAJCOM Functional Managers at the 23-26 Jan 2017 Utilization and Training Workshop. This CFETP/STS will be implemented with the class beginning Oct 2017 and graduating Jan 2018.

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

12.1. 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.

12.2. Identifies in column 2 (Core Tasks), by asterisk (*****), specialty-wide training requirements. Qualification on all AFCFM directed core tasks applicable to the specialty must be completed for skill level upgrade.

12.2.1. 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).

12.2.2. Units that use the GO81 maintenance data collection system do not need to complete Integrated Maintenance Data System (MIS) Web-Based Training (WBT) core tasks. However, these units must be

capable of training MIS-related WBT core tasks for deployment preparation. This capability ensures GO81 users are capable of operating MIS prior to deploying to MIS using units.

12.3. 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.

12.4. 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.

12.5. 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 in AFI 36-2502, *Enlisted Airman Promotion/Demotion Program*. WAPS is not applicable to the Air National Guard or Air Force Reserve.

13. 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.

14. Job Qualification Standard. Becomes a job qualification standard (JQS) for on-the-job training when placed in AF Form 623, **Individual Training Record**, and used according to AFI 36-2201 *Air Force Training Program*. 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:

14.1. Documentation. Document and certify completion of training IAW AFI 36-2201. Automated records, utilizing MIS/GO81, reflecting this STS may be used and is highly encouraged. The use of Training Business Area (TBA) is mandatory for training documentation and attachments one and two of this CFETP must be used. Attachment 3 is to be used as a correlation document for the 2AX7X 7-level Aerospace Maintenance Craftsman CDCs.

14.2. Transcribing from Old CFETP to New CFETP. All AFJQSs and previous CFETPs are replaced by this CFETP; therefore, transcribing of all training records to this CFETP STS is mandatory. Use this CFETP STS (or automated STS) to identify and certify all past and current qualifications. Document and certify all previous and current training IAW AFI 36-2201.

15. Specialty Training Standard (STS). Is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests (SKTs) are developed at the AETC Airman Advancement Division 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, *Enlisted Airman Promotion/Demotion Program*. WAPS is not applicable to the Air National Guard or Air Force Reserve.

16. 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 736-3545, email address is: UDG_361TRS_TRAININGMANAGERS@us.af.mil. 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

JOHN B. COOPER
Lieutenant General, USAF
DCS Logistics, Engineering, Force Protection

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

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PROFICIENCY CODE KEY

This Block Is For Identification Purposes Only		
Name Of Trainee		
Printed Name (*Last, First, Middle Initial*)	Initials (Written)	SSAN (last Four)

Printed Name Of Training/Certifying Official And Written Initials	
N/I	***N/I***
N/I	***N/I***
N/I	***N/I***
N/I	***N/I***
N/I	***N/I***
N/I	***N/I***
N/I	***N/I***
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.)

Explanations * 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)

** 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.

-This mark is used alone instead of a scale value to show that no proficiency training is provided in the courses or CDCs. / 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.).

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. NOTE 3: Items in column 2A/2B marked with an asterisk (*) identify core tasks. NOTE 5: Address comments and recommended changes through the MAJCOM Functional Managers to the AETC Training Manager, DSN 736-3545.											
A2.1. OPERATION SECURITY (OPSEC) VULNERABILITIES of AFSC 2A7X1 TR: AFI 10-701								A	-	-	-
A2.2. AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM TR: AFI 91-203, AFI 48-145, Applicable OSHA Standard TO 00-25-252 and 42B5-1-2 , AFI32-7042											
A2.2.1. Hazards of AFSC 2A7X1								A	B	-	-
A2.2.2. Conduct Safety Inspections											
A2.2.2.1. Work area TR: AFI 91-203	*							2b	b	-	-
A2.2.2.2. Equipment TR: AFI 91-203, TO 34-1-3 and 42B5-1-2	*							2b	-	-	-
A2.2.3. Hazardous Materials And Waste Handling IAW Environmental Standards TR: AFI 90-821, AFI 48-145, AFI 48-155.											
A2.2.3.1. Types of hazardous materials/fluids								B	-	-	-
A2.2.3.2. Handling/disposal procedures TR: Applicable SDS								B	-	-	-
A2.2.3.3. Storage and labeling								-	-	-	-
A2.2.4. Classes Of Fire Extinguishers								A	-	-	-
A2.2.5. HAZCOM								B	-	-	-
A2.2.6. AF Form 55 or local equivalent (Employee Safety and Health Record) TR: AFI 90-821 and AFI 91-203								-	-	-	-
A2.2.6.1. LRM								A	-	-	-

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
A2.2.7. Perform Lockout/Tagout TR: AFI 91-203	*							a	-	-	-
A2.2.8. Respiratory Protection Equipment TR: AFI 48-137								-	-	-	-
A2.3. SUPERVISION AND TRAINING TR: AFI 21-101, 36-2201, and Air Force Enlisted Classification Directory (AFECD)											
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. Provide training		*						-	-	-	-
A2.3.2.2.2. Provide feedback		*						-	-	-	-
A2.3.2.3. OJT Task Certifier Requirements											
A2.3.2.3.1. Evaluate trainee								-	-	-	-
A2.3.2.3.2. Provide feedback on training results								-	-	-	-
A2.3.2.3.3 Maintain 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: AFI 21-101 and AFMAN 23-110											
A2.3.4.1. Maintain equipment accountability								-	-	-	-
A2.3.4.2. Establish supply levels		*									
A2.3.4.3. Maintain supply levels		*						-	-	-	-

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
A2.3.4.4. Interpret supply computer products								-	-	-	-
A2.4. DOCUMENTATION TR: AFMAN 23-110, TOs 00-20-1, 00-25-252, and 34-1-3											
A2.4.1. Annotate Forms											
A2.4.1.1. Aircraft Form (AFTO Form 781A)	*							b	b	-	-
A2.4.1.2. Equipment Form (AFTO Form 781H)										-	-
A2.4.1.3. Equipment Form (AFTO Form 781K)											
A2.4.1.4. Equipment Form (AFTO Form 244)	*							2b	b		
A2.4.1.5. Equipment Form (AFTO Form 95)											
A2.4.1.6. Welding certification (DD Form 2757)		*						-	b	-	-
A2.4.1.7. Aircraft Safe For Maintenance TR: Applicable Weapons MDS Job Guides	-							-	-	-	-
A2.4.2. MIS/CAMS TR: AFSCM 21-56 Intro to CAMS, 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 User's 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. Interactive Electronic Technical Manuals (IETMs)	*							A	-	-	-
A2.6. SHOP MATHEMATICS TR: Machinery's Handbook											
A2.6.1. Calculate	*							2b	b	-	-

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. DRAWINGS AND LAYOUT TR: Weapon System TOs, Machinery's Handbook, Welding Processes											
A2.7.1. Interpret Blueprints/Shop Drawings	*							2b	b	-	-
A2.7.2. Construct Manual Drawings	*							2b	b	-	-
A2.7.3.. Perform Layout Operations	*							2b	b	-	-
A2.7.4 Computer Aided Design (CAD)											
A2.7.4.1. Construct drawings	*							2b	B	-	-
A2.7.4.2. Construct solid models	*							2b	B	-	-
A2.7.4.3. Construct 2D geometry		*						-	-	-	-
A2.7.4.4. Construct 3D geometry		*						-	-	-	-
A2.7.4.5. Construct surfaces								-	-	-	-
A2.7.5. Computer aided manufacturing (CAM)											
A2.7.5.1. Generate 2D toolpaths/programs		*						-	B	-	-
A2.7.5.2. Generate 3-axis surface toolpaths/programs		*						-	-	-	-
A2.7.5.3. Generate 4-axis surface toolpaths/programs								-	-	-	-
A2.7.5.4. Create part geometry for lathes								-	B	-	-
A2.7.5.5. Generate toolpaths for lathes								-	B	-	-
A2.8. /MANUFACTURE TR: Weapon System TOs, Machinery's Handbook											
A2.8.1. Special Tools		*						-	b	-	-
A2.8.2. Fixtures/Jigs		*						-	b	-	-
A2.8.3. Parts	*							2b	b	-	-
A2.8.4. Dies								-	a	-	-
A2.9. FIT MACHINED PARTS TR: Weapon System TOs, Machinery's Handbook, TO 1-1A-8, TO 44B and 44H Series											
A2.9.1. System of Fits								-	B	-	-

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
A2.9.2. 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	-	-
A2.9.3.1.1. Locking ring inserts								b	b	-	-
A2.9.3.1.2. Heli-coil inserts	*							b	b	-	-
A2.9.3.1.3. Slim inserts								b	b	-	-
A2.9.3.1.4. Keenserts (Pinned Inserts)								-	b	-	-
A2.9.3.2. Pins								b	b	-	-
A2.9.3.3. Bushings	*							2b	b	-	-
A2.9.3.4. Bearings											
A2.9.3.4.1. Roller staking								-	b	-	-
A2.9.3.4.2. Swaged								-	b	-	-
A2.9.3.5. Use Liquid Nitrogen/Dry Ice To Install Bushings								-	b	-	-
A2.10. METALS PROCESSING TR: SAE-AMS H-81200, SAE AMS-2770, -6875 and -2728, 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	*							a	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	-	-

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
A2.10.5. 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								-	-	-	-
A2.10.5.2.3. Copper Alloys								-	-	-	-
A2.10.5.2.4. Heat and corrosion resistant alloys								-	-	-	-
A2.10.5.3. Equipment											
A2.10.5.3.1 Maintain	*							-	a	-	-
A2.10.5.3.2 Perform Temperature Uniformity Survey		*						-	b	-	-
A2.10.5.3.3 Perform System Accuracy Test		*						-	b	-	-
A2.10.6. Brushplating								-	a	-	-
A2.10.7. Passivation								-	a	-	-
A2.10.8. Roto Peening								a	a	-	-
A2.11. TOOLS TR: Applicable 32-Series TOs; Machinery's Handbook											
A2.11.1. Use											
A2.11.1.1. Handtools	*							2b	b	-	-
A2.11.1.2. Precision measuring devices	*							2b	b	-	-
A2.11.1.3. Indexable cutting inserts								a	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	*							2b	-	-	-

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
A2.11.4.3. Use Tool Control System	*							-	-	-	-
A2.12. MEDIA BLASTER TR: Operator's Manual, TO 1-1-8											
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											
A2.14.1 Types								-	B	-	-
A2.14.2 Applications								-	B	-	-
A2.15. DRILL PRESS TR: Machinery's Handbook, Operator's Manual, TO 32-1-151 and 34-1-10											
A2.15.1. Operate	*							-	b	-	-
A2.15.2. Maintain	*							-	b	-	-
A2.16. LATHE TR: Machinery's Handbook, Operator's Manual, TO 34-1-10											
A2.16.1. Manual Equipment											
A2.16.1.1. Turn/face	*							2b	b	-	-
A2.16.1.2. Taper turn using											
A2.16.1.2.1. Tailstock offset								b	b	-	-
A2.16.1.2.2. Compound rest	*							2b	b	-	-
A2.16.1.2.3. Taper attachment								b	b	-	-
A2.16.1.3. Bore	*							2b	b	-	-
2.16.1.4. Knurl								b	b	-	-

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
A2.16.1.5. Thread											
A2.16.1.5.1. Systems								A	B	-	-
A2.16.1.5.2. Cut internal	*							2b	b	-	-
A2.16.1.5.3. Cut external	*							2b	b	-	-
A2.16.1.5.4. Use Geometric die								2b	b	-	-
A2.16.1.6. File								b	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	*							2b	b	-	-
A2.16.2. Computer Numerical Controlled (CNC) Lathe 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 stepping	*							2b	b	-	-
A2.17.1.2. Slotting								2b	b	-	-
A2.17.1.3. Pocket milling	*							2b	b	-	-
A2.17.1.4. Keyseat milling								-	b	-	-
A2.17.1.5. Fly cutting								b	b	-	-
A2.17.1.6. Angle milling								2b	b	-	-
A2.17.1.7. Form milling								-	b	-	-

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
A2.17.1.11. Use milling attachments											
A2.17.1.11.1. Offset boring head								2b	b	-	-
A2.17.1.11.2. Indexing head								2b	b	-	-
A2.17.1.11.3. Rotary table								a	b	-	-
A2.17.1.11.4. Toolmaker's knee								-	b	-	-
A2.17.1.12. Maintain Equipment	*							2b	b	-	-
A2.17.2. Computer Numerical Controlled (CNC) Milling Machine 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								-	b	-	-
A2.18.2. Maintain								-	b	-	-
A2.19. HORIZONTAL BANDSAW TR: Operator's Manual											
A2.19.1. Operate	*							2b	b	-	-
A2.19.2. Maintain	*							2b	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	*							-	a	-	-
A2.21.2. Maintain		*						-	a	-	-
A2.22. GRINDER TR: Machinery's Handbook, Operator's Manual, TO 34-1-10											

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	*							1a	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	*							2b	b	-	-
A2.22.3. Tool And Cutter Grinders											
A2.22.3.1. Operate								-	-	-	-
A2.22.3.2. Maintain								-	-	-	-
A2.22.4. Surface Grinders											
A2.22.4.1. Operate								-	-	-	-
A2.22.4.2. Maintain								-	-	-	-
A2.23. ABRASIVE SANDING MACHINE											
A2.23.1. Operate	*							2b	b	-	-
A2.23.2. Maintain	*							2b	b	-	-
A2.24. UNIVERSAL PUNCHING AND SHEARING MACHINE TR: Operator's Manual											
A2.24.1. Operate	*							-	b	-	-
A2.24.2. Maintain	*							-	b	-	-
A2.25. POWER SHEAR TR: Operator's Manual											
A2.25.1. Operate								-	-	-	-
A2.25.2. Maintain								-	-	-	-

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 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								-	-	-	-
A2.26.1.1.2. Horizontal								-	-	-	-
A2.26.1.1.3. Vertical								-	-	-	-
A2.26.1.2. Fillet welds in position											
A2.26.1.2.1. Flat								-	-	-	-
A2.26.1.2.2. Horizontal								-	-	-	-
A2.26.1.2.3. Vertical								-	-	-	-
A2.26.2. Soft Solder											
A2.26.2.1. Ferrous metals								-	-	-	-
A2.26.2.2. Nonferrous metals								-	-	-	-
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	-	-	-
A2.26.4.2. Nonferrous metals								-	-	-	-
A2.26.4.3. Castings								-	-	-	-
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	*							2b	b	-	-
A2.26.8.2. Disassemble	*							2b	b	-	-
A2.26.8.3. Maintain	*							2b	b	-	-

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. SHIELDED METAL ARC WELDING TR: Operator's Manual, TO 34W4-1-5											
A2.27.1. Fundamentals								-	A	-	-
A2.27.1. Weld Ferrous Metal											
A2.27.1.1. Groove welds in position											
A2.27.1.1.1. Flat								-	-	-	-
A2.27.1.1.2. Horizontal								-	-	-	-
A2.27.1.1.3. Vertical								-	-	-	-
A2.27.1.1.4. Overhead								-	-	-	-
A2.27.1.2. Fillet welds in position											
A2.27.1.2.1. Flat								-	-	-	-
A2.27.1.2.2. Horizontal								-	-	-	-
A2.27.1.2.3. Vertical								-	-	-	-
A2.27.1.2.4. Overhead								-	-	-	-
A2.27.2. Maintain Equipment								-	-	-	-
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	*							-	b	-	-
A2.28.1.1.3. Vertical								-	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								-	b	-	-
A2.28.1.2.4. Overhead								-	-	-	-
A2.28.2. Weld Nonferrous Metal											
A2.28.2.1. Groove welds in position											

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
A2.28.2.1.1. 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	*							2b	b	-	-
A2.29. GAS TUNGSTEN ARC WELDING TR: AWS D 17.1, 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	*							2b	b	-	-
A2.29.1.1.2. Horizontal								-	b	-	-
A2.29.1.1.3. Vertical								2b	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								2b	b	-	-
A2.29.1.2.3. Vertical								-	b	-	-
A2.29.1.2.4. Overhead								-	b	-	-
A2.29.2. Weld Group II (Stainless Steel)											
A2.29.2.1. Groove welds in position											
A2.29.2.1.1. Flat	*							-	b	-	-
A2.29.2.1.2. Horizontal								-	b	-	-
A2.29.2.1.3. Vertical								-	b	-	-

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
A2.29.2.1.4. 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								-	b	-	-
A2.29.2.2.3. Vertical								-	b	-	-
A2.29.2.2.4. Overhead								-	b	-	-
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	-	-
A2.29.3.2.3. Vertical								-	b	-	-
A2.29.3.2.4. Overhead								-	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)								-	b	-	-
A2.29.4.2. Fillet welds in position											
A2.29.4.2.1. Flat								-	b	-	-

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
A2.29.4.2.2. Horizontal	*							2b	b	-	-
A2.29.4.2.3. Vertical								-	b	-	-
A2.29.4.2.4. Overhead								-	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	-	-
A2.29.6. Weld Group VI (titanium)											
A2.29.6.1. Groove welds in position											
A2.29.6.1.1. Flat								-	b	-	-
A2.29.6.1.2. Horizontal								-	b	-	-
A2.29.6.1.3. Vertical								-	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								-	b	-	-
A2.29.6.2.3. Vertical								-	b	-	-
A2.29.6.2.4. Overhead								-	b	-	-

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
A2.29.7. 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								-	b	-	-
A2.29.8. Maintain Equipment	*							2b	b	-	-
A2.30. VISUALLY INSPECT WELDS TR: TO 00-25-252		*						-	b	-	-
A2.31. PLASMA ARC OPERATIONS TR: Operator's Manual											
A2.31.2. Cut	*							-	b	-	-
A2.31.3. Maintain Equipment	*							-	a	-	-
A2.32. RESISTANCE WELDER TR: Operator's Manual											
A2.32.1. Operate								-	-	-	-
A2.32.2. Maintain								-	-	-	-
A2.33. PORTABLE WELDING MACHINE TR: Operator's Manual											
A2.33.1. Operate								-	b	-	-
A2.33.2. Maintain								-	-	-	-
A2.33.3 Static Ground Machine								-	-	-	-

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
A2.34. REPAIRS TR: Weapon System TOs, 00-25-252,44B 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	-	-

`1. Tasks	**4. Proficiency Codes Used To Indicate Training/Information Provided**			
Knowledge And Technical References	**A** 3-Skill Level	**B** 5-Skill Level	**C** 7-Skill Level	
	(1) Crse	**(1)** CDC	**(1)** Crse	**(2)** CDC
NOTE 1: Columns 2 and 3 are deleted from this STS because all items are SUBJECT KNOWLEDGE LEVEL only and require no certification.				
NOTE 2: Users are responsible for annotating training references to identify current references pending STS revision.				
NOTE 3: This attachment is to be used in conjunction with other attachments in applicable CFETPs.				
NOTE 4: Personnel must complete CDC requirements on all MDSs/attachments.				
NOTE 5: This attachment is to be used as a correlation document for the 2AX7X 7-level Aerospace Maintenance Craftsman CDCs.				
As of U&TW 15-17 Feb 2011				
AA.1. MAINTENANCE PHILOSOPHY AND POLICY				
AA.1.1. Aircraft and Equipment Readiness TR: AFI 21-101 and Repair Enterprise 21 Fact Sheet (https://acc.dau.mil/CommunityBrowser.aspx?id=32781				A
AA.1.2. Maintenance Concept TR: AFI 21-101 and AFI 21-129				A
AA.1.3. Reliability and Maintainability (R&M) TR: AFI 21-101, AFI 21-118 and TO 00-35D-54.				A
AA.1.4. Operating Instructions (OI) TR: AFI 21-101 and AFI 33-360				A
AA.1.5. Support Agreements (SA) TR: AFI 21-101 and AFI 25-201				A
AA.1.6. Modification and Configuration Management TR: AFI 21-101				A
AA.1.7. Maintenance Information Systems (MIS) TR: AFI 21-101, AFI 21-116, AFCSM 21-556 volume 2, and TO 00-20-2				B
AA.1.8. Maintenance Performance Indicator Metrics and Health of the Fleet TR: AFI 21-101 and AFI 21-103				B
AA.1.9. Personnel Utilization TR: AFI 21-101				A
AA.1.10. Maintenance Repair Priorities TR: AFI 21-101				A
AA.1.11. Minimum Essential System Listing (MESL) TR: AFI 21-101 and AFI 21-103				A
AA.1.12. Status of Resources and Training System (SORTS), and AEF Reporting Tool (ART) TR: AFI 10-201, AFI 10-244 and https://aefcenter.afpc.randolph.af.mil/				A
AA.1.13. Historical Aircraft and Equipment Records TR: AFI 21-101 and T.O. 00-20-1				A
AA.1.14. Maintenance Scheduling Effectiveness TR: AFI 21-101				A
AA.2. MAINTENANCE ORGANIZATION KEY LEADER RESPONSIBILITIES				
AA.2.1. Wing Commander (WG/CC) TR: AFI 21-101 and AFI 38-101				A
AA.2.2. Wing Vice Commander (WG/CV) TR: AFI 21-101 and AFI 38-101				A
AA.2.3. Maintenance Group Commander (MXG/CC) TR: AFI 21-101 and AFI 38-101				A
AA.2.4. Maintenance Group Deputy Commander (MXG/CD) TR: AFI 21-101				A

`1. Tasks		**4. Proficiency Codes Used To Indicate Training/Information Provided**			
Knowledge And Technical References		**A** 3-Skill Level	**B** 5-Skill Level	**C** 7-Skill Level	
		(1) Crse	**(1)** CDC	**(1)** Crse	**(2)** CDC
AA.2.5.	MXG Superintendent (SUPT) TR: AFI 21-101				A
AA.2.6.	Squadron Commander (SQ/CC) Responsibilities TR: AFI 21-101				A
AA.2.7.	Operations Officer and Maintenance Superintendent (MX SUPT) Responsibilities TR: AFI 21-101				A
AA.2.8.	Flight Commander/Flight Chief TR: AFI 21-101				A
AA.2.9.	AMU OIC/Superintendent (SUPT) TR: AFI 21-101				A
AA.2.10.	Section NCOIC TR: AFI 21-101				A
AA.2.11.	Production Superintendent (Pro Super) TR: AFI 21-101				A
AA.2.12.	Expediter TR: AFI 21-101				B
AA.3.	FUNCTIONS OF MAINTENANCE OPERATIONS SQUADRON (MOS) TR: AFI 21-101 and AFI 38-101				
AA.3.1.	Maintenance Operations Flight (MOF) TR: AFI 21-101				A
AA.3.2.	Maintenance Training Flight (MTF) TR: AFI 21-101 and AFI 36-2232				A
AA.3.3.	Programs and Resources Flight TR: AFI 21-101				A
AA.3.4.	Quality Assurance (QA) Flight TR: AFI 21-101				A
AA.4.	FUNCTIONS OF AIRCRAFT/HELICOPTER MAINTENANCE SQUADRON (AMXS/HMXS) TR: AFI 21-101 and AFI 38-101				
AA.4.1.	Aircraft Maintenance Unit (AMU) TR: AFI 21-101				A
AA.4.2.	Aircrew and Maintenance Debrief Section TR: AFI 21-101				A
AA.4.3.	Aircraft Section TR: AFI 21-101				A
AA.4.4.	Specialist Section TR: AFI 21-101				A
AA.4.5.	Weapons Section TR: AFI 21-101				A
AA.4.6.	Plans, Scheduling and Documentation Section (PS&D) TR: AFI 21-101				A
AA.4.7.	Support Section TR: AFI 21-101				A
AA.5.	FUNCTIONS OF MAINTENANCE SQUADRON (MXS) TR: AFI 21-101 and AFI 38-101				
AA.5.1.	Accessories Flight TR: AFI 21-101				A
AA.5.2.	Aerospace Ground Equipment (AGE) Flight TR: AFI 21-101				A
AA.5.3.	Armament Flight TR: AFI 21-101				A
AA.5.4.	Avionics Flight TR: AFI 21-101				A

`1. Tasks	**4. Proficiency Codes Used To Indicate Training/Information Provided**			
Knowledge And Technical References	**A** 3-Skill Level	**B** 5-Skill Level	**C** 7-Skill Level	
	(1) Crse	**(1)** CDC	**(1)** Crse	**(2)** CDC
AA.5.5. Fabrication Flight TR: AFI 21-101				A
AA.5.6. Maintenance Flight TR: AFI 21-101				A
AA.5.7. Munitions Flight TR: AFI 21-101 and AFI 21-201				A
AA.5.8. Propulsion Flight TR: AFI 21-101				A
AA.5.9. Test, Measurement, and Diagnostic Equipment (TMDE) Flight TR: AFI 21-101				A
AA.6. AIR FORCE MATERIEL COMMAND RESPONSIBILITIES				
AA.6.1. Air Logistics Centers (ALC) TR: AFMCMD (Mission Directives) 406, 407 and 410. Located at: https://www.afmc-mil.wpafb.af.mil/pdl/afmc/md.htm , OO-ALC Brochure located at: http://www.hill.af.mil/main/index.html , WR-ALC: http://www.robins.af.mil/units/402mw.asp and OC-ALC: http://www.tinker.af.mil/units/				A
AA.6.2. Air Force Flight Test Center/Air Armament Center TR: AFMCMD 404 located at https://www.afmc-mil.wpafb.af.mil/pdl/afmc/md.htm and Flight Test Center Fact Sheet locate at: http://www.edwards.af.mil/library/factsheets/factsheet_print.asp?fsID=6573&page=1				A
AA.6.3. Aerospace Maintenance and Regeneration Center (AMARC) TR: AFMCMD 415 located at: https://www.afmc-mil.wpafb.af.mil/pdl/afmc/md.htm and http://www.dm.af.mil/units/amarc.asp				A
AA.7. MAINTENANCE TRAINING				
AA.7.1 Types of Training TR: AFI 36-2232 and the ETCA site located at: https://etca.randolph.af.mil/				A
AA.7.2. Training Documentation TR: AFI 36-2232, AFI 21-101, and AFI 36-2201				A
AA.7.3. Special Certification Rosters TR: AFI 21-101				A
AA.7.4. Maintenance Qualification Program (MQP) TR: AFI 36-2232, AFI 21-101 and AFPD 10-9.				A
AA.7.5. Training Forecast / Request TR: AFI 36-2232 and AFI 21-101				A
AA.7.6. Training Development Process TR: AFI 36-2232, AFI 21-101, and AETCI 36-2601				A
AA.8. PERSONNEL RESOURCE MANAGEMENT				
AA.8.1. Capability Based Manpower Standard and Logistics Composite Model (LCOM) TR: AFMAN 38-208 Volume 3, AFI 38-201, AFI 21-101 and AFTTP 3-21.1				A
AA.8.2. Unit Manpower Document (UMD) and Unit Personnel Manpower Roster (UPMR) TR: AFI 38-201, AFTTP 3-21.1 and AFI 36-2110				A
AA.9. MAINTENANCE SUPPLY				
AA.9.1. Logistics Readiness Squadron (LRS) Supply Support TR: AFI 21-101, AFMAN 23-110 (vol. 1) and AFTTP 3-21.1				A
AA.9.2. Readiness Spares Packages TR: AFMAN 23-110, AFI 21-101 and AFTTP 3-21.1				A
AA.9.3. Consumables Management TR: AFI 21-101, AFTTP 3-21.1 and AFMAN 23-110				A

`1. Tasks	**4. Proficiency Codes Used To Indicate Training/Information Provided**			
Knowledge And Technical References	**A** 3-Skill Level	**B** 5-Skill Level	**C** 7-Skill Level	
	(1) Crse	**(1)** CDC	**(1)** Crse	**(2)** CDC
AA.9.4. Equipment Items TR: AFI 21-101, AFMAN 23-110 and AFMAN 23-220				A
AA.9.5. Special Purpose Recoverable Authorized Maintenance (SPRAM) Assets TR: AFI 21-101, AFMAN 23-110 and AFI 21-103				A
AA.9.6. Supply Assets Requiring Functional Check, Calibration, or Operational Flight Programming TR: AFI 21-101 and AFMAN 23-110				A
AA.9.7. Precious Metals Recovery Program TR: AFMAN 23-110 and AFI 21-101				A
AA.9.8. Supply Points TR: AFI 21-101 and AFMAN 23-110				A
AA.9.9. Local Manufacture TR: AFI 21-101				A
AA.9.10. Repair Cycle Assets / Supply Management Products TR: AFI 23-110 and AFI 21-101				A
AA.9.11. Tail Number Bins (TNB) TR: AFI 21-101				A
AA.9.12. Maintenance Repair / Supply Delivery Priorities TR: AFI 21-101				A
AA.9.13. Classified Assets TR: AFI 21-101 and TO 00-20-1				A
AA.9.14. Hazardous Materials TR: AFI 90-821, AFI 32-7086 and AFI 21-101				A
AA.9.15. Supply Deficiency and Discrepancy Reporting TR: AFI 23-110 and AFI 21-101				B
AA.10. TECHNICAL ORDER POLICY TR: TO 00-5-1, AFI 21-101, AFI 21-303				
AA.10.1. Use of Technical Orders (TO), TO Supplements and Publications TR: AFI 21-101, 21-303 and AFTTP 3-21.1				A
AA.10.2. Technical Order Change Process TR: AFI 21-303				A
AA.10.3. Technical Order Waivers TR: AFI 21-303 and AFI 21-101				A
AA.11. MAINTENANCE REQUIREMENTS AND PROGRAMS				
AA.11.1. Cannibalization Program TR: AFI 21-101 and AFTTP 3-21.1				A
AA.11.2. Restricted Maintenance Areas TR: AFI 21-101				A
AA.11.3. Red Ball Maintenance TR: AFI 21-101 and AFTTP 3-21.1				A
AA.11.4. Aircraft/Equipment Impoundment Program TR: AFI 21-101				A
AA.11.5. Maintenance Standardization and Evaluation Program (MSEP) Purpose and Inspection Types TR: AFI 21-101 and AFTTP 3-21.1				B
AA.11.6. Foreign Object Damage (FOD) Program TR: AFI 21-101, AFI 36-2232 and AFTTP 3-21.1				A
AA.11.7. Dropped Object Prevention (DOP) Program TR: AFI 21-101				A
AA.11.8. Tool Management TR: AFI 21-101 and AFTTP 3-21.1				A
AA.11.9. Tool Accountability TR: AFI 21-101 and AFTTP 3-21.1				A

`1. Tasks	**4. Proficiency Codes Used To Indicate Training/Information Provided**			
Knowledge And Technical References	**A** 3-Skill Level	**B** 5-Skill Level	**C** 7-Skill Level	
	(1) Crse	**(1)** CDC	**(1)** Crse	**(2)** CDC
AA.11.9.1. Marking and Tool Identification TR: AFI 21-101				A
AA.11.9.2. Locally Manufactured, Developed, or Modified Tools and Equipment TR: AFI 21-101				A
AA.11.9.3. Lost Item/Tool Procedures TR: AFI 21-101				A
AA.11.10. Maintenance Recovery Team TR: AFI 21-101				A
AA.11.11. Aging Aircraft / Equipment Issues TR: AFI 21-101, DoD 5010.12-M and DMSMS Guide Book (SD-22)				A
AA.11.12. Quality Assurance Evaluators TR: AFI 21-101 and AFTTP 3-21.1				A
AA.11.13. Computer Applications TR: AF Portal, AF E-Publishing site, AF IT E-Learning site, Advanced Distributed Learning Services (ADLS) site, AF Center of Excellence for Knowledge Management (AFKM) site, Defense Travel System (DTS) training site, Air & Space Expeditionary Force Center site and the AF Center for Electronic Distribution of Systems (AFCEDS) site				A
AA.11.14. Mobility TR: AFTTP 3-21.1, AFI 10-403, AFI 21-101, and the AFMAN 10-100 (Airman's Manual)				A
AA.11.15. Crashed Damaged or Disabled Aircraft Recovery (CDDAR) Program TR: AFI 21-101				A

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