

# **AFSC 2A3X7 TACTICAL AIRCRAFT MAINTENANCE (5<sup>th</sup> GENERATION) SPECIALTY**



## **CAREER FIELD EDUCATION AND TRAINING PLAN**

**ACCESSIBILITY:** Publications and forms are available on the e-publishing website at [www.e-publishing.af.mil](http://www.e-publishing.af.mil) for downloading or ordering.

**RELEASABILITY:** There are no releasability restrictions on this publication.

**SUMMARY OF CHANGES.** As a result of the 22 July – 9 August 2019 Specialty Training Requirements Team Workshop, the STSs contained in this Career Field Education and Training Plan (CFETP) have significant changes in Core Tasks, proficiency codes, and STS line item numbers.

**CAREER FIELD EDUCATION AND TRAINING PLAN  
TACTICAL AIRCRAFT MAINTENANCE (5<sup>th</sup> GENERATION) SPECIALTY  
AFSC 2A3X7**

**Table of Contents**

<b>PART I</b>	<b>Page</b>
<b>Preface.....</b>	<b>1</b>
<b>Abbreviations/Terms Explained.....</b>	<b>2</b>
<b>Section A--General Information .....</b>	<b>4</b>
Purpose of the CFETP	
Use of the CFETP	
Coordination and Approval of the CFETP	
<b>Section B--Career Progression and Information .....</b>	<b>4</b>
Specialty Description	
Skill and Career Progression	
Apprentice Level (3)	
Journeyman Level (5)	
Craftsman Level (7)	
Superintendent Level (9)	
Training Decisions	
CCAF/Higher Education and Advanced Certification Opportunities	
Career Field Path	
Base/Unit Education and Training Manager Checklist	
<b>Section C--Skill-Level Training Requirements .....</b>	<b>11</b>
Purpose	
Special Qualification Requirements	
Apprentice Level (3)	
Journeyman Level (5)	
Craftsman Level (7)	
Superintendent Level (9)	
<b>Section D--Resource Constraints .....</b>	<b>15</b>
<b>Section E--Transitional Training Guide .....</b>	<b>15</b>

## **PART II**

<b>Section A--Specialty Training Standard .....</b>	<b>16</b>
<b>Section B--Course Objective List .....</b>	<b>17</b>
<b>Section C--Support Material .....</b>	<b>18</b>
<b>Section D--Training Course Index .....</b>	<b>18</b>
<b>Section E--MAJCOM Unique Requirements .....</b>	<b>21</b>
<b>STS Attachments</b>	
<b>1. Proficiency Code Key .....</b>	<b>22</b>
<b>2. Aircraft Maintenance Common Training Requirements .....</b>	<b>24</b>
<b>3. 2A3X7A F-22 Qualitative Requirements .....</b>	<b>35</b>
<b>4. 2A3X7B F-35 Qualitative Requirements .....</b>	<b>51</b>
<b>A. F-35 Objective Training Matrix .....</b>	<b>69</b>

---

Supersedes: This publication supersedes CFETP 2A3X7, dated 1 October 2016 and CFETP 2A3X7C1, 22 May 2018.

OPR: 362 TRS/TRR

Certified by: Mr. Tom Ameluxen, GS-12 (362 TRS/TRR)

Approved By: CMSgt Robert W. Rafferty II (HQ USAF/A4LM)

Number of Printed Pages: 76

**TACTICAL AIRCRAFT MAINTENANCE (5<sup>th</sup> GENERATION) SPECIALTY**  
**AFSC 2A3X7A/B**  
**CAREER FIELD EDUCATION AND TRAINING PLAN**

**PART I**

***PREFACE***

**1. Career Field Education and Training Plan (CFETP).** This CFETP is a comprehensive education and training document that identifies life-cycle education and training requirements, training support resources, and minimum Core Task requirements for 2A3X7, Tactical Aircraft Maintenance (5<sup>th</sup> Generation) Specialty. The CFETP will provide personnel a clear career path to success and instills rigor in all aspects of career field training. This CFETP supersedes 2A3X7 CFETP published 1 October 2016 and CFETP 2A3X7C1, 22 May 2018. Information is available at Air Force Publications website.

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

**2. CFETP Parts.** The CFETP consists of two parts. Supervisors will use both parts to plan, manage, and control training. 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.

**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, experience, 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 identifies the Specialty Training Standard (STS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) conducted training, wartime course/Core Task, and correspondence course requirements. Section B contains the course objective list and training standards supervisors will use to determine if Airmen have satisfied training requirements. Section C identifies available support materials, such as Qualification Training Package (QTP), which may be developed to support proficiency training. Section D identifies a training course index that supervisors can use to determine if resources are available to support training. Included here are both mandatory and optional courses. Section E identifies MAJCOM unique training requirements supervisors can use to determine additional training required for the associated qualification needs. At unit level, supervisors and trainers will use Part II to identify, plan, and conduct training commensurate with the overall goals of this plan.

## ***ABBREVIATIONS/TERMS EXPLAINED***

**Advanced Training.** Formal course, which provides individuals who are qualified in 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 an AFS.

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

**Career Field Education and Training Plan.** 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, eliminate duplication, and ensure training is budget defensible.

**Continuation Training.** This is additional training that exceeds minimum upgrade requirements and has an emphasis on present or future duty assignments.

**Core Task.** Tasks that the Air Force Career Field Manager (AFCFM) identifies as minimum qualification requirements within an AFS. 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.

**Electronic Training Record.** A 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. Electronic training records support base, wing, and work center level training management activities by automating training management business processes. The primary users of electronic training records will be any personnel directly involved in base level training management and certification activities. Electronic training records were developed and maintained by 754th Electronic Systems Group, Installation and Logistics, Maintenance Flight (754 ELSG/ILM) at Maxwell-Gunter AFB.

**Enlisted Specialty Training (EST).** A mix of formal AETC training and OJT training designed 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.

**Go/No Go Level.** In OJT, the stage at which an individual has gained enough skill, knowledge, and experience to either be qualified to perform an identified task without error or cannot perform the task without error.

**Initial Skills 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 AFS Code (AFSC). This training is conducted at various locations by AETC.

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

**Proficiency Training.** Proficiency training is additional training, either in-residence or exportable advanced training courses, or OJT, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

**Qualification Training.** 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 and knowledge required to do the job.

**Resource Constraints.** Resource deficiencies such as money, facilities, time, manpower, or equipment that preclude desired training from being accomplished.

**Specialty Knowledge Test (SKT).** A test based on knowledge of each Air Force Specialty. The SKT is designed to sample an Airman's knowledge of his or her entire Air Force specialty and not a specific job. Specialty Knowledge Tests are developed at the AETC Airman Advancement Division, by Senior Noncommissioned Officers with extensive practical experience in their career fields.

**Specialty Training Requirements Team (STRT).** A forum that is convened and co-chaired on a recurring basis by the AFCFM and Training Pipeline Manager, designed to review the appropriate CFETP and its attachments. The purpose is to ensure currency, accuracy and completeness of content, to include specific formal career ladder training requirements.

**Specialty Training Standard.** An Air Force document that is published as an attachment to the appropriate CFETP that describes an AFS 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 and exportable courses.

**Supplemental Training.** Formal, standardized training within an AFS that is in addition to required initial skills training and skill level upgrade training. It may support new/newly assigned equipment, methods, and/or technology.

**Upgrade Training (UGT).** 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.

**Utilization and Training Workshop (U&TW).** A forum to determine education and training requirements, bringing together the expertise to establish the most effective mix of formal and on-the-job training for each AF Specialty skill level. Also used to create or revise training standards, and set responsibilities for providing training.

## ***SECTION A - GENERAL INFORMATION***

**1. Purpose of the CFETP.** This CFETP provides the information necessary for the AFCFM, MAJCOM functional managers (MFMs), commanders, training managers, supervisors, and trainers to plan, develop, manage, and conduct an effective and efficient career field training program. It identifies major resource constraints which impact full implementation of the desired career field training process. This CFETP outlines the training that individuals in AFSC 2A3X7A/B should receive in order to develop and progress throughout their career. This CFETP identifies initial skills, upgrade, qualification, advanced, and proficiency training requirements for each skill level in the specialty.

### **2. Use of the CFETP**

**2.1.** The CFETP is the primary document used to identify life-cycle education and training requirements. It serves as a road map for career progression and outlines requirements that should be satisfied at appropriate points throughout the career path. The CFETP also specifies the mandatory task qualification requirements for award and maintenance of an AFSC. AETC training personnel will develop or revise formal resident, non-resident, field, 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. 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. Each individual will complete the mandatory training requirements specified in this plan. The list 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 for the CFETP. The AFCFM for AFSC 2A3X7 will initiate an annual review of this document to ensure currency and accuracy. MAJCOM representatives and AETC training personnel will identify and coordinate on the career field training requirements. Using the list of courses in Part II, they will eliminate duplicate training.

## ***SECTION B - CAREER PROGRESSION INFORMATION***

### **1. Specialty Description:**

**1.1. Specialty Summary.** Maintains aircraft, support equipment, forms, and records. Performs and supervises as a section chief, production superintendent, flightline expeditor, crew chief, repair and reclamation technician, quality assurance inspector, and maintenance support functions. Related DoD Occupational Subgroup: 160000.

**1.2. Duties and Responsibilities.** Refer to Air Force Enlisted Classification Directory (AFECD) Parts I and II located on the Air Force Personnel Services page in the Air Force Portal. Use the following address to access the AFECD: [https://gum-crm.csd.disa.mil/app/answers/detail/a\\_id/7504/kw/afecd/r\\_id/100169](https://gum-crm.csd.disa.mil/app/answers/detail/a_id/7504/kw/afecd/r_id/100169) or use the following instructions to

access the AFECD: Enter the Air Force Portal, in the search box enter “AFECD” and when results are displayed, click-on “AFECD - Air Force Enlisted Classification Directory” and log-in.

**2. Skill and 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, develop, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure each individual receives viable training at appropriate points in their career. Use Table 5.1 *Enlisted Career Path* in conjunction with information below to manage career field skill progression.

**2.1. Apprentice (3) Level.** Upon completion of initial skills training, a trainee will work with a trainer to enhance their knowledge and skills. They will utilize task qualification training and available exportable courses for continued advancement. Once task qualified, a trainee may perform the task unsupervised. The 1-and 3-skill levels are assigned shred identifiers for initial-skills course scheduling and assignment purposes. Shred identifiers and Special Experience Identifiers (SEI) codes are provided in the AFECD.

**2.2. Journeyman (5) Level.** Individuals must complete formal 5-level OJT. This training involves completion of identified 5-level Core Task qualification training requirements. Available proficiency/supplementary training should be completed as early as duty permits. Five-levels are assigned shred identifiers for scheduling and assignment purposes, and may be assigned job positions such as quality assurance and various staff positions. Five-levels will be considered for appointment as unit trainers. Individuals may use the SKT references found at <https://www.omsq.af.mil/> to prepare for testing under the Weighted Airman Promotion System (WAPS). They should continue their education toward an associate's or higher educational degree from the Community College of the Air Force (CCAF) or other accredited institution.

**2.3. Craftsman (7) Level.** Individuals must complete formal 7-level OJT. This training involves completion of identified 7-level Core Task qualification training requirements. Available proficiency/supplementary training should be completed as early as duty permits. A craftsman can expect to fill various supervisory and management positions such as shift leader, element NCOIC, flight/section chief, and task certifier. They can also be assigned to work in staff positions. They should continue their education toward an associate's or higher educational degree from CCAF or other accredited institution. Once promoted to TSgt, the shred identifier drops from the Control AFSC and the individual can be assigned to other 5<sup>th</sup> Generation fighter aircraft.

**2.4. Superintendent (9) Level.** Individuals promoted to SMSgt are required to attend the Senior Noncommissioned Officer Academy. Additional training in the areas of budget, manpower, resources, and personnel management should be pursued through continuing education. Completion of college courses in the pursuit of a higher-level educational degree is also recommended. Once promoted to SMSgt, an individual can be assigned to any legacy, 5th generation, or remotely piloted aircraft unit.

**3. Training Decisions.** The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Tactical Aircraft (5<sup>th</sup> Generation) Maintenance (2A3X7) career field. The spectrum includes a strategy for when, where, and how to meet these training requirements. The strategy should be apparent and affordable to reduce duplication of training and

eliminate a disjointed approach to training. The following training decisions were made by MFMs and SMEs at the career field STRT held 22 July – 9 August 2019 at Sheppard AFB, TX.

**3.1. Initial Skills.** Changes were made to initial skills training. Several STS line items not identified previously were identified for inclusion in the mission-design-series (MDS) specific STS attachments and proficiency codes were assigned.

**3.2. Five-Level Upgrade Requirements.** Changes were made to 5-level Core Task upgrade requirements. Field Training Detachments (FTDs) will provide advanced aircraft system training.

**3.3. Seven-Level Upgrade Requirements.** New SSgts will complete advanced aircraft system training provided by FTDs.

**3.4. Proficiency/Continuation Training (see pg 2/3).** Additional knowledge and skill requirements, which are not taught through initial skills or upgrade training, are accomplished by unit training or FTD. The purpose of continuation training is to provide additional training, exceeding minimum upgrade training requirements, with emphasis on present and future duty positions. To provide additional training in this area, MAJCOMs must develop a continuation training program that ensures individuals in the aerospace maintenance career field receive the necessary training at the appropriate point in their career. The training program will identify both mandatory and optional training requirements. Refer to Part II, Section D, Training Course Index, of this CFETP for a listing of available AETC supplementary training courses.

**4. CCAF/Higher Education and Advanced Certification Opportunities.** Higher education and advanced certification is a personal choice that is encouraged for the professional development of the entire enlisted force. Listed below are some current opportunities:

**4.1. CCAF Academic Programs.** Enrollment in CCAF occurs upon completion of Basic Military Training (BMT). CCAF provides the opportunity to obtain an Associate in Applied Sciences Degree.

**4.1.1. Degree Requirements:** 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
General Education.....	15
Program Elective.....	15
Technical Education; Leadership, Management, and Military Studies; or General Education	
Total.....	60

**4.1.1.1. Technical Education (24 semester hours).** A minimum of 12 semester hours of Technical Core subjects and courses must be applied and the remaining semester hours applied from Technical Core or Technical Elective subjects and courses. Completion of the initial skills resident training at Sheppard AFB satisfies all or part of the technical education requirement.

**4.1.1.2. Leadership, Management, and Military Studies (6 semester hours).** Professional military education and/or civilian management courses.

**4.1.1.3. 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*.

**4.1.1.4. Program Elective (15 semester hours).** Satisfied with applicable Technical Education; Leadership, Management, and Military Studies; or General Education subjects and 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 degree for this specialty.

**4.1.2. 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.

**4.2. AETC Instructor.** Individuals desiring to become an AETC Instructor should be actively pursuing an associate's degree. Special Duty Assignment (SDA) requires an AETC Instructor candidate to have a CCAF degree or be within one year of completion. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools. An AETC instructor can also be awarded an Associates of Applied Science, Instructor of Technology and Military Science degree.

**4.3. 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. The program consists of OJT, three Air University Online A&P Specialized Courses, documented evidence of 30 months practical experience in airframe and powerplant systems, and 4 years time-in-service. 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 <https://afvec.us.af.mil/afvec/Public/COOL/SearchCredentials.aspx>. The CCAF currently awards 30 semester hours for the FAA A&P certification and 18 semester hours for the FAA Airframe or Powerplant certification.

**4.4. 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 <https://afvec.us.af.mil/afvec/Public/COOL/SearchCredentials.aspx>.

## **5. Career Field Path:**

**NOTE:** For the latest information go to USAF Career Path Tool at <https://myvector.us.af.mil/myvector/Home>.

**5.1. Enlisted Development Team.** The Enlisted Development Team (EDT) is the deliberate force development steering group for the Maintenance Management Career Fields and provides recommendations for the best qualified SNCOs into key leadership/development positions across the Air Force. The EDT results will be used to influence future assignments as they relate to aircraft maintenance Key Developmental Positions (KDPs). Example KDPs include the MAJCOM Weapons System Team Managers, Aircraft Battle Damage Repair/Expeditionary Depot Maintenance Functional Area Manager to name a few. The EDT also identifies other developmental opportunities for Maintenance Management SNCOs to facilitate their deliberate development. These recommendations or vectors are the EDT's collective recommendations for experience level, training and/or education opportunity, or position type that a member should be considered and seek out for professional growth. Vectoring will consist of recommendations for identified positions (i.e. development, leadership and strategic positions) within the Maintenance Management construct for which a member should be considered in subsequent assignments, but will not identify a specific location of assignment.

**5.2. Enlisted Career Path.** Table 5.1 identifies career milestones for the 2A3X7A/B Air Force Specialty.

Table 5.1 Enlisted Career Path (Airman Promotion Reference AFI 36-2670)				
Education and Training Requirements	Grade Requirements			
	Rank	Average Sew-on	Earliest Sew-on	High Year of Tenure (HYT)
<b>Basic Military Training School</b>				
<b>Apprentice Technical School (3-Skill Level)</b>	Amn A1C	6 months 10 months		
<b>Upgrade to Journeyman (5-Skill Level)</b> - Complete all appropriate 5- level Core Tasks.	Amn A1C SrA	10 months 3 years	28 months	8 Years
<b>Airman Leadership School (ALS)</b> -Must be a SrA with 48 months time in service or be an SSgt Selectee. -Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	<b>Trainer</b> - Qualified and certified to perform the task to be trained. - Must attend formal AF Training Course. - Recommended by the supervisor.			
	<b>Certifier</b> - Be a SSgt select with a 5- skill level or civilian equivalent. - Must attend AF Training Course. - Be a person other than the trainer except for AFSCs, duty position, units and/or work centers with specialized training standardization and certification requirements.			
<b>Upgrade To Craftsman (7-Skill Level)</b> -Minimum rank of SSgt (Sel). -Time in training is determined by the Career Field Manager. -Complete Career Development Course if applicable. -Attend Craftsman course, if applicable.	SSgt (Sel)	7.5 years	3 years	15 Years
<b>Noncommissioned Officer Academy (NCOA)</b> - Must be a TSgt or TSgt Selectee. - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only).	TSgt	12.5 years	5 years	20 Years
	MSgt	16 years	8 years	24 Years
<b>USAF Senior NCO Academy</b> - Must be a SMSgt or SMSgt Selectee. - Resident graduation is a prerequisite for SMSgt sew-on (Active Duty Only).	SMSgt	19.2 years	11 years	26 Years
<b>Upgrade To Superintendent (9-Skill Level)</b> - Minimum rank of SMSgt.	CMSgt	21.5 years	14 years	30 Years

**5.3. Base/Unit Education and Training Manager Checklist:**

<b>Table 5.2. Base/Unit Education and Training Manager Checklist</b>		
<b>Requirements for Upgrade to:</b>	<b>Y</b>	<b>N</b>
<b>Journeyman</b> <ul style="list-style-type: none"><li>- Does apprentice possess 2A337A/B AFSC?</li><li>- Has apprentice completed all appropriate 5-level Core Tasks identified in the CFETP?</li><li>- Has apprentice met mandatory requirements listed in specialty description, ECD, and CFETP?</li><li>- Has apprentice been recommended by their supervisor?</li></ul>		
<b>Craftsman</b> <ul style="list-style-type: none"><li>- Does journeyman possess 2A357A/B AFSC?</li><li>- Has journeyman achieved the rank of SSgt?</li><li>- Has journeyman completed all appropriate Core Tasks identified in the CFETP?</li></ul>		

TO: Squadron/CC

FROM: Squadron Training Manager

SUBJECT: Upgrade Trainee

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

---

Training Manager

---

Supervisor

## ***SECTION C – SKILL-LEVEL TRAINING REQUIREMENTS***

**1. Purpose.** Skill level training requirements in this 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 tasks and knowledge training requirements are identified in the STS at Part II, Sections A, B, and D of this CFETP.

**1.1** USAF policy has changed to allow Air Force Career Field Managers to set time in training requirements. Aggregate data for the 2AXXX AFSCs shows the average of all upgrade core tasks completion at 8 months for 5-level and 3 months for 7-level. Therefore, Time in Training requirements (upgrade and retraining) are as below:

5 level - RegAF: no minimum/15 month maximum. ARC: no minimum/no maximum

7 level - RegAF: no minimum/8 month maximum. ARC: no minimum/no maximum

RegAF maximum time in training for 5-level is 15 months and 7-level is 8 months. When training exceeds the maximum, commanders, UTMs, supervisors, will conduct a training progress review with the trainee to determine the root cause. This training progress review is in addition to the review required IAW AFI 36-2670 at 24 months. In the 2AXXX AFSC, it is imperative training progress is evaluated early on as it leads to key decisions impacting people and mission. UTMs with commander's approval will place members in Training Status Code T (failure to progress) for a period of 90 days, then accomplish a re-evaluation. If members are not complete with training required after 90 days, commanders will determine whether to: 1. Waive maximum time in training and return the member to duty, 2. Retrain member into another AFSC, or 3. Separate the member for failure to progress. UTMs guide commanders with the appropriate use of training status codes when there are any training progression concerns.

**1.2** The maintenance badge will be awarded in conjunction with skill-level upgrade. Maintainers currently wearing the badge that do not meet this new criteria may continue to wear the badge, essentially grandfathered-in, but all future award or upgrade of the badge will be at the prescribed skill-level:

Basic: Wear the basic badge after award of the 5-skill-level

Senior: Wear the senior badge after award of the 7-skill-level

Master: Wear the master badge after award of the 9-skill-level.

See AFI 36-2903 for guidance on the wearing of occupational badges.

## **2. Specialty Qualification Requirements.**

### **2.1. Apprentice Level Training (3):**

**2.1.1. Specialty Qualification.** This information will be located in the official specialty description in the AFECD.

**2.1.1.1. Knowledge.** Knowledge is mandatory of: principles applying to aircraft systems, flight theory, hydraulic principles, electrical theory, principles, concepts, and application of maintenance directives and data reporting, using technical data, technical order use. Air Force supply and procedures, and proper handling, use, and disposal of hazardous waste and materials.

**2.1.1.2. Education.** For entry into this specialty completion of high school or equivalent is mandatory. Completion of related vocational courses is highly desirable.

**2.1.1.3. Training.** For award of AFSC 2A337A/B, completion of a suffix specific basic aircraft maintenance course, as applicable is mandatory.

**2.1.1.4. Experience.** There is no experience necessary for entry into AFSC 2A337A/B.

**2.1.1.5. Other.** For entry into this specialty normal color vision as defined in AFI 48-123, *Medical Examination and Standards* is required. See Attachment 4 of the AFECD for additional entry requirements. Must maintain local network access IAW AFI 17-130, *Cybersecurity* and AFMAN 17-1301, *Computer Security*. Specialty requires routine access to Secret material or similar environment. For award and retention of AFSC 2A3X7, completion of a current National Agency Check, Local Agency Checks and Credit (NACLC) according to DoDMAN5200.02\_AFMAN16-1405, *Personnel Security Program Management*.

**NOTE:** Award of the 3-skill level without a completed NACLC is authorized provided an interim Secret security clearance has been granted according to DoDMAN5200.02\_AFMAN16-1405.

**2.1.2. Training Sources.** Formal AETC initial skills courses provide the required knowledge and task proficiency training for award of the 3-skill level. Training includes common maintenance requirements (fundamentals), system theory and operation, system components, component removal and installation, introduction to maintenance concepts, general flight line maintenance practices, use of technical publications, maintenance documentation, and Aerospace Ground Equipment (AGE)/Support Equipment (SE) familiarization and use.

**2.1.3. Implementation.** Upon graduation from BMT, Airmen are assigned to the 82d Training Wing, 362d Training Squadron, to attend formal technical training appropriate to his or her end assignment and type aircraft. This training begins with fundamental maintenance training common to all aircraft maintenance apprentices within the specialty. This generic phase of training is followed by aircraft-specific maintenance training. Successful completion of formal technical training (listed in Part II, section D paragraph 2) results in the award of the 3-skill level.

## **2.2. Journeyman Level Training (5):**

**2.2.1. Specialty Qualification.** This information is derived from the official specialty description in the AFECD.

**2.2.1.1. Knowledge.** In addition to the 3-level qualifications, a 5-level must possess the knowledge and skills necessary to maintain aircraft systems and associated systems. An individual must be task qualified on aircraft inspections, servicing, ground handling, troubleshooting, component

removal/repair/installation, and system component operational checks. Journeymen perform operational checks, component repair, and use and maintenance of test and support equipment. Individuals can apply the proper handling, use, and disposal of hazardous waste and materials IAW federal and local environmental standards.

**2.2.1.2. Education:** There are no formal education requirements for upgrade to AFSC 2A357A/B. However, progress toward a CCAF Associate's Degree or equivalent is highly encouraged.

**2.2.1.3. Training:** Completion of appropriate Core Tasks specified in the STS is mandatory.

**2.2.1.4. Experience.** Qualification in and possession of AFSC 2A337 with appropriate shred is required. Completion of the specified STS Core Tasks is required, as well as duty position requirements identified by the supervisor.

**2.2.1.5. Other.** For entry into this specialty, normal color vision as defined in AFI 48-123, *Medical Examination and Standards* is required. See Attachment 4 of the AFECD for additional entry requirements. Must maintain local network access IAW AFI 17-130, *Cybersecurity* and AFMAN 17-1301, *Computer Security*. Specialty requires routine access to Secret material or similar environment. For award and retention of AFSC 2A3X7, completion of a current National Agency Check, Local Agency Checks and Credit (NACLC) according to DoDMAN5200.02\_AFMAN16-1405, *Personnel Security Program Management*.

**2.2.3. Implementation.** The units utilizing this STS and exportable courses perform training to the 5-level. Upgrade to the 5-level requires completion of appropriate 5-level Core Tasks as identified in the STS for one MDS.

**2.2.4. Supervisor/Training Manager Input.** Utilize Table 5.2 *Base/Unit Education and Training Manager Checklist* as applicable to facilitate upgrade actions.

### **2.3. Craftsman Level Training (7):**

**2.3.1. Specialty Qualification.** This information is derived from the official specialty description in the AFECD.

**2.3.1.1. Knowledge.** In addition to the 5-level qualifications, an individual must possess advanced skills and knowledge of theory, concepts, and principles of aircraft maintenance. The 7-level must be able to supervise and train personnel to maintain 2A3X7A/B systems. They must be able to plan, schedule, and organize maintenance to ensure effective utilization of available resources. Qualification is required on advanced repair, inspection, troubleshooting, and diagnostic techniques. Historical documentation analysis is also required for all 7-levels.

**2.3.1.2. Education.** There are no additional education requirements beyond those defined for the apprentice level. However, progress toward a CCAF Associate's Degree or equivalent is highly encouraged.

**2.3.1.3. Training.** Completion of appropriate Core Tasks specified in the STS is mandatory.

**2.3.1.4. Experience.** Completion of appropriate 7-level Core Tasks as identified in the STS for one MDS, and qualification in and possession of AFSC 2A357A/B, as well as duty position requirements identified by the supervisor.

**2.3.1.5. Other.** For entry into this specialty, normal color vision as defined in AFI 48-123, *Medical Examination and Standards* is required. See Attachment 4 of the AFECD for additional entry requirements. Must maintain local network access IAW AFI 17-130, *Cybersecurity* and AFMAN 17-1301, *Computer Security*. Specialty requires routine access to Secret material or similar environment. For award and retention of AFSC 2A3X7, completion of a current National Agency Check, Local Agency Checks and Credit (NACLC) according to DoDMAN5200.02\_AFMAN16-1405, *Personnel Security Program Management*.

**2.3.2. Training Sources.** Seven-level upgrade training will be completed and conducted by certified trainers using AF Core Tasks and unit/MAJCOM specific courses.

**2.3.3. Supervisor/Training Manager Input.** Utilize Table 5.2 *Base/Unit Education and Training Manager Checklist* as applicable to facilitate upgrade actions.

**2.3.4. Implementation.** Units utilize the STS to perform training to the 7-level. Upgrade to the 7-level requires completion of appropriate Core Tasks as identified in the STS for one MDS, and promotion to SSgt.

## **2.4. Superintendent Level Training (9):**

**2.4.1. Specialty Qualification.** This information is derived from official specialty description in the AFECD.

**2.4.1.1. Knowledge.** Knowledge is mandatory of: electrical and mechanical principles applying to aircraft and SE; concepts and application of maintenance directives; maintenance data reporting; interpreting and use of maintenance data reports and technical orders; Air Force supply procedures; resource management; and proper handling, use, and disposal of hazardous waste and materials.

**2.4.1.2. Education.** Not used.

**2.4.1.3. Training.** Not used.

**2.4.1.4. Experience.** For award of AFSC 2A390, qualification in and possession of AFSC 2A373, 2A374, 2A375, 2A377, 2A378 is mandatory. Experience is mandatory in the following areas: the management of maintenance efforts on aircraft and aircraft systems; evaluating maintenance, interpreting and resolving technical problems; analyzing system and component failures and inspection results; and the management and projection of funds to support maintenance efforts.

**2.4.1.5. Other.** For award and retention of these AFSCs: Must maintain local network access IAW AFI 17-130, *Cybersecurity* and AFMAN 17-1301, *Computer Security*. Specialty requires routine access to Secret material or similar environment. For award and retention of AFSCs 2A300/2A390, completion

of a current National Agency Check, Local Agency Checks and Credit (NACLC) according to DoDMAN5200.02\_AFMAN16-1405, *Personnel Security Program Management*.

**2.4.2. Training Sources.** No formal training is required. Qualification training and experience inherent in career specialty job performance are desired sources of training.

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

#### ***SECTION D - RESOURCE CONSTRAINTS***

*There are no resource constraints identified for training in this AFSC.*

#### ***SECTION E - TRANSITIONAL TRAINING GUIDE***

*There is currently no transition training requirement. This area is reserved.*

## **PART II**

### ***SECTION A – SPECIALTY TRAINING STANDARD***

**1. Implementation.** These STS attachments will be used for technical training provided by AETC for classes beginning after 1 April 2021.

**2. Purpose.** As prescribed in AFI 36-2670, this STS:

**2.1. Column 1 (Task, Knowledge, and Technical Reference)** lists 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. Column 2 (Core Tasks)** identifies, by either 5 or 7, specialty-wide training requirements. Core Tasks identified with a 5R or 7R are optional for the AFRC Traditional Reservist (TR) and the ANG Drill Status Guardsman (DSG); for full-time members, Core Tasks are required. 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 that 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 MDS aircraft, upgrade trainees need only complete Core Tasks on a single MDS. MFMs, unit commanders, and/or supervisors may require trainees to complete Core Task training on additional MDS 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 MDS aircraft. All units are bound by the requirements in this CFETP and will accommodate Core Task trainees from other units.

**2.3. Column 3 (Certification for OJT)** provides certification for OJT and is used to record completion of tasks and knowledge training requirements. Use IMDS/G081 or electronic training records to document technician qualifications, if available. Task certification must show a certification or completed date.

**2.4. Column 4 (Proficiency Codes)** shows formal training and correspondence course requirements. Also shows the proficiency to be demonstrated on the job by the graduate as a result of training on the task and knowledge and the career knowledge provided by the correspondence course.

**3. Qualitative Requirements.** Attachment 1 contains the proficiency code key used to indicate the level of training and knowledge provided by resident training.

**4. Job Qualification Standard.** The STS becomes a Job Qualification Standard (JQS) for OJT when placed in AF Form 623, *On-The-Job Training Record*, and used according to AFI 36-2670. 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:

**4.1. Documentation.** Document and certify completion of training IAW AFI 36-2650 and AFI 36-2670. Units converted to electronic training records will use this system to document training. IMDS or G081 will continue to be used to document ancillary training and other training currently maintained in these data systems. Use of Part II and Attachments 1 and 2 of this CFETP are mandatory in individual training records where paper training records are the primary method of documenting training.

**4.1.1. Transcribing from Old CFETP to New CFETP.** All AFJQs 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 36-2650 and AFI 36-2670.

**5. STS.** A guide for development of promotion tests used in the WAPS. 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 Enlisted Promotions References and Requirements Catalog. Individual responsibilities are in AFMAN 36-2664, *Personnel Assessment Program*. WAPS is not applicable to the Air National Guard or Air Force Reserve.

**6. Recommendations.** Report unsatisfactory performance of individual course graduates to the AETC Training Manager at 362 TRS, 613 10<sup>th</sup> Ave, Sheppard AFB TX, 76311-2352, DSN 736-1825, or the 82TRG Customer Service Information Line at DSN 736-5236 or e-mail: 82trgcsil@us.af.mil Please reference specific STS paragraphs.

## ***SECTION B - COURSE OBJECTIVE LIST (COL)***

**1. Introduction.** 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 (i.e. TOs, type of equipment, etc). The behavior is the observable portion of the objective (i.e. perform an operational check). The standard is the level of performance that is measured to ensure the STS proficiency code level is attained. AETC course objectives and associated information are published in the Plan of Instruction (POI) for each of the courses identified in Section D, below, *Training Course Index*.

**2. Measurement.** Each objective is indicated as follows: **W** indicates task or subject knowledge, which is measured using a written test. **PC** indicates required task performance, which is measured with a performance progress check. **PC/W** indicates separate measurement of both knowledge and performance elements using a written test and a performance progress check.

**3. Standard.** The minimum standard for written examinations is 70%. Standards for performance measurement are indicated in the objective and delineated on the individual progress check checklist. The checklist is used by the instructor to document each student's progress, on each task. 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.

**4. Proficiency Level.** Review column 4A of the STS to determine the proficiency level of a particular task or knowledge item. Review the course objective list to determine which STS item the objective supports. Review the proficiency code key in the STS Attachment 1 of this CFETP for an explanation of the proficiency codes. Most task performance is taught to the “2b” proficiency level which means the students 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. For tasks that are taught to the “3c” proficiency level, students can do all parts of the task and only require a spot check on completed work (competent). The student can also identify why and when a task must be done and why each step is needed.

**5. Course Objectives List.** A detailed listing of initial skills or craftsman courses are listed in Section D tables 2.1 and 2.2 and a complete list of objectives may be obtained by submitting a written request to the identified course OPR in Section D, paragraph 1. Course descriptions can be found on line in the Education and Training Course Announcements (ETCA). The URL for ETCA is:  
<https://cs2.eis.af.mil/sites/app10-ETCA>.

### ***SECTION C - SUPPORT MATERIAL***

**1. Support Material.** Interactive Courseware (ICW) is available from the 367 TRS/TRSS at Hill AFB, Utah. Visit their web site at <https://367trss.hill.af.mil/Home/Index> to view available courses. Their customer service number is DSN 586-4014. To request ordering information on hardware, your MAJCOM training POC (for ACC, AMC, and ANG) is the first stop. For personnel in other MAJCOMs, contact them directly and they will provide you the information required for purchasing the item through them.

### ***SECTION D - TRAINING COURSE INDEX***

**1. Purpose.** This section of the CFETP identifies training courses available for the 2A3X7 specialty and shows how the courses are used by each MAJCOM in their career field training programs. For further information on the following courses, contact the OPR as indicated:

OPR: 362 TRS/TRR	359 TRS/TRR	372 TRS/TRR
613 10th Avenue	1005 Nomad Way	917 Missile Rd, Suite 200
Sheppard AFB, TX 76311	Eglin AFB, FL 32542	Sheppard AFB, TX 76311
DSN 736-1825	DSN 755-3548	DSN 736-4794

For questions regarding training courses or STS content, contact the course training manager or the respective Training Group (TRG) Customer Service Information Line:

82 TRG: DSN 736-5236  
e-mail: 82trgcsil@us.af.mil

982 TRG: DSN 736-4687

## 2. Air Force In-resident Courses:

**NOTE:** Unless otherwise stated in the Course Title block below, airframe specific STS elements are trained in the course(s) listed in the 2A3X7 Course Objective Training Matrix, Attachment A.

<b>Table 2.1 Enlisted Initial Skills Courses</b>					
<b>Course Number</b>	<b>Course Title</b>	<b>Location</b>	<b>OPR</b>	<b>USER</b>	<b>Course Length</b>
J3ABR2A337A027D/ J3AQR2A337A027D	Tactical Aircraft Maintenance Apprentice, F-22 (Attachments 2 and 3)	Sheppard AFB, TX	362 TRS	USAF	67
J3AQR2A337B028C	Tactical Aircraft Maintenance Apprentice, F-35 (Attachment 2 only)	Sheppard AFB, TX	362 TRS	USAF	24
J3AQP2A337B028B	Tactical Aircraft Maintenance Apprentice (F-35)	Eglin AFB, FL	359 TRS	USAF	31
J3ABP2A337B(E/L)28C	Tactical Aircraft Maintenance Apprentice (F-35)	Eglin AFB, FL/ Luke AFB, AZ	372 TRS	USAF	40

### Right Time Training

Right Time Training (RTT) is a new approach that focuses on providing new Airmen the right skill set, at the right time in their career, and at the right location for them to make immediate impact for mission execution. Upon completion of the RTT course, Airmen will be capable of completing targeted maintenance tasks to support daily sortie generation.

Under the RTT construct, Active Duty Airmen will be awarded their 3-level qualification in their respective AFSC prior to departing Sheppard AFB through a Type-3 course. After completion of this course, the Airmen will subsequently attend targeted weapons system training during a required Type-4 RTT course taught by the Field Training Detachment (FTD) at their first permanent duty location. Active Duty en-route Airmen, installations with low flow 3-level crew chiefs, and Airmen assigned where there are no FTDs located will attend Type-4 RTT courses at regionalized locations.

ANG and AFRC students will be awarded their 3-level qualification through a Type-4 FTD course at regionalized locations.

RTT tasks are selected by the Lead MAJCOM in coordination with using MAJCOMs and incorporated into a Type-4 FTD course for each weapons system. The course will be identified on each command's MAJCOM Mandatory Course Listing (MMCL), which are developed and approved per weapons system by MAJCOM Functional Managers (MFM). Once the MMCL requirements are established by the MFM, the FTD will train and qualify Airmen within each respective aircraft RTT course.

When available, the following courses are required for all Active Duty Airmen in their respective AFSC/Shred:

1. J4AMP2A337A027X, F-22 Tactical Aircraft Maintenance (Right Time Training)
2. J4AMP2A337B028X, F-35 Tactical Aircraft Maintenance (Right Time Training)

When available, the following courses are required for all ANG and AFRC in their respective AFSC:

1. J4ABP2A337A027X, F-22 Tactical Aircraft Maintenance (Right Time Training)
2. J4ABP2A337B028X, F-35 Tactical Aircraft Maintenance (Right Time Training)

**NOTE:** For further information on the in-residence courses, contact the OPR as indicated.

OPR: 362 TRS/TRR	372 TRS	373 TRS
613 10th Avenue	917 Missile Rd, Suite 200	917 Missile Rd, Suite 200
Sheppard AFB, TX 76311	Sheppard AFB, TX 76311	Sheppard AFB, TX 76311
DSN 736-1825	DSN 736-4797	DSN 736-4750

Website: <https://cs2.eis.af.mil/sites/app10-ETCA>

<b>Table 2.2 Supplemental Courses</b>			
<b>Supplemental Course Number</b>	<b>Course Title</b>	<b>OPR</b>	<b>User</b>
J3AZR2AXXX 0W1B	Weight and Balance Practical	362 TRS	USAF
J7AZT2AXXX 0W1B	Weight and Balance Practical (MTT)	362 TRS	USAF
J3AAR2AXXX 048B	Crash Damaged, Disabled Aircraft Recovery	362 TRS	USAF

OPRs: 362 TRS/TRR  
613 10th Avenue  
Sheppard AFB, TX 76311-2352  
DSN 736-1825

### 3. Exportable Courses:

367 TRSS course information can be found on their web-site: <https://367trss.hill.af.mil/Home/Index>

The following course can be found on the ETCA website, available through AETC Advanced Distributed Learning Service (ADLS):

OPR: 362 TRS/TRR  
613 10th Avenue  
Sheppard AFB, TX 76311-2352  
DSN 736-1825

<b>Table 3.1 Exportable Courses</b>			
<b>Course Number</b>	<b>Course Title/Media</b>	<b>OPR</b>	<b>User</b>
J6ANW2AXXX 0W1A	Weight and Balance (General)	362 TRS	USAF

**4. Courses Under Development/Revision.** Courses currently under development are the Maintenance Functional Development, Quality Assurance Aircraft and Career Development Program courses.

### ***SECTION E - MAJCOM UNIQUE REQUIREMENTS***

For MAJCOM unique requirements, refer to the MAJCOM mandatory course lists.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

WARREN D. BERRY  
Lieutenant General, USAF  
DCS/Logistics, Engineering and Force Protection

### **5 STS Attachments**

1. Proficiency Code Key
2. Aircraft Maintenance Common Training Requirements
3. 2A3X7A, F-22 Qualitative Requirements
4. 2A3X7B, F-35 Qualitative Requirements
- A. F-35 Objective Training Matrix

## Proficiency Code Key

Name Of Trainee		
Printed Name ( <i>Last, First, Middle Initial</i> )	Initials (Written)	SSAN (last four only)
Printed Name Of Training/Certifying Official And Written Initials		
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	
<i>N/I</i>	<i>N/I</i>	

### QUALITATIVE REQUIREMENTS

Proficiency Code Key		
	Scale Value	Definition: The individual
Task Performance Levels	1	<b>IS EXTREMELY LIMITED</b> (Can do simple parts of the task. Needs to be told or shown how to do most of the task.)
	2	<b>IS PARTIALLY PROFICIENT</b> (Can do most parts of the task. Needs only help on hardest parts.)
	3	<b>IS COMPETENT</b> (Can do all parts of the task. Needs only a spot check of completed work.)
	4	<b>IS HIGHLY PROFICIENT</b> (Can do the complete task quickly and accurately. Can tell or show others how to do the task.)
*Task Knowledge Levels	a	<b>KNOWS NOMENCLATURE</b> (Can name parts, tools, and simple facts about the task.)
	b	<b>KNOWS PROCEDURES</b> (Can determine step-by-step procedures for doing the task.)
	c	<b>KNOWS OPERATING PRINCIPLES</b> (Can identify why and when the task must be done and why each step is needed.)
	d	<b>KNOWS ADVANCED THEORY</b> (Can predict, isolate, and resolve problems about the task.)
**Subject Knowledge Levels	A	<b>KNOWS FACTS</b> (Can identify basic facts and terms about the subject.)
	B	<b>KNOWS PRINCIPLES</b> (Can identify relationship of basic facts and state general principles about the subject.)
	C	<b>KNOWS ANALYSIS</b> (Can analyze facts and principles and draw conclusions about the subject.)
	D	<b>KNOWS EVALUATION</b> (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 along with proficiency codes to show that training is required but not given due to limitations in resources (3c/b, 2b/b, 2b/- etc.).

**Note:** All tasks and knowledge items taught in the initial skills course are trained during war time.

This Page Intentionally Left Blank

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
NOTE 1: Users are responsible for annotating training references pending STS revision. NOTE 2: All task/knowledge items taught in the initial skills course are trained during war time. NOTE 3: Items in column 2 identified with an 5R or 7R are optional for the AFRC Traditional Reservist (TR) and the ANG Drill Status Guardsman (DSG); for full-time members, Core Tasks are required.											
A2.1.	CAREER LADDER PROGRESSION TR: AFI 36-2101										
A2.1.1	Progression in career ladder							A			
A2.1.2	Duties of AFS							A			
A2.2.	OPERATIONS SECURITY (OPSEC) VULNERABILITY OF AFSC TR: AFI 10-701										
A2.2.1	Purpose of OPSEC							A			
A2.3.	AF CONSOLIDATED OCCUPATIONAL SAFETY INSTRUCTION TR: AFI 21-101, AFMANs 91-203 and 11-218; TOs 00-25-172, 1-1-691, and applicable aircraft TOs										
A2.3.1	Housekeeping consistent with safety of personnel and equipment							A			
A2.3.2.	Safety precautions pertaining to aircraft maintenance										
A2.3.2.1	Engine air intake and exhaust							A			
A2.3.2.2	High intensity sound							A			
A2.3.2.3	Turbine, propeller, and rotor plane of rotation							A			
A2.3.2.4	Radio frequency radiation							A			
A2.3.2.5	Ground handling of aircraft							A			
A2.3.2.6	Hot brakes							A			
A2.3.2.7	Use of tools and equipment							A			
A2.3.2.8	Servicing aircraft systems							A			
A2.3.2.9	Cleaning agents							A			
A2.3.2.10	Solvents							A			
A2.3.2.11	Lubricants							A			
A2.3.2.12	High pressure gasses							A			
A2.3.2.13	Aircraft explosive equipment							A			
A2.3.2.14	Composite materials							A			
A2.3.2.15	Maintenance resource management							-			
A2.3.2.16	Electrostatic hazards, static grounding and bonding TR: TOs 00-25-172 and 00-25-234							A			
A2.3.2.17	Purpose of fall protection/prevention							A			

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.3.3. Portable ground fire extinguishers TR: AFI 32-2001; TO 00-25-172											
A2.3.3.1 Perform pre-use inspection	5							2b			
A2.3.3.2 Position								-			
A2.3.3.3 Operate								-			
A2.3.4 Aircraft Damage Prevention											
A2.3.4.1 Foreign Object Damage (FOD) prevention program								A			
A2.3.4.2 Dropped object prevention program								A			
A2.3.5. Hazardous chemicals TR: AFI 90-821 and AFMAN 91-203											
A2.3.5.1 Use								A			
A2.3.5.2 Disposal								A			
A2.3.5.3 Hazard communication training program								-			
A2.3.5.4 Hazardous material handling procedures								A			
A2.3.6 AFTO Form 492, Mx Warning Tag TR: TO 00-20-1								A			
<b>A2.4. MAINTENANCE DIRECTIVES, REFERENCES, &amp; INSTRUCTIONS</b> <b>TR: AFI 33-360; TO 00-5 series as applicable</b>											
A2.4.1 TO system								A			
A2.4.2 Air Force manuals and instructions								A			
A2.4.3 Use technical orders (except HH-60)								1b			
A2.4.4 TO improvement reporting								-			
A2.4.5 Technical order management								-			
<b>A2.5. SUPERVISION</b> <b>TR: AFI 21-101 and AFTTP 3-4.21V1</b>											
A2.5.1 Plan work schedules								-			
A2.5.2 Schedule maintenance								-			
A2.5.3 Supervise personnel accomplishing maintenance								-			
A2.5.4. Establish											
A2.5.4.1 Work methods								-			
A2.5.4.2 Work controls								-			
A2.5.4.3 Performance standards								-			
A2.5.5 Evaluate work performance of subordinate personnel								-			
<b>A2.6. TRAINING</b> <b>TR: AFIs 36-2650 and 36-2670</b>											

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.6.1	Evaluate personnel for training							-			
A2.6.2	Plan and supervise OJT							-			
A2.6.3	Counsel trainees on training progress							-			
A2.6.4	Prepare AF Form 797							-			
A2.6.5	Document training records							-			
A2.6.6	Purpose and use of Career Field Education and Training Plan (CFETP)							A			
<b>A2.7</b>	<b>MAINTENANCE MANAGEMENT</b> <b>TR: AFIs 21-101, 21-103 and 90-201; AFMAN 23-122</b>										
A2.7.1	Basic functions within maintenance							A			
A2.7.2	Resource management							-			
A2.7.3	Personnel management							-			
A2.7.4	Maintenance incident investigation and prevention							-			
A2.7.5	Determine and report aircraft status							-			
A2.7.6	Maintenance Performance Indicators (MPI) relationships							-			
<b>A2.8.</b>	<b>MAINTENANCE DATA DOCUMENTATION (MDD)</b> <b>TR: AFI 21-101; TO 00-20 Series; Applicable aircraft –06 Work Unit Code Manuals; Integrated Maintenance Data System (IMDS) on- line help screens; G0-81 on- line help screens</b>										
A2.8.1	MDD Fundamentals							A			
A2.8.2.	Aircraft and supporting maintenance records										
A2.8.2.1	Purpose							A			
A2.8.2.2	Automated Forms							A			
A2.8.2.3	Document AFTO Form 781H (except HH-60)							1b			
A2.8.2.4	Document AFTO Form 781A (except HH-60)							1b			
A2.8.2.5	Document AFTO Form 781J (except HH- 60)							1b			
A2.8.2.6	Document AFTO Form 781K (except HH-60)							1b			
A2.8.2.7	Document AFTO Form 781F (except HH- 60)							1b			
A2.8.2.8	Document other AFTO 781 series forms							-			
A2.8.2.9	Document AFTO Form 244/245							1b			

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.8.2.10 Document AFTO Form 350 (except HH-60)								1b			
A2.8.2.11 Document AFTO Form 349								-			
A2.8.2.12 Document AFTO Form 95								-			
A2.8.3. Maintenance Information Systems (MIS)											
A2.8.3. Purpose								A			
A2.8.3.2. Job data documentation (JDD)											
A2.8.3.2.1 Purpose								-			
A2.8.3.2.2 Access JDD								-			
A2.8.3.2.3 Create maintenance event								-			
A2.8.3.2.4 Defer maintenance event								-			
A2.8.3.2.5 Schedule maintenance event								-			
A2.8.3.2.6 Close maintenance event								-			
A2.8.3.2.7 Use IMDS								-			
A2.8.3.3. G0-81											
A2.8.3.3.1 Purpose								-			
A2.8.3.3.2 Access JDD								-			
A2.8.3.3.3 Create maintenance event								-			
A2.8.3.3.4 Defer maintenance event								-			
A2.8.3.3.5 Schedule maintenance event								-			
A2.8.3.3.6 Close maintenance event								-			
A2.8.3.3.7 Use G0-81								-			
A2.8.4 Historical records								-			
A2.8.5 Configuration management								-			
<b>A2.9. MAINTENANCE MATERIALS/TOOLS</b> <b>TR: AFI 21-101; TOs 1-1A-8, 1-1A-14, 1-1-691 and TO 32 series as applicable</b>											
A2.9.1 Tool control								A			
A2.9.2 Select and use special tools								-			
A2.9.3 Process Test, Measurement, and Diagnostic Equipment (TMDE)								-			
A2.9.4. Hardware											
A2.9.4.1 Purpose								A			
A2.9.4.2 Remove/inspect/install								2b			
A2.9.5. Electrical connectors											
A2.9.5.1 Purpose								A			
A2.9.5.2 Connect/disconnect								2b			
A2.9.6. Securing devices											

# AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.9.6.1	Purpose							A			
A2.9.6.2	Install/remove safety wire							2b			
A2.9.6.3	Install/remove cotter pins							2b			
A2.9.6.4	Safety cable							A			
A2.9.7	Lubricants							A			
A2.9.8	Sealants							A			
A2.9.9	Adhesives							A			
A2.9.10	Cleaning agents							A			
A2.9.11.	Hand tools										
A2.9.11.1	Purpose							A			
A2.9.11.2	Select, inspect and use							2b			
A2.9.12.	Measuring tools										
A2.9.12.1	Purpose (to include Prevailing Torque)							A			
A2.9.12.2	Select and use ruler							2b			
A2.9.12.3	Select and use thickness gauge							2b			
A2.9.12.4	Use multi-meter							-			
A2.9.12.5	Select, inspect and use torque wrench (to include Prevailing Torque)							1b			
A2.9.12.6	Select and use micrometer							-			
A2.9.12.7	Use depth gauge							2b			
<b>A2.10.</b>	<b>RESPONSIBILITY FOR SUPPLY</b>										
	<b>TR: AFI 21-101; AFMAN 23-122; TOs 00-20-3 and 00-35D-54</b>										
A2.10.1	Maintenance supply concept							A			
A2.10.2	Standard Base Supply System (SBSS)							-			
A2.10.3	Special requisition (GPC, local purchase)							-			
A2.10.4	Ordering parts							A			
A2.10.5	Priority system							A			
A2.10.6	Prepare repairable and serviceable parts for turn-in							-			
A2.10.7	Repair cycle assets							-			
A2.10.8	Due-in From Maintenance (DIFM) Control							A			
A2.10.9	Local manufacture of parts							-			
A2.10.10	Equipment account management							-			
A2.10.11	Deficiency reporting							-			
A2.10.12	Warranty programs							-			
A2.10.13	DD Forms 1574, 1575, 1576, 1577							A			

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
and 1577-2 Condition Tags)											
A2.10.14 Classified asset handling								-			
<b>A2.11. AIRCRAFT GENERAL TR: AFMAN 11-218; TOs 00-20-1, 00-25-172, 1-1-691, 1-1B-50 and applicable aircraft TOs</b>											
A2.11.1 Weight and balance								A			
A2.11.2 Determine weight and balance requirements								-			
A2.11.3 Inventory aircraft equipment								-			
A2.11.4 Safe aircraft for maintenance								A			
A2.11.5. Corrosion control program											
A2.11.5.1 Aircraft cleaning								A			
A2.11.5.2 Corrosion identification								A			
A2.11.5.3 Corrosion treatment								A			
A2.11.5.4 Aircraft lubrication								A			
A2.11.6. Aircraft inspections											
A2.11.6.1 Concepts and types								A			
A2.11.6.2 Non-Destructive Inspections (NDI)								A			
A2.11.6.3 Borescope								A			
A2.11.7. Fundamentals of ground handling											
A2.11.7.1 Jacking								A			
A2.11.7.2 Towing								A			
A2.11.7.3 Mooring								A			
A2.11.8 Aircraft marshalling signals	5							2b			
A2.11.9 Crash Damaged, or Disabled Aircraft Recovery (CDDAR)								A			
A2.11.10 Perform inclement/cold weather procedures TR: TO 42C-1-2S-2								-			
A2.11.11 De-ice aircraft: TR: TO 42C-1-2S-2, 14CFR121.629 section 121.629								-			
A2.11.12 Debrief aircrews								-			
A2.11.13. Aircraft guarded switches											
A2.11.13.1 Design/function/proper identification								A			
A2.11.13.2 Remove and replace covers								-			
A2.11.13.3 Operational check								-			
A2.11.14 Aircraft Battle Damage Repair (ABDR) TR: 1-1H-39								-			
<b>A2.12. AIRFRAME TR: Applicable aircraft TOs</b>											
A2.12.1 Structure								A			

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.12.2	Remove/inspect/install panels							1b			
A2.12.3	Inspect structural components							-			
<b>A2.13.</b>	<b>LANDING GEAR (except HH-60)</b>										
	<b>TR: Applicable aircraft TOs</b>										
A2.13.1	System fundamentals							A			
A2.13.2.	Service										
A2.13.2.1	Shock strut							1b			
A2.13.2.2	Tire							1b			
A2.13.3.	Remove/install										
A2.13.3.1	Wheel and tire assembly							1b			
A2.13.3.2	Brake assembly							1b			
A2.13.4	Brake bleeding							A			
<b>A2.14.</b>	<b>UTILITIES (except HH-60)</b>										
	<b>TR: Applicable aircraft TOs</b>										
A2.14.1.	System fundamentals										
A2.14.1.1	Oxygen							A			
A2.14.1.2	Bleed air							A			
A2.14.1.3	Pressurization							A			
A2.14.1.4	Air conditioning							A			
A2.14.1.5	Fire/overheat warning							A			
A2.14.1.6	Fire suppression							A			
<b>A2.15.</b>	<b>FLIGHT CONTROLS</b>										
	<b>TR: Applicable aircraft TOs</b>										
A2.15.1	Fundamentals of flight							A			
A2.15.2	Primary flight control fundamentals (except HH-60)							A			
A2.15.3	Secondary flight control fundamentals (except HH-60)							A			
A2.15.4	Component identification							A			
A2.15.5	Operate flight controls (except HH-60)							1a			
<b>A2.16.</b>	<b>HYDRAULICS</b>										
	<b>TR: TO 1-1A-8 and applicable aircraft TOs</b>										
A2.16.1	System fundamentals							A			
A2.16.1.1	Hydraulic schematics / diagrams							A			
A2.16.2.	Remove/install components										
A2.16.2.1	Tubing/hoses							-			
A2.16.2.2	Fittings							-			
A2.16.2.3	Filter elements							-			
<b>A2.17.</b>	<b>ENGINES</b>										
	<b>TR: Applicable aircraft TOs</b>										
A2.17.1	System fundamentals							A			
A2.17.2	Component identification							A			

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.17.3	Oil system servicing							A			
A2.17.4	Joint oil analysis program							-			
<b>A2.18. FUELS</b> <b>TR: AMAN 91-203; TOs 00-25-172, 1-1-3 and applicable aircraft TOs, Applicable AFOSH standards</b>											
A2.18.1	System fundamentals							A			
A2.18.2	Classify fuel leaks							A			
<b>A2.19. ELECTRICAL</b> <b>TR: Applicable aircraft TOs</b>											
A2.19.1	AC electrical system fundamentals							A			
A2.19.2	DC electrical system fundamentals							A			
A2.19.3	Wire repair							-			
A2.19.4	Fiber optics							-			
A2.19.5	Electrical bonding							-			
A2.19.6	Databus							-			
A2.19.7	Electrical schematics / diagrams							A			
<b>A2.20. SUPPORT EQUIPMENT</b> <b>TR: AFMAN 91-203; TO 35A3 series as applicable, equipment TOs</b>											
A2.20.1.	Maintenance stands										
A2.20.1.1	Purpose and description							A			
A2.20.1.2	Perform pre-use inspection and operate							2b			
A2.20.2.	Self-propelled universal platforms										
A2.20.2.1	Purpose and description							-			
A2.20.2.2	Perform pre-use inspection and operate							-			
A2.20.3.	Aircraft jacks TR: TO 35A2 series as applicable										
A2.20.3.1	Purpose and description							A			
A2.20.3.2	Perform pre-use inspection and operate							2b			
A2.20.4.	Jacking manifold TR: TO 35A2 series as applicable										
A2.20.4.1	Purpose and description							-			
A2.20.4.2	Perform pre-use inspection and operate							-			
A2.20.5.	Oxygen servicing equipment TR: TO 15X-1-1 and 37C2-8 series as applicable										
A2.20.5.1.	Liquid oxygen (LOX)										
A2.20.5.1.1	Purpose and description							A			
A2.20.5.1.2	Perform pre-use inspection and operate							-			

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.20.5.2. Gaseous oxygen (GOX) (except HH- 60)											
A2.20.5.2.1 Purpose and description								A			
A2.20.5.2.2 Perform pre-use inspection and operate								-			
A2.20.6. Diesel air compressors TR: TO 34Y1 series as applicable											
A2.20.6.1 Purpose and description								A			
A2.20.6.2 Perform pre-use inspection and operate								-			
A2.20.7. Ground heaters TR: TO 35E7 series as applicable											
A2.20.7.1 Purpose and description								A			
A2.20.7.2 Perform pre-use inspection and operate								-			
A2.20.8. Lighting equipment TR: TO 35F5 series as applicable											
A2.20.8.1 Purpose and description								A			
A2.20.8.2 Perform pre-use inspection and operate								2b			
A2.20.9. Hydraulic test stand TR: TO 33A2 series as applicable											
A2.20.9.1 Purpose and description								A			
A2.20.10. Air conditioning units TR: TO 35E9 Series as applicable											
A2.20.10.1 Purpose and description								A			
A2.20.11. Ground generator sets/gas turbine compressors											
A2.20.11.1. A/M32A-60 gas turbine generator set/gas turbine compressor TR: TO 35C2 series as applicable (except HH-60)											
A2.20.11.1.1 Purpose and description								A			
A2.20.11.1.2 Perform pre-use inspection and operate								2b			
A2.20.11.2. A/M32A-95 gas turbine compressor (except HH-60) TR: TO 35D12series as applicable											
A2.20.11.2.1 Purpose and description								A			
A2.20.11.3. Diesel driven generator sets TR: TO 35C2 series as applicable											
A2.20.11.3.1 Purpose and description								A			
A2.20.11.3.2 Perform pre-use inspection and operate (except HH-60)								2b			
A2.20.12. Tow bar TR: Applicable aircraft TOs											
A2.20.12.1 Purpose and description								A			
A2.20.12.2 Connect/disconnect								-			
A2.20.13. Tow vehicles TR: TO 36A10 series as applicable											

AIRCRAFT MAINTENANCE COMMON TRAINING REQUIREMENTS											
1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert A	Deployment * / SFL+	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A2.20.13.1 Purpose and description								A			
A2.20.13.2 Perform pre-use inspection and operate								-			
A2.20.14. Self-generating nitrogen equipment TR: TO 35D29-7-6-1											
A2.20.14.1 Purpose and description								A			
A2.20.14.2 Perform pre-use inspection and operate								2b			
A2.20.15. Gaseous nitrogen servicing equipment TR: TO 35D3 series as applicable											
A2.20.15.1 Purpose and description								A			
A2.20.15.2 Perform pre-use inspection and operate								-			
A2.20.16. Engine stands and dollies TR: TO 35D3 series as applicable											
A2.20.16.1 Purpose and description								A			
A2.20.16.2 Perform pre-use inspection and operate								-			

This Page Intentionally Left Blank

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

NOTE 1: Use this attachment in conjunction with STS 2A3X7 attachment 2.

NOTE 2: All task/knowledge items taught in the initial skills course are trained during war time.

NOTE 3: Items in column 2 identified with an 5R or 7R are optional for the AFRC Traditional Reservist (TR) and the ANG Drill Status Guardsman (DSG); for full-time members, Core Tasks are required.

<b>A3.1. AIRCRAFT GENERAL</b>											
<b>TR: Portable Maintenance Aid;</b>											
<b>TO 1F- 22A-8-1; AFMAN 91-203</b>											
A3.1.1. Portable Maintenance Aid (PMA)											
A3.1.1.1 Use PMA to perform maintenance	5							2b			
A3.1.1.2 Use PMA to document maintenance	5							2b			
A3.1.2 Use Advanced Diagnostic Interface Tool (ADIT)	7							-			
A3.1.3 Integrated Maintenance Information System (IMIS)											
A3.1.3.1 Operate IMIS	5							2b			
A3.1.3.2 Operate and Document ECL	7							-			
A3.1.4 Vehicle Management System (VMS)								A			
A3.1.5 Integrated Vehicle Subsystem Controller (IVSC)								A			
A3.1.6 Avionics components and system operation								A			
A3.1.7 Weapons system components								A			
A3.1.8 Aircraft security requirements								A			
A3.1.9 Safe aircraft for maintenance	5							1a			
A3.1.10 Fire access points								A			
A3.1.11 Aircraft danger zones								B			
A3.1.12 Aircraft composite and coating hazards								A			
A3.1.13 Engine composite and coating hazards								A			
A3.1.14. Aircraft corrosion control program											
A3.1.14.1 Exterior surfaces/coatings								A			
A3.1.14.2 Clean canopy	5							2b			
A3.1.14.3 Wash aircraft								-			
A3.1.14.4 Lubricate aircraft	5							-			
A3.1.15 Connect/disconnect ground communications	5							2b			
A3.1.16. Egress/canopy system											
A3.1.16.1 Operation and components								A			
A3.1.16.2 Emergency canopy operation								A			
A3.1.16.3 Raise/lower ejection seat electrically	5							-			
A3.1.16.4 Open/close canopy electrically	5							2b			
A3.1.16.5 Open/close canopy manually	5							2b			
A3.1.17. Ground handling											
TR: Applicable TOD; AFMAN 11-											

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
218 and AFMAN 91-203											
A3.1.17.1. Towing											
A3.1.17.1.1 Perform team member duties	5							-			
A3.1.17.1.2 Perform brake rider duties	5							-			
A3.1.17.1.3 Perform team supervisor duties	7							-			
A3.1.17.1.4 Perform vehicle operator duties								-			
A3.1.17.2 Manually reposition aircraft								-			
A3.1.17.3 Moor aircraft								-			
A3.1.17.4 Winch aircraft into hardened shelter								-			
A3.1.17.5. Jack aircraft											
A3.1.17.5.1 Perform tripod jacking team member duties	5							2b			
A3.1.17.5.2 Perform tripod jacking team supervisor duties	7							-			
A3.1.17.5.3 Axle jack Main Landing Gear (MLG)	5							2b			
A3.1.17.5.4 Axle jack Nose Landing Gear (NLG)	5							2b			
A3.1.17.6. Connect/disconnect/apply											
A3.1.17.6.1 Electric	5							2b			
A3.1.17.6.2 Cooling air	5							2b			
A3.1.17.6.3 Polyalphaolefin (PAO)	5							2b			
A3.1.17.6.4 Hydraulic	5							2b			
A3.1.17.6.5 Bleed air	5							2b			
A3.1.17.7 Download/clear Crash Survivable Memory Unit (CSMU)	5							-			
A3.1.17.8 De-ice aircraft								-			
A3.1.17.9 Connect/disconnect engine run holdback tool (restraint)								-			
A3.1.17.10 Open/close main fuel shutoff valve	5							-			
A3.1.18. Aircraft inspections TR: Applicable TOD, applicable -6 TO Series											
A3.1.18.1 Inspection concept								A			
A3.1.18.2. Perform inspections											
A3.1.18.2.1 Launch	5							-			
A3.1.18.2.2 Recovery	5							-			
A3.1.18.2.3 Preflight (PR)	5							-			
A3.1.18.2.4 Thru-flight (TH)	5							-			
A3.1.18.2.5 Basic postflight (BPO)	5							-			
A3.1.18.2.6 Combined BPO/PR	5							-			
A3.1.18.2.7 Outer mold line	5							-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.1.18.2.8 Alert launch								-			
A3.1.18.2.9 End of runway								-			
A3.1.18.2.10 Quick-turn								-			
A3.1.18.2.11 Concurrent Servicing Operation (CSO)								-			
A3.1.19. Perform special occurrence inspections											
A3.1.19.1 Engine inlet/exhaust inspection								-			
A3.1.19.2 Inspect Coating(150 Tactical Cycle)	7							-			
A3.1.19.3 Acceptance/transfer inspection								-			
A3.1.19.4 Engine bay	5							-			
A3.1.19.5 Over-G (structural overload)								-			
A3.1.19.6 Lightning strike								-			
A3.1.19.7 Hard landing								-			
A3.1.19.8 Overweight landing								-			
A3.1.19.9 Landing gear/door overspeed								-			
A3.1.19.10 Rejected takeoff								-			
A3.1.19.11 Arresting gear post engagement								-			
<b>A3.2. AIRFRAME</b>											
<b>TR: Applicable TOD</b>											
A3.2.1 Airframe structure								A			
A3.2.2 Low observable concepts								A			
A3.2.3. Remove/install											
A3.2.3.1 Actuated doors	5							2b			
A3.2.3.2 Panel, door and louver seals								-			
A3.2.3.3 Side weapons bay storage case								b			
A3.2.3.4 Screens								-			
A3.2.3.5 Non-actuated panels/doors	5							2b			
A3.2.3.6 Fuselage skin/fairings								-			
A3.2.3.7 Forward fuselage chine								-			
A3.2.3.8 Diverter lip	5							-			
A3.2.3.9 Travel pods								-			
A3.2.3.10 Calibration pod	5							-			
A3.2.3.11 Keel Aircraft Mounted Nozzle Sidewall (AMNS)	5							-			
A3.2.3.12 Keelson AMNS	5							-			
A3.2.3.13 AMNS liners								-			
A3.2.3.14 Keel AMNS fitting and bracket								-			
A3.2.3.15 Dropout links								-			
A3.2.3.16 Longitudinal seals								-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.2.3.17	Arresting gear fairing door							-			
A3.2.3.18	Aft boom trailing edge							-			
A3.2.3.19	Vertical stabilizer							-			
A3.2.3.20	Wing stub leading edge							-			
A3.2.3.21	Wing tip assembly							-			
A3.2.4.	Cockpit TR: Applicable TOD										
A3.2.4.1	Remove/install										
A3.2.4.1.1	Canopy secondary lock assembly							-			
A3.2.4.1.2	Console access panels							-			
A3.2.4.1.3	Cockpit console support panels							-			
A3.2.4.1.4	Console stowage compartment / case							-			
A3.2.4.1.5	Heel rest							-			
A3.2.4.1.6	Arm rest							-			
A3.2.4.1.7	Kick shield							-			
A3.2.5.	Open/close/doors										
A3.2.5.1	Hydraulically	5						2b			
A3.2.5.2	Manually	5						2b			
A3.2.5.3	Infrared Countermeasures (IRCM) doors							-			
A3.2.5.4	Rig Actuated (EW/IRCM) doors							-			
A3.2.6	Extend/retract Configurable Rail Launcher (CRL) trapeze							-			
A3.2.7.	Transverse fairings										
A3.2.7.1	Lower/raise							-			
A3.2.7.2	Remove/install							-			
A3.3.	<b>LANDING GEAR SYSTEM</b> <b>TR: Applicable TOD</b>										
A3.3.1	Component and system operation							A			
A3.3.2	Perform fault isolation	7						-			
A3.3.3.	Perform Landing Gear (LDG) system operation										
A3.3.3.1	LDG system checkout	7						-			
A3.3.3.2	LDG emergency extension system checkout	7						-			
A3.3.3.3	Brake system function checks	7						-			
A3.3.3.4	Nose wheel steering system ops check	7						-			
A3.3.4	Bleed MLG brake system	7						-			
A3.3.5.	Remove/install										
A3.3.5.1	LDG selector valve							-			
A3.3.5.2	LDG hydraulic sequence valve							-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.3.5.3	LDG Emergency pneumatic control valve							-			
A3.3.5.4	NLG shock strut assembly							-			
A3.3.5.5	NLG shock strut piston assembly							-			
A3.3.5.6	NLG retract actuator							-			
A3.3.5.7	NLG lower torque arm assembly							-			
A3.3.5.8	NLG drag brace assembly							-			
A3.3.5.9	Nose wheel steering radius rod							-			
A3.3.5.10	Nose wheel steering control valve							-			
A3.3.5.11	MLG shock strut assembly							-			
A3.3.5.12	MLG shock strut piston assembly							-			
A3.3.5.13	MLG retract actuator assembly							-			
A3.3.5.14	MLG door fwd uplock actuator							-			
A3.3.5.15	MLG door aft uplock actuator							-			
A3.3.5.16	MLG door actuator							-			
A3.3.5.17	MLG brake assembly							2b			
A3.3.5.18	MLG side brace linkage assembly							-			
A3.3.5.19	MLG side brace trunion beam							-			
A3.3.5.20	Side brace spring assembly							-			
A3.3.5.21	Brake control valve							-			
A3.3.5.22	Brake control valve backplate assembly							-			
A3.3.5.23	Brake control module							-			
A3.3.5.24	Nosewheel steering actuator							-			
A3.3.5.25	Nosewheel steering damper							-			
A3.3.5.26	NLG wheel and tire assembly	5						-			
A3.3.5.27	MLG wheel and tire assembly	5						2b			
A3.3.6	Repack NLG strut							-			
A3.3.7	Repack MLG Strut							-			
A3.3.8	Service tire	5						2b			
A3.3.9	Service landing gear shock strut	5						2b			
A3.3.10.	Aircraft Arresting Gear System (ARS GR) TR: Applicable TOD										
A3.3.10.1	Component and system operation							A			
A3.3.10.2	Perform fault isolation	7						-			
A3.3.10.3	Raise/lower arresting gear	5						2b			
A3.3.10.4	Perform operational test							-			
A3.3.10.5	Perform hook force check							-			
A3.3.10.6	Service arresting gear damper							-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.3.10.7. Remove/install											
A3.3.10.7.1 Links								-			
A3.3.10.7.2 Drag brace								-			
A3.3.10.7.3 Centering device								-			
A3.3.10.7.4 Shank								-			
A3.3.10.7.5 Hook point								-			
A3.3.10.7.6 Uplock hooks								-			
A3.3.10.7.7 Air regulator								-			
A3.3.10.7.8 Uplock actuator								-			
A3.3.10.7.9 Retract actuator								-			
A3.3.10.7.10 Damper								-			
A3.3.10.7.11 Pneumatic shutoff valve								-			
A3.3.10.7.12 Spring strut assembly								-			
A3.3.10.7.13 Rod/arms								-			
A3.3.10.7.14 Switches								-			
A3.3.10.7.15 Transducers								-			
A3.3.10.8. Rig											
A3.3.10.8.1 NLG doors								-			
A3.3.10.8.2 MLG doors								-			
A3.3.10.8.3 Arresting gear system								-			
<b>A3.4. UTILITIES</b>											
<b>TR: Applicable TOD</b>											
A3.4.1. Fire/overheat detection system											
A3.4.1.1 Component and system operation								A			
A3.4.1.2 Perform fault isolation	7							-			
A3.4.1.3. Remove/install											
A3.4.1.3.1 Thermal detection units								-			
A3.4.1.3.2 Optical fire sensors								-			
A3.4.1.3.3 Temperature sensors								-			
A3.4.2. Automatic Backup Oxygen System (ABOS)											
<b>TR: Applicable TOD</b>											
A3.4.2.1 Components and system operation								A			
<b>A3.5. FLIGHT CONTROL SYSTEM</b>											
<b>TR: Applicable TOD</b>											
A3.5.1 Component and system operation								A			
A3.5.2 Perform fault isolation	7							-			
A3.5.3 Perform freeplay check								-			
A3.5.4 Operate flight controls	5							-			
A3.5.5. Remove/install											

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.5.5.1	Flaperon servo actuator							-			
A3.5.5.2	Aileron servo actuator							-			
A3.5.5.3	Aileron assembly							-			
A3.5.5.4	Flaperon assembly							-			
A3.5.5.5	Flaperon/aileron links/ribs							-			
A3.5.5.6.	Leading Edge Flap (LEF)										
A3.5.5.6.1	LEF							-			
A3.5.5.6.2	LEF torque shaft							-			
A3.5.5.6.3	Asymmetry brakes							-			
A3.5.5.6.4	LEF position sensor							-			
A3.5.5.6.5	LEF Power Drive Unit (PDU)							-			
A3.5.5.6.6	LEF PDU control module							-			
A3.5.5.6.7	LEF over-travel stop							-			
A3.5.5.6.8	Service/inspect LEF PDU oil							-			
A3.5.5.7.	Horizontal stabilizer										
A3.5.5.7.1	Horizontal stabilizer							-			
A3.5.5.7.2	Horizontal stab spindle bearing							-			
A3.5.5.7.3	Horizontal stab servo actuator							-			
A3.5.5.7.4	Horizontal stab bearing							-			
A3.5.5.8.	Rudder										
A3.5.5.8.1	Rudder servo actuator							-			
A3.5.5.8.2	Rudder assembly							-			
A3.5.6.	Rig										
A3.5.6.1	Engine bypass louvers							-			
A3.5.6.2	LEF asymmetry brake							-			
A3.5.6.3	Auto-rig flight control surfaces	7						-			
A3.5.6.4	Align wing tip position sensor							-			
A3.5.7.	Perform operational checkouts										
A3.5.7.1	Trim checkout							-			
A3.5.7.2	Manual control checkout							-			
A3.5.7.3	Speedbrake checkout							-			
A3.5.7.4	Rudder pedal assembly checkout							-			
A3.5.7.5	FLCS/hydraulic Initiated Built-In Test (IBIT)							-			
<b>A3.6.</b>	<b>HYDRAULIC SYSTEM</b>										
	<b>TR: Applicable TOD</b>										
A3.6.1	Component and system operation							A			
A3.6.2	Perform fault isolation	7						-			
A3.6.3	Perform hydraulic system flush							-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References		2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
		Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
				Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.6.4	Drain system								-			
A3.6.5.	Perform operational checkouts											
A3.6.5.1	Power system IBIT (ground power)	5							-			
A3.6.5.2	Bleed and leak check	5							2b			
A3.6.6.	Remove/install											
A3.6.6.1	Reservoir								-			
A3.6.6.2	System accumulator								2b			
A3.6.6.3	Reservoir accumulator								-			
A3.6.6.4	Pressure filter module								-			
A3.6.6.5	Return/case drain filter module								-			
A3.6.6.6	Case drain filter	5							-			
A3.6.6.7	Pressure/return filter	5							-			
A3.6.6.8	Air inlet bleed door actuator								-			
A3.6.6.9	Inlet bypass louver actuator								-			
A3.6.6.10	Engine driven hydraulic pump								-			
A3.6.6.11	APU driven hydraulic pump								-			
A3.6.6.12	Suction manifold								-			
A3.6.6.13	Charging manifold								-			
A3.6.6.14	Rudder shuttle valve								-			
A3.6.6.15	Hydraulic solenoid switching valve								-			
A3.6.6.16	Delta-P assembly								-			
A3.6.6.17	Isolation valves								-			
A3.6.6.18	Switching valve								-			
A3.6.6.19	Pump pressurization switches								-			
A3.6.6.20	Air refueling door actuator								-			
A3.6.6.21	Air refueling control valve								-			
A3.6.7.	Service											
A3.6.7.1	System (filler unit)	5							2b			
A3.6.7.2	System (engines operating)	5							-			
A3.6.7.3	Hydraulic/pneumatic accumulators	5							-			
A3.6.8	Sample hydraulic fluid								-			
A3.6.9	Depressurize system	5							2b			
<b>A3.7.</b>	<b>ENGINE SYSTEM</b>											
	<b>TR: Applicable TOD</b>											
A3.7.1	Component and system operation								A			
A3.7.2	Perform fault isolation	7							-			
A3.7.3	Perform Full Authority Digital Electronic Control (FADEC) power-on test								-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References		2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
		Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
				Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.7.4	Load propulsion Operational Flight Program (OFP)								-			
A3.7.5	Execute Comprehensive Engine Diagnostic Unit (CEDU) to PMA, PMA to CEDU Data Transfer/Event Clear								-			
A3.7.6	Inspect engine chip collector								-			
A3.7.7.	Remove/install											
A3.7.7.1	Engine	7							-			
A3.7.7.2	Power take-off shaft								-			
A3.7.7.3	Actuator fuel pump								-			
A3.7.7.4	Main fuel pump								-			
A3.7.7.5	Main fuel pump filter								-			
A3.7.7.6	Differential pressure sensors								-			
A3.7.7.7	Main Fuel Throttle Valve (MFTV)								-			
A3.7.7.8	MFTV manifold								-			
A3.7.7.9	Augmentor Fuel Control (AFC)								-			
A3.7.7.10	AFC manifold								-			
A3.7.7.11	Fuel/oil cooler								-			
A3.7.7.12	Fuel filter								-			
A3.7.7.13	Oil filter								2b			
A3.7.7.14	Oil pump								-			
A3.7.7.15	Oil valves/adapters								-			
A3.7.7.16	Breather pressurizing valve								-			
A3.7.7.17	Oil flow management valve								-			
A3.7.7.18	Multi-port service adapter								-			
A3.7.7.19	Rotor generator								-			
A3.7.7.20	Stator generator								-			
A3.7.7.21	Ignition exciter								-			
A3.7.7.22	High tension leads								-			
A3.7.7.23	Main spark igniter	5							2b			
A3.7.7.24	Augmentor spark igniter								-			
A3.7.7.25	CEDU	5							2b			
A3.7.7.26	FADEC	5							2b			
A3.7.7.27	Modulating Exhaust Cooling (MEC) actuator								-			
A3.7.7.28	Compressor Variable Vane (CVV) actuator								-			
A3.7.7.29	Fan Variable Vane (FVV) actuator								-			
A3.7.7.30	Anti-ice valve								-			
A3.7.7.31	Fuel/air heat exchanger								-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.7.7.32	Skate assembly	7						-			
A3.7.7.33	Inlet seal							-			
A3.7.7.34	Engine nose cone							-			
A3.7.7.35	Turbine exhaust cone							-			
A3.7.7.36	Electro hydraulic servo valve							-			
A3.7.7.37	Linear variable differential transducer							-			
A3.7.7.38	Exhaust Gas Temperature (EGT) thermocouple probe							-			
A3.7.7.39	Light-off Detector (LOD)							-			
A3.7.7.40	Total temperature probe (Tt2)							-			
A3.7.7.41	Total temperature probe (Tt3)							-			
A3.7.7.42	Tt cables							-			
A3.7.7.43	N1 sensor							-			
A3.7.7.44	MFTV pressure/temperature transducer							-			
A3.7.7.45	Engine vibration sensors							-			
A3.7.7.46	Oil debris monitor							-			
A3.7.7.47	Oil level sensor							-			
A3.7.7.48	Oil filter differential sensor							-			
A3.7.7.49	Oil pressure and temperature sensor							-			
A3.7.7.50	Fuel filter differential sensor							-			
A3.7.7.51	Solenoids							-			
A3.7.7.52	Reed switches							-			
A3.7.8.	Engine gearbox components										
A3.7.8.1	Component and system operation							A			
A3.7.8.2.	Remove/install										
A3.7.8.2.1	Wire harnesses							-			
A3.7.8.2.2	Gearbox seals							-			
A3.7.9.	Augmentor nozzle system										
A3.7.9.1	Component and system operation							A			
A3.7.9.2.	Remove/install										
A3.7.9.2.1	Augmentor fuel nozzle							-			
A3.7.9.2.2	Flameholder							-			
A3.7.9.2.3	Augmentor nozzle module							-			
A3.7.9.2.4	Augmentor fuel nozzle igniter							-			
A3.7.9.2.5	Air transfer tube assembly							-			
A3.7.9.2.6	Air pump assembly							-			
A3.7.9.2.7	Sidewall liners							-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.7.9.2.8 External segments								-			
A3.7.9.2.9 Flaps								-			
A3.7.9.2.10 Divergent liner								-			
A3.7.9.2.11 Convergent liner								-			
A3.7.9.2.12 Divergent actuators								-			
A3.7.9.2.13 Convergent actuators								-			
A3.7.9.2.14 Divergent segments								-			
A3.7.9.2.15 Convergent segments								-			
A3.7.10. Perform											
A3.7.10.1 Flex borescope								-			
A3.7.10.2 Fan blade blending								-			
A3.7.10.3 LO blending in exhaust section								-			
A3.7.11. Service engine oil											
A3.7.11.1 Initial service								-			
A3.7.11.2 Routine service	5							2b			
A3.7.12 Drain engine oil								-			
A3.7.13 Sample engine oil	5							-			
A3.7.14 Document DD Form 2026	5							-			
A3.7.15. Aircraft engine operation											
A3.7.15.1 Perform idle engine run								-			
A3.7.15.2 Perform idle through afterburner engine run								-			
<b>A3.8 FUEL SYSTEM</b> <b>TR: Applicable TOD</b>											
A3.8.1 Component and system operation								A			
A3.8.2. Refuel aircraft											
A3.8.2.1 Power off	5							-			
A3.8.2.2 Power on								-			
A3.8.3. Defuel aircraft								-			
A3.8.3.1 Power on with APU	5							-			
A3.8.3.2 Power on with ground power	5							-			
A3.8.3.3 Depuddle aircraft								-			
A3.8.3.4 External tanks								-			
A3.8.4. Hot pit refueling											
A3.8.4.1 Perform team member duties								-			
A3.8.4.2 Perform team supervisor duties								-			
A3.8.5 Remove/install external fuel tanks								-			
A3.8.6 Perform external fuel tank leak and transfer checks								-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.8.7. Air Refueling (AR) TR: Applicable TOD											
A3.8.7.1 Component and system operation								A			
A3.8.7.2 Operate In-flight refueling slipway doors								-			
A3.8.7.3. Remove/install											
A3.8.7.3.1 Door hinges mechanism/shields								-			
A3.8.7.3.2 Door hinge pushrods								-			
A3.8.7.3.3 Inflight Refueling Receptacle (IFRR) top plate								-			
A3.8.8 Adjust air refueling door pushrods								-			
<b>A3.9. ELECTRO / ENVIROMENTAL SYSTEM</b> <b>TR: Applicable TOD</b>											
A3.9.1 Environmental components and system operation								A			
A3.9.2 Electro components and system operation								A			
A3.9.3 Lighting components and system operation								A			
A3.9.4 Perform general bleed and leak check (Engine)								-			
A3.9.5 Perform general bleed and leak check (APU)								-			
A3.9.6 Operate interior lights								-			
A3.9.7 Operate exterior lights (landing, taxi, formation, anti-collision, position, air refueling)	5							2b			
A3.9.8. Connect/disconnect aircraft battery	5							2b			
A3.9.9. Remove/install											
A3.9.9.1 Landing light lamp	5							2b			
A3.9.9.2 Taxi light lamp	5							2b			
A3.9.9.3 Auxilliary generator								-			
A3.9.9.4 Main generator								-			
<b>A3.10. SECONDARY POWER SYSTEMS</b> <b>TR: Applicable TOD</b>											
A3.10.1. Auxiliary Power System (APS)											
A3.10.1.1 Component and system operation								A			
A3.10.1.2 Perform fault isolation	7							-			
A3.10.1.3 Perform Auxiliary Power Unit (APU) fuel shutoff valve checkout								-			
A3.10.1.4 Inspect APU chip collector								2b			
A3.10.1.5 Operate APU from PMA	5							2b			
A3.10.1.6. Remove/install											
A3.10.1.6.1 APU	7							-			
A3.10.1.6.2 Exhaust duct								-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.10.1.6.3 Inlet door								-			
A3.10.1.6.4 Exhaust door								-			
A3.10.1.6.5 Fuel filter element								-			
A3.10.1.6.6 Speed sensor								-			
A3.10.1.6.7 Exhaust Gas Temperature (EGT) sensor								-			
A3.10.1.6.8 Lube filter element								-			
A3.10.1.6.9 APU chip collector assembly								-			
A3.10.1.6.10 Overfill fitting								-			
A3.10.1.6.11 Fuel control unit											
A3.10.1.6.12 Exhaust door open switch								-			
A3.10.1.6.13 APU inlet/exhaust door actuator								-			
A3.10.1.6.14 APU inlet door emergency actuator								-			
A3.10.1.6.15 APS Door Actuation System (ADAS) actuator position switch								-			
A3.10.1.6.16 Ignition exciter								-			
A3.10.1.6.17 APU igniter lead								-			
A3.10.1.6.18 APU igniter plug								-			
A3.10.1.6.19 Oil level switch								-			
A3.10.1.6.20 Oil bypass switch								-			
A3.10.1.6.21 Low oil pressure sensor								-			
A3.10.1.6.22 APU lube pump								-			
A3.10.1.6.23 Fuel flow control valve								-			
A3.10.1.6.24 Turbine Power Module (TPM)	7							-			
A3.10.1.6.25 TPM speed sensor								-			
A3.10.1.6.26 TPM combustor temperature sensor								-			
A3.10.1.6.27 TPM igniter lead								-			
A3.10.1.6.28 TPM igniter plug								-			
A3.10.1.6.29 Air temperature sensor								-			
A3.10.1.6.30 Air flow control valve								-			
A3.10.1.6.31 Bleed air check valve								-			
A3.10.1.7. Rig											
A3.10.1.7.1 APU inlet door								-			
A3.10.1.7.2 APU exhaust door								-			
A3.10.1.8. APU oil											
A3.10.1.8.1 Perform initial service	5							-			
A3.10.1.8.2 Perform routine service	5							-			
A3.10.1.8.3 Drain APU oil								-			
A3.10.1.8.4 Sample APU oil (JOAP)								-			

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.10.2. Stored Energy System (SES)											
A3.10.2.1 Component and system operation								A			
A3.10.2.2 Service SES	5							2b			
A3.10.2.3 Perform fault isolation	7							-			
A3.10.2.4 Perform SES fuel bottle service/purge								-			
A3.10.2.5. Remove/install											
A3.10.2.5.1 Air bottle assembly								-			
A3.10.2.5.2 Fuel supply bottle								-			
A3.10.2.5.3 Air Recharge System (ARS)								-			
A3.10.2.5.4 Air servicing manifold								-			
A3.10.2.5.5 Combined function valve								-			
A3.10.3. Airframe Mounted Accessory Drive (AMAD)											
A3.10.3.1 Component and system operation								A			
A3.10.3.2 Perform fault isolation	7							-			
A3.10.3.3 Perform AMAD system checkout								-			
A3.10.3.4 Adjust oil pressure regulating valve								-			
A3.10.3.5 Inspect AMAD chip collector	5							2b			
A3.10.3.6 Inspect Air Turbine Starter (ATS) chip collector								-			
A3.10.3.7. Remove/install											
A3.10.3.7.1 AMAD								-			
A3.10.3.7.2 ATS								-			
A3.10.3.7.3 ATS control valve								-			
A3.10.3.7.4 AMAD chip collector assembly								-			
A3.10.3.7.5 AMAD oil filter element								2b			
A3.10.3.7.6 Oil pressure regulating valve								-			
A3.10.3.8. Service AMAD											
A3.10.3.8.1 Initial service	5							-			
A3.10.3.8.2 Routine service	5							2b			
A3.10.3.9 Drain AMAD oil								-			
A3.10.3.10 Sample AMAD oil (JOAP)								-			
<b>A3.11. SUPPORT EQUIPMENT</b> <b>TR: Applicable equipment TOs;</b> <b>AFMAN 91-203</b>											
A3.11.1. F119 engine removal/installation trailer											
A3.11.1.1 Purpose and description								A			
A3.11.1.2 Perform pre-use inspection and operate	5							-			
A3.11.2. F119 Engine Shipping System (ESS)											

## F-22 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl
A3.11.2.1 Purpose and description								A			
A3.11.2.2 Perform pre-use inspection and operate	5							-			
A3.11.3. Crane											
A3.11.3.1 Purpose and description								A			
A3.11.3.2 Perform pre-use inspection and operate								-			
A3.11.3.3 Skyhook multi aircraft crane								2b			
A3.11.3.4 East west crane								-			
A3.11.4. SES cart											
A3.11.4.1 Purpose and description								A			
A3.11.4.2 Perform pre-use inspection and operate	5							2b			
A3.11.5. PAO cart											
A3.11.5.1 Purpose and description								A			
A3.11.5.2 Perform pre-use inspection	5							2b			
A3.11.6. Power converter											
A3.11.6.1 Perform pre-use inspection and use								-			
A3.11.7. Essex generator											
A3.11.7.1 Purpose and description								A			
A3.11.7.2 Perform pre-use inspection	5							2b			
A3.11.8. Hydraulic test stand TR: TO 33A2-2-76-1											
A3.11.8.1 Purpose and description								A			
A3.11.8.2 Perform pre-use inspection	5							2b			
A3.11.9. Perform pre-use inspection and operate											
A3.11.9.1. Oil servicing carts TR: TO 35A17- series as applicable	5							2b			
A3.11.9.2 Hydraulic servicing carts TR: TO 35D29 series as applicable	5							2b			

This Page Intentionally Left Blank

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

NOTE 1: Use this attachment in conjunction with STS 2A3X7 attachment 2.

NOTE 2: All task/knowledge items taught in the initial skills course are trained during war time.

NOTE 3: Items in column 2 identified with an 5R or 7R are optional for the AFRC Traditional Reservist (TR) and the ANG Drill Status Guardsman (DSG) of that skill level; for full-time members, Core Tasks are required.

<b>A4.1. AIRCRAFT GENERAL</b>											
<b>TR: Applicable F-35 Joint Technical Data (JTD)</b>											
A4.1.1 F-35 overview								A			
A4.1.1.1 Perform static ground aircraft procedure								2b			
A4.1.2 Portable Maintenance Aid (PMA)											
A4.1.2.1 Connect/disconnect PMA	5							2b			
A4.1.2.2 Use Joint Technical Data (JTD)								2b			
A4.1.2.3 Perform Maintenance Vehicle Interface (MVI) session start/shutdown								2b			
A4.1.3 Autonomic Logistics Information System (ALIS)											
A4.1.3.1 Overview								A			
A4.1.3.2 Point of Entry (POE)								A			
A4.1.3.3 Computerized Maintenance Management System (CMMS)								B			
A4.1.3.4 CMMS Squadron Status Page								B			
A4.1.3.5 CMMS Air Vehicle page								2b/1b			
A4.1.3.6 CMMS Work Order List								2b/1b			
A4.1.3.7 CMMS Work Order Solutions								2b/1b			
A4.1.3.8 CMMS Work Order Execution								2b/1b			
A4.1.3.9 CMMS Work Order Completion								2b/1b			
A4.1.3.10 CMMS Follow-On Maintenance Requirements (FMR)								-			
A4.1.3.11 CMMS Time Compliance Technical Directives (TCTD)								-			
A4.1.3.12 CMMS Supply Requisition								-			
A4.1.3.13 CMMS As Maintained								-			
A4.1.3.14 Anomaly & Failure Resolution System (AFRS)								-			
A4.1.3.15 Customer Relationship Management (CRM)								-			
A4.1.3.16 Squadron Health Management (SHM)								-			
A4.1.4. Remove/install											

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.1.4.1	Service covers (-21)	5							-			
A4.1.4.2	Protective matting								-			
A4.1.5.	Aircraft access											
A4.1.5.1	Use/extend/stow boarding ladder	5							-			
A4.1.6.	Perform aircraft safe for maintenance (SFM)											
A4.1.6.1	Perform aircraft safe for electrical power application	5							2b			
A4.1.6.2	Perform aircraft safe for hydraulic power application	5							2b			
A4.1.6.3	Perform aircraft cockpit safe for entry procedure	5							2b			
A4.1.6.4	Perform aircraft exterior safe for maintenance procedure	5							2b			
A4.1.7.	Canopy											
A4.1.7.1	Perform transparency cleaning (exterior/interior)	5							1b			
A4.1.7.2.	Open/close canopy											
A4.1.7.2.1	Electrically	5							1b			
A4.1.7.2.2	Manually								b			
A4.1.7.3.	Remove/install/open/close											
A4.1.7.3.1	Easy access panels	5							-			
A4.1.7.3.2	Panels	5							-			
A4.1.7.3.3	Hinged doors	5							-			
A4.1.7.3.4	Low Observable (LO) plugs								-			
A4.1.8.	Ground handling TR: AFMAN 11-218; AFMAN 91-203											
A4.1.8.1.	Towing											
A4.1.8.1.1	Perform tow team member duties	5							b			
A4.1.8.1.2	Perform tow team supervisor duties	7										
A4.1.8.1.3	Duties of tow vehicle operator								A			
A4.1.8.1.4	Tow aircraft (with disabled wheel dolly, main landing gear)								-			
A4.1.8.2	Moor aircraft								-			
A4.1.8.3.	Jack aircraft											
A4.1.8.3.1	Perform axle jack Nose Landing Gear (NLG) duties	5							-			
A4.1.8.3.2	Perform axle jack Main Landing Gear (MLG) duties	5							-			
A4.1.8.3.3	Perform aircraft jacking/lowering	5							-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

(tripod)											
A4.1.8.3.4 Duties of tripod jacking team member	5							A			
A4.1.8.3.5 Perform tripod jacking team supervisor duties	7							-			
A4.1.8.3.6 Perform aircraft jacking/ lowering (engine removal/ installation)								-			
A4.1.8.4 Level aircraft								-			
A4.1.8.5 Weigh aircraft								-			
A4.1.8.6. Wash aircraft											
A4.1.8.6.1 Clean exterior	5							-			
A4.1.8.6.2 Lubricate MLG	5							-			
A4.1.8.6.3 Lubricate NLG	5							-			
A4.1.8.6.4 Perform post cleaning inspection	7							-			
A4.1.8.7. Apply/remove											
A4.1.8.7.1 Electrical power - external	5							1b			
A4.1.8.7.2 Hydraulic pressure, system A (external)	5							1b			
A4.1.8.7.3 Hydraulic pressure, system B (external)	5							1b			
A4.1.8.7.4 Cooling air (external)	5							1b			
A4.1.8.8. Connect/disconnect											
A4.1.8.8.1 External electrical power	5							1b			
A4.1.8.8.2 External cooling air	5							1b			
A4.1.8.8.3 Cooling air to Integrated Power Package (IPP)								-			
A4.1.8.8.4 Cooling Polyalphaolefin (PAO) cold liquid loop (external)								-			
A4.1.8.8.5 Cooling PAO hot liquid loop (external)								-			
A4.1.9. Aircraft inspections											
A4.1.9.1 Inspection concept								B			
A4.1.9.2. Perform inspections											
A4.1.9.2.1 Backup oxygen system (BOS) servicing	5							-			
A4.1.9.2.2 Before operations servicing (BOS)	5							1b			
A4.1.9.2.3 Inter-operations servicing (IOS)	5							-			
A4.1.9.2.4 Post operations servicing (POS)	5							1b			
A4.1.9.2.5 Aircraft dispatch actions (ADA)	5							1b			
A4.1.9.2.6 Aircraft return actions (ARA)	5							1b			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.1.9.2.7	Rapid Pilot Swap								-			
A4.1.9.2.8	Landing gear overspeed								-			
A4.1.9.2.9	Over G								-			
A4.1.9.2.10	Hard landing (lateral)								-			
A4.1.9.2.11	Overweight landing								-			
A4.1.9.2.12	Lightning strike								-			
A4.1.9.2.13	Brake fire								-			
A4.1.9.2.14	Engine foreign object damage (inlet)								-			
A4.1.9.2.15	Engine compressor stall								-			
A4.1.9.2.16	Engine bay fire								-			
A4.1.9.2.17	Engine fire (internal)								-			
A4.1.9.2.18	Aircraft arrestment								-			
A4.1.9.2.19	Noise or vibration								-			
A4.1.9.2.20	Integrated power package bay								-			
A4.1.9.2.21	Aerial refuel doors overspeed								-			
A4.1.9.2.22	Bird Strike								-			
A4.1.9.2.23	Engine bay								-			
<b>A4.2.</b>	<b>AIRFRAME</b>											
	<b>TR: Applicable F-35 JTD</b>											
A4.2.1	Low observable concepts								B			
A4.2.2.	Open/close											
A4.2.2.1	Weapons bay door (manual)	5							1b			
A4.2.2.2	Air Refueling doors (2310 and 2311)	5							-			
A4.2.2.3	Forward MLG Doors	5							1b			
A4.2.2.4	Weapons bay doors (hydraulic)	5							2b			
A4.2.2.5	Door 4124 (mission system equipment)								-			
A4.2.2.6	Doors 4170 and 4172 (infrared countermeasures)								-			
A4.2.3.	Weapons bay door drive											
A4.2.3.1	Fault isolate								-			
A4.2.3.2	Perform weapons bay door drive functional test	7							-			
A4.2.3.3.	Adjust											
A4.2.3.3.1	Weapons bay door drive								-			
A4.2.3.3.2	Up-lock actuators								-			
A4.2.3.3.3	Over travel stop								-			
A4.2.3.4.	Remove/install											

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.2.3.4.1	Electronic control units							-			
A4.2.3.4.2	Isolation control unit							-			
A4.2.3.4.3	Power drive units							b			
A4.2.3.4.4	Torque shafts							-			
A4.2.3.4.5	Rotary gear actuator							-			
A4.2.3.4.6	Over travel stops							-			
A4.2.3.4.7	Manual drive input unit							-			
A4.2.3.4.8	Transfer gearboxes							-			
A4.2.3.4.9	Up-lock actuators							-			
A4.2.3.4.10	Engaged switch up-lock							-			
A4.2.3.4.11	Door switch							-			
A4.2.3.4.12	Locked switch up-lock							-			
A4.2.3.4.13	Transfer cable (gearbox)							-			
A4.2.4.	Equipment/furnishings										
A4.2.4.1.	Remove/install										
A4.2.4.1.1	Display pedestal (center)							-			
A4.2.4.1.2	Consoles							-			
A4.2.4.1.3	Arm rest							-			
A4.2.4.1.4	Glareshield							-			
A4.2.4.1.5	Stowage assembly							-			
A4.3.	<b>LANDING GEAR SYSTEM</b>										
	<b>TR: Applicable F-35 JTD</b>										
A4.3.1	Components and system operation							A			
A4.3.2	Fault isolate	7						1b			
A4.3.3.	Perform										
A4.3.3.1	Landing gear functional test	7									
A4.3.3.2	Landing gear (post alternate extension functional test)	7						-			
A4.3.3.3	Up-lock (MLG) adjust							-			
A4.3.3.4	Up-lock (NLG) adjust							-			
A4.3.3.5	Strut (MLG) check X dimension	5						b			
A4.3.3.6	Strut (NLG) check X dimension	5						b			
A4.3.4	Clean/apply/remove/inspect titanium fouling plate							-			
A4.3.5.	Remove/install										
A4.3.5.1	Control valve							-			
A4.3.5.2	Control valve (emergency)							1b			
A4.3.5.3	Return check valve							-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.3.5.4	Landing/taxi light assembly								-			
A4.3.5.5.	MLG											
A4.3.5.5.1	Torque arm assembly (strut)								-			
A4.3.5.5.2	Swivel assembly								-			
A4.3.5.5.3	Collar assembly								-			
A4.3.5.5.4	Drag brace assembly (MLG)								-			
A4.3.5.5.5.	Extend/retract mechanism											
A4.3.5.5.5.1	Retract actuator								-			
A4.3.5.5.5.2	Down lock actuator (drag brace)								-			
A4.3.5.5.5.3	Link assembly (aft door/gear)								-			
A4.3.5.5.5.4	Link assembly (up-lock)								-			
A4.3.5.5.5.5	Up-lock shear cartridge								-			
A4.3.5.5.5.6	Control valve (forward door)								-			
A4.3.5.5.5.7	Up-lock (forward door)								-			
A4.3.5.5.5.8	Up-lock (MLG door)								-			
A4.3.5.5.5.9	Sequence valve								-			
A4.3.5.6.	NLG											
A4.3.5.6.1	Shock strut assembly								-			
A4.3.5.6.2	Torque arm assembly (lower)								-			
A4.3.5.6.3	Torque arm assembly (upper)								-			
A4.3.5.6.4	Swivel assembly								-			
A4.3.5.6.5	Drag brace assembly								-			
A4.3.5.6.6.	Extend/retract mechanism											
A4.3.5.6.6.1	Retract actuator								-			
A4.3.5.6.6.2	Down lock actuator								-			
A4.3.5.6.6.3	Door actuator								-			
A4.3.5.6.6.4	Up-lock shear cartridge								-			
A4.3.5.6.6.5	Link assembly (door)								-			
A4.3.5.6.6.6	Link assembly (up-lock)								-			
A4.3.5.6.6.7	Up-lock (door)								-			
A4.3.5.6.6.8	Sequence valve (up-lock)								-			
A4.3.5.6.6.9	Control valve (door)								-			
A4.3.6.	Service											
A4.3.6.1.	MLG											
A4.3.6.1.1	Strut (hydraulic, ground)								b			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.3.6.1.2	Strut (hydraulic, on jacks)							-			
A4.3.6.1.3	Strut (pneumatic, ground)	5						b			
A4.3.6.1.4	Strut (pneumatic, on jacks)							-			
A4.3.6.2.	NLG										
A4.3.6.2.1	Strut (hydraulic, ground)							-			
A4.3.6.2.2	Strut (hydraulic, on jacks)							-			
A4.3.6.2.3	Strut (pneumatic, ground)	5						-			
A4.3.6.2.4	Strut (pneumatic, on jacks)							-			
A4.3.7.	Wheels and brakes										
A4.3.7.1	Anti-skid operation							A			
A4.3.7.2	Perform brake system (anti- skid) functional test							1b			
A4.3.7.3.	Remove/install										
A4.3.7.3.1	Wheel/tire assembly (NLG)	5						-			
A4.3.7.3.2	Wheel/tire assembly (MLG)	5						1b			
A4.3.7.3.3	Brake control (electronic)							-			
A4.3.7.3.4	Brake assembly (MLG)	7						1b			
A4.3.7.3.5	Manifold (brake control)							-			
A4.3.7.3.6	Brake pressure transducer							-			
A4.3.7.3.7	Filter module (brake return)							-			
A4.3.7.3.8	Filter element (brake return)							-			
A4.3.7.3.9	Wheel speed sensor							-			
A4.3.7.4.	Service tires										
A4.3.7.4.1	Main (pneumatic)	5						b			
A4.3.7.4.2	Nose (pneumatic)	5						-			
A4.3.8.	Steering										
A4.3.8.1	Perform nose wheel steering functional test							1b			
A4.3.8.2	Remove/install steering motor valve assembly (NLG)							1b			
A4.3.9.	Arresting hook										
A4.3.9.1	Lower/raise arresting hook/functional test	5						1b			
A4.3.9.2.	Remove/install										
A4.3.9.2.1	Shank bumper							-			
A4.3.9.2.2	Hook shank							-			
A4.3.9.2.3	Hook point toe							-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.3.9.2.4	Mechanical sequence valve							-			
A4.3.9.2.5	Directional control valve							-			
A4.3.9.2.6	Door actuator, forward							-			
A4.3.9.2.7	Shank actuator							-			
A4.3.9.2.8	Door 4182, forward							-			
A4.3.9.2.9	Up-lock (door)							-			
A4.3.9.2.10	Door 4184, aft							-			
A4.3.9.2.11	Spring damper, aft door							-			
<b>A4.4.</b>	<b>UTILITIES</b>										
	<b>TR: Applicable F-35 JTD</b>										
A4.4.1.	Fire protection system										
A4.4.1.1	Components and system operation							B			
A4.4.2.	Ice Detection system										
A4.4.2.1	Components and system operation							B			
A4.4.2.2	Fault isolate in-flight ice detection							-			
<b>A4.5.</b>	<b>FLIGHT CONTROL SYSTEM</b>										
	<b>TR: Applicable F-35 JTD</b>										
A4.5.1	Components and system operation							B			
A4.5.2	Fault isolation							-			
A4.5.3.	Perform										
A4.5.3.1	Flight control system - operate	5						-			
A4.5.3.2	Flight control system operational test	7						-			
A4.5.3.3	Leading edge flap actuation system rigging							-			
A4.5.3.4	Control surface rigging (electrical)	7						-			
A4.5.3.5	Cable (rudder pedal) adjustment							-			
A4.5.4.	Remove/install										
A4.5.4.1.	Rudder										
A4.5.4.1.1	Rudder pedal assembly							-			
A4.5.4.1.2	Rudder LH/RH							-			
A4.5.4.1.3	Electrohydrostatic actuator	7R						-			
A4.5.4.2.	Horizontal stabilizers										
A4.5.4.2.1	Electrohydrostatic actuators	7						1b			
A4.5.4.2.2	Horizontal stabilizer							-			
A4.5.4.2.3	Centering actuator							-			
A4.5.4.3.	Flaperon										
A4.5.4.3.1	Electrohydrostatic actuators	7R						-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEL +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.5.4.3.2	Flaperon surface							-			
A4.5.4.4.	Leading edge flap										
A4.5.4.4.1	Power drive unit	7R						-			
A4.5.4.4.2	Rotary geared actuators							-			
A4.5.4.4.3	Torque shafts							-			
A4.5.4.4.4	Leading edge flap surface							-			
A4.5.4.4.5	Brakes (asymmetry)							-			
<b>A4.6.</b>	<b>HYDRAULIC POWER SYSTEM</b>										
	<b>TR: Applicable F-35 JTD</b>										
A4.6.1	Components and system operation							B			
A4.6.2	Fault isolate	7						1b			
A4.6.3.	Perform										
A4.6.3.1	Bleed/Leak check, hydraulic system A or B	5						-			
A4.6.3.2	Check valve functional test (GMMP)							1b			
A4.6.3.3	Firewall shutoff valve functional check							-			
A4.6.3.4	Ground maintenance motor pump controller functional test							-			
A4.6.3.5	Hydraulic - fill (fluid)	5						-			
A4.6.3.6	Hydraulic - drain (fluid)							-			
A4.6.4	Pressurize hydraulic system A/B							-			
A4.6.5	Release pressure, hydraulic, system A/B							-			
A4.6.6	Prime ground maintenance motor pump							-			
A4.6.7.	Remove/install										
A4.6.7.1	Check valve (ground maintenance motor pump, system A/B)							-			
A4.6.7.2	Shutoff valve (firewall, system A/B)							-			
A4.6.7.3	Hydraulic pump (engine driven system A/B)							1b			
A4.6.7.4	Bootstrap reservoir (system A/B)							-			
A4.6.7.5	Accumulator (bootstrap and parking brake, system A/B)							-			
A4.6.7.6	Filter module (pressure, system A/B)							1b			
A4.6.7.7	Filter module (return/case drain, system A/B)							-			
A4.6.7.8	Filter elements							-			
A4.6.7.9	Drains							-			
A4.6.7.10	Pressure transducers							-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEL +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.6.7.11	Engine driven pump system A								1b			
A4.6.7.12	Engine driven pump system B								-			
A4.6.7.13	Ground Maintenance Motor Pump (GMMP)	7							-			
A4.6.7.14	Controller, GMMP								-			
A4.6.7.15	Check valve, GMMP								-			
<b>A4.7.</b>	<b>PROPULSION SYSTEM</b>											
	<b>TR: Applicable F-35 JTD</b>											
A4.7.1	Maintenance concepts								A			
A4.7.2	Perform fault isolate	7							-			
A4.7.3.	System familiarization / constructional features											
A4.7.3.1	Propulsion system								A			
A4.7.3.2	Fan module								A			
A4.7.3.3	Power module								A			
A4.7.3.4	Augmenter duct module								A			
A4.7.3.5	Nozzle module								A			
A4.7.3.6	Gearbox module								A			
A4.7.4.	Subsystems familiarization											
A4.7.4.1	Lubrication system								A			
A4.7.4.2	Fuel distribution system								A			
A4.7.4.3	Electrical power system								A			
A4.7.4.4	Ignition system								A			
A4.7.4.5	Control and monitoring system								A			
A4.7.4.6	Modes of operation								A			
A4.7.5.	Inspect											
A4.7.5.1	Engine uninstalled visual (general condition)	7R							-			
A4.7.5.2	1st stage axial compressor rotor assembly								-			
A4.7.5.3	Case assembly (fan inlet)								-			
A4.7.5.4	1st stage compressor stator vane assembly								-			
A4.7.5.5	Engine assembly (turbofan) borescope								-			
A4.7.5.6	Detectors (metal chip)	5							-			
A4.7.6	Rotate rotor (lower pressure, N1) (access)								-			
A4.7.7	Engine assembly (turbofan) rotate N2 rotor for examination with a								-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEL +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

	borescope										
A4.7.8.	Engine chemical cleaning										
A4.7.8.1	Perform water wash, gaspath (engine) cleaning							-			
A4.7.8.2	Perform follow-on procedures							-			
A4.7.9.	Remove/install										
A4.7.9.1	Outer cone assembly (compressor inlet)							-			
A4.7.9.2	Engine assembly (access)	7R						-			
A4.7.9.3	Borescope plugs							-			
A4.7.9.4	Signal conditioning unit (exhaust gas debris)							-			
A4.7.9.5	Lines and tubing							-			
A4.7.9.6.	Power module externals										
A4.7.9.6.1	Flame holder assembly (augmentor)							-			
A4.7.9.6.2	Outer cone assembly (turbine exhaust)							-			
A4.7.9.7.	Engine lubrication system										
A4.7.9.7.1	Filter (oil element)							-			
A4.7.9.7.2	Valve (oil pressure LV10)							-			
A4.7.9.7.3	Heat exchanger (buffer fuel/air)							-			
A4.7.9.7.4	Oil pump (main)							-			
A4.7.9.7.5	Fuel/oil cooler							-			
A4.7.9.7.6	Valve (breather pressurization)							-			
A4.7.9.8.	Engine fuel system										
A4.7.9.8.1	Fuel pump (actuators hydraulic)							-			
A4.7.9.8.2	Pressure sensor (actuators hydraulic fuel pump)							-			
A4.7.9.8.3	Electro Hydraulic Servo Valve (EHSV) (actuators hydraulic fuel pump)							-			
A4.7.9.8.4	Solenoid (actuators hydraulic fuel pump)							-			
A4.7.9.8.5	Element fuel filter (main fuel pump)							-			
A4.7.9.8.6	Fuel pump (main)							-			
A4.7.9.8.7	Fuel pump (augmentor)							-			
A4.7.9.8.8	Solenoid (augmentor fuel pump)							-			
A4.7.9.8.9	Throttle valve (augmentor fuel)							-			
A4.7.9.8.10	EHSV (augmentor fuel throttle valve)							-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.7.9.8.11	Tailcone pilot valve (metering module, augmentor fuel throttle valve)								-			
A4.7.9.8.12	Throttle valve (main fuel)								-			
A4.7.9.8.13	EHSV (main fuel throttle valve)								-			
A4.7.9.9.	Engine actuators											
A4.7.9.9.1	Actuator (Fan Variable Vane (FVV))								-			
A4.7.9.9.2	EHSV (FVV actuator)								-			
A4.7.9.9.3	Solenoid (FVV actuator)								-			
A4.7.9.9.4	Actuator (Compressor Variable Vane (CVV))								-			
A4.7.9.9.5	EHSV (CVV)								-			
A4.7.9.9.6	Solenoid (CVV)								-			
A4.7.9.9.7	Valve (directional control, convergent nozzle actuator)								-			
A4.7.9.9.8	Convergent nozzle actuator								-			
A4.7.9.10.	Engine sensors											
A4.7.9.10.1	Sensor (oil debris)								-			
A4.7.9.10.2	Sensor (oil filter pressure)								-			
A4.7.9.10.3	Sensor (fuel filter delta-P, main fuel pump)								-			
A4.7.9.10.4	Sensor (main oil pressure/temperature)								-			
A4.7.9.10.5	Sensor (oil level/condition)								-			
A4.7.9.10.6	Speed sensor (front compressor rotor, N1)								-			
A4.7.9.10.7	Temperature sensor (exhaust gas left/right)								-			
A4.7.9.10.8	Augmentor flame detector sensor								-			
A4.7.9.10.9	Temperature sensor (compressor exit, Tt3)	7							-			
A4.7.9.10.10	Temperature sensor (compressor inlet left/right, Tt2)								-			
A4.7.9.10.11	Vibration sensor (gearbox)								-			
A4.7.9.10.12	Vibration sensor, (intermediate case)								-			
A4.7.9.10.13	Vibration sensor (thrust mount ring)								-			
A4.7.9.10.14	Pressure sensor (tail cone pilot)								-			
A4.7.9.10.15	Sensor (eddy current)								-			
A4.7.9.10.16	Sensor (augmentor fuel pump pressure/temperature)								-			
A4.7.9.10.17	Module main fuel throttle valve								-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

(pressure/temperature sensor)											
A4.7.9.10.18 Speed sensor (N2)								-			
A4.7.9.10.19 Sensor (exhaust gas debris)								-			
A4.7.9.11. Exhaust nozzle components											
A4.7.9.11.1 Liner (exhaust nozzle convergent)								-			
A4.7.9.11.2 Liner (exhaust nozzle, convergent air seal)								-			
A4.7.9.11.3 Segment (exhaust nozzle external)								-			
A4.7.9.11.4 Segment (exhaust nozzle divergent)								-			
A4.7.9.11.5 Seal (exhaust nozzle divergent)								-			
A4.7.9.12. Engine electrical system											
A4.7.9.12.1 Alternator (permanent magnet)								-			
A4.7.9.12.2 Ignition exciter								-			
A4.7.9.12.3 Electrical power cable (exciter to main ignitor)								-			
A4.7.9.12.4 Electrical power cable (exciter to augmentor spark ignitor)								-			
A4.7.9.12.5 Ignitor (augmentor spark)								-			
A4.7.9.12.6 Ignitor (main spark)								-			
A4.7.9.12.7 Electronic engine control (MEFP)								-			
A4.7.9.12.8 Electronic engine control (ice protection system)								-			
A4.7.9.12.9 Electrical harnesses								-			
A4.7.10. Engine controls											
A4.7.10.1 Remove and install active throttle quadrant assembly								-			
A4.7.10.2 Inspect active throttle quadrant assembly								-			
A4.7.10.3 Inspect throttle grip								-			
A4.7.11. Off airframe engine maintenance											
A4.7.11.1. Remove/inspect/install major engine modules											
A4.7.11.1.1 Fan and front compressor								-			
A4.7.11.1.2 Gearbox module (main)								-			
A4.7.11.1.3 Power module assembly								-			
A4.7.11.1.4 Module (exhaust duct)								-			
A4.7.11.1.5 Exhaust nozzle module								-			
A4.7.11.2 Engine / Line Replaceable Components (LRC) preservation, shipment, and storage											

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.7.11.2.1	Prepare engine for shipment							-			
A4.7.11.2.2	Remove engine/module/LRCs from shipping container							-			
A4.7.11.2.3	Install engine/modules/LRCs in shipping container							-			
A4.7.11.2.4	Pressurize shipping container							-			
A4.7.11.2.5	Perform periodic inspection requirements of shipping container							-			
A4.7.11.2.6	Perform Quick Engine Change (QEC) components disassemble	7R						-			
A4.7.11.2.7	Perform QEC assemble	7R						-			
A4.7.12.	Engine ground operation/testing										
A4.7.12.1	Engine operation (idle)							-			
A4.7.12.2	Engine operation (motoring)							-			
A4.7.12.3	Engine operation (after engine removal/installation) leak check/functional check							-			
A4.7.13.	Service										
A4.7.13.1	Engine replenishing (oil)	5						b			
A4.7.14	Sample oil (engine oil analysis)	5						b			
<b>A4.8.</b>	<b>FUEL SYSTEM</b>										
	<b>TR: Applicable F-35 JTD</b>										
A4.8.1	Components and system operation							B			
A4.8.2	Fault isolation	7						-			
A4.8.3	Perform leak check							-			
A4.8.4	Open/close aerial refuel doors (2310 and 2311)							-			
A4.8.5.	Refuel/defuel aircraft										
A4.8.5.1	Refuel aircraft, battery power	5						-			
A4.8.5.2	Refuel aircraft, power on							-			
A4.8.5.3	Refuel, hot							-			
A4.8.5.4	Defuel aircraft, power off							-			
A4.8.5.5	Defuel aircraft, power on	5						b			
A4.8.6	Take fuel sample							-			
A4.8.7	Maintenance mode refuel							-			
<b>A4.9</b>	<b>POWER THERMAL MANAGEMENT SYSTEM (PTMS)</b>										
	<b>TR: Applicable F-35 JTD</b>										
A4.9.1	Components and system operation							B			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEL +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.9.2	Fault isolation								-			
A4.9.3.	Perform Integrated Power Pack (IPP) ground operation											
A4.9.3.1	Ground	5							1b			
A4.9.3.2	Cockpit								-			
A4.9.4.	Remove/install											
A4.9.4.1	Integrated power package								-			
A4.9.4.2	Fuel atomizer								-			
A4.9.4.3	Pump/motor assembly, fuel metering								-			
A4.9.4.4	Filter, fuel								-			
A4.9.4.5	PTMS ducts								1b			
A4.9.4.6	PTMS valves								1b			
A4.9.4.7	Door 4121 (powered intake, IPP)								-			
A4.9.4.8	Actuator, intake door								-			
A4.9.4.9.	IPP ignition											
A4.9.4.9.1	Ignition unit								-			
A4.9.4.9.2	Ignitor								-			
A4.9.4.9.3	Ignition lead								-			
A4.9.5.	Engine starter generator (ESG)											
A4.9.5.1	Perform engine starter generator replenishing (oil)	5							b			
A4.9.5.2	Drain engine starter generator fluid								-			
A4.9.5.3.	Remove/install											
A4.9.5.3.1	Sensor (magnetic chip detector)								-			
A4.9.5.3.2	Drop link (engine starter generator/engine fluid)								-			
A4.9.6.	28 VDC/270 VDC generation											
A4.9.6.1.	Battery 28 VDC											
A4.9.6.1.1	Remove/install								-			
A4.9.6.1.2	Charge								-			
A4.9.6.1.3	Connect and disconnect	5							-			
A4.9.6.2.	Battery 270 VDC											
A4.9.6.2.1	Remove/install								-			
A4.9.6.2.2	Charge								-			
A4.9.6.2.3	Connect and disconnect	5							-			
A4.9.7.	Perform											
A4.9.7.1	Integrated power pack-fill (oil)								-			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEI +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.9.7.2	Integrated power pack-drain (oil)								-			
A4.9.7.3	Integrated power pack – replenish (oil)								-			
A4.9.7.4	Reservoir PAO replenishing (cold liquid loop)								-			
A4.9.7.5	Reservoir PAO replenishing (hot liquid loop)								b			
A4.9.7.6	Reservoir PAO drain (cold liquid loop)								-			
A4.9.7.7	PAO reservoir bleed								-			
<b>A4.10.</b>	<b>SUPPORT EQUIPMENT</b>											
	<b>TR: Applicable AFIs; Applicable equipment TOs</b>											
A4.10.1.	Cart, liquid coolant system (PAO)											
A4.10.1.1	Purpose and description								B			
A4.10.1.2	Pre-use inspection and operate								-			
A4.10.2.	Cart, hydraulic power											
A4.10.2.1	Purpose and description								B			
A4.10.2.2	Pre-use inspection and operate	5							-			
A4.10.3.	Perform pre-use inspection and operate											
A4.10.3.1	Servicing unit (engine, IPP, ESG)	5							-			
A4.10.3.2	Servicing unit (hydraulics)	5							-			
A4.10.3.3	Servicing unit (PAO)	5							-			
A4.10.3.4	Servicing unit (BOS)								-			
A4.10.3.5	Power cart (270 VDC)	5							-			
A4.10.3.6	Cooling air cart	5							-			
A4.10.3.7	Component handling jack	5							-			
A4.10.3.8	Landing gear component handling jack								-			
A4.10.3.9	Brones jack (gear box)								-			
A4.10.3.10	Transverse adapter								-			
A4.10.3.11	Disabled wheel dolly								-			
A4.10.3.12	Crane, Floor, Portable								-			
A4.10.3.13	PWA59826 water wash cart								-			
A4.10.4.	Component Hoisting equipment											
A4.10.4.1	Purpose and description								-			
A4.10.5.	Engine removal and installation trailer											
A4.10.5.1	Operational fundamentals								A			

## F-35 QUALITATIVE REQUIREMENTS

1. Tasks, Knowledge And Technical References	2. Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided via ICW and/or course			
	Core/Cert ^	Deployment * / SEL +	A	B	C	D	E	A	B	C	D
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3-lvl	5-lvl	7-lvl	9-lvl

A4.10.5.2	Use	7R							-			
A4.10.5.3.	Perform inspections											
A4.10.5.3.1	Pre-use inspection								-			
A4.10.5.3.2	Service								-			
A4.10.5.3.3	Periodic								-			
A4.10.5.3.4	Special								-			
A4.10.5.4	Perform operational check								-			
A4.10.5.5	Troubleshoot								-			
A4.10.5.6	Correct malfunctions								-			
A4.10.6.	Engine Shipping System Trailer (ESST) and engine support assembly											
A4.10.6.1	Purpose and description								-			
A4.10.6.2	Perform pre-use inspection and operate								-			
A4.10.6.3.	Perform inspections											
A4.10.6.3.1	Service								-			
A4.10.6.3.2	Periodic								-			
A4.10.6.3.3	Special								-			
A4.10.6.4	Perform operational check								-			
A4.10.6.5	Troubleshoot								-			
A4.10.6.6	Correct malfunctions								-			

This Page Intentionally Left Blank

## F-35 OBJECTIVE TRAINING MATRIX

**NOTE:** The following matrix defines specific sources for training required to achieve an apprentice (3) skill level appropriate to each aircraft (MDS) as identified in each STS attachment, column 4A to this CFETP. Training is separated into different phases/locations as indicated in PART II, SECTION D. The contents of each phase are shown by the proficiency codes listed under the appropriate column headings in the matrix.

**Phase 1** training consists of STS Attachment 2 and is the four blocks of instruction in all courses conducted at Sheppard AFB.

**Phase 2** training consists of the MDS specific attachment at 359 TRS.

**Phase 3** training is the AFSC awarding course.

<u>STS Element</u>	<u>TASK</u>	<u>Phase 2</u>	<u>Phase 3</u>
A4.1.1	F-35 overview	A	
A4.1.1.1	Perform static ground aircraft procedure	2b	3c
A4.1.2.1	Connect/disconnect PMA	2b	3c
A4.1.2.2	Use Joint Technical Data (JTD)	2b	3c
A4.1.2.3	Perform Maintenance Vehicle Interface (MVI) session start/shutdown	2b	3c
A4.1.3.1	Autonomic Logistics Information System (ALIS), Overview	A	
A4.1.3.2	Point of Entry (POE)	A	
A4.1.3.3	Computerized Maintenance Management System (CMMS)	B	
A4.1.3.4	CMMS Squadron Status Page	B	
A4.1.3.5	CMMS Air Vehicle page	2b/1b	3c
A4.1.3.6	CMMS Work Order List	2b/1b	3c
A4.1.3.7	CMMS Work Order Solutions	2b/1b	3c
A4.1.3.8	CMMS Work Order Execution	2b/1b	3c
A4.1.3.9	CMMS Work Order Completion	2b/1b	3c
A4.1.4.1	Remove/install, Service covers (-21)		3c
A4.1.5.1	Use/extend/stow boarding ladder		3c
A4.1.6.1	Perform aircraft safe for electrical power application	2b	3c
A4.1.6.2	Perform aircraft safe for hydraulic power application	2b	3c
A4.1.6.3	Perform aircraft cockpit safe for entry procedure	2b	3c
A4.1.6.4	Perform aircraft exterior safe for maintenance procedure	2b	3c
A4.1.7.1	Perform transparency cleaning (exterior/interior)	1b	
A4.1.7.2.1	Open/close canopy, Electrically	1b	2b

<b><u>STS Element</u></b>	<b><u>TASK</u></b>	<b><u>Phase 2</u></b>	<b><u>Phase 3</u></b>
A4.1.7.2.2	Manually	b	
A4.1.7.3.1	Remove/install/open/close, Easy access panels		2b
A4.1.7.3.3	Hinged doors		2b
A4.1.8.1.1	Perform tow team member duties	b	
A4.1.8.1.3	Duties of tow vehicle operator	A	
A4.1.8.3.1	Perform axle jack Nose Landing Gear (NLG) duties		2b
A4.1.8.3.2	Perform axle jack Main Landing Gear (MLG) duties		2b
A4.1.8.3.4	Duties of tripod jacking team member	A	
A4.1.8.7.1	Apply/remove, Electrical power - external	1b	2b
A4.1.8.7.2	Hydraulic pressure, system A (external)	1b	
A4.1.8.7.3	Hydraulic pressure, system B (external)	1b	2b
A4.1.8.7.4	Cooling air (external)	1b	2b
A4.1.8.8.1	Connect/disconnect, External electrical power	1b	2b
A4.1.8.8.2	External cooling air	1b	2b
A4.1.9.1	Aircraft inspections, Inspection concept	B	
A4.1.9.2.1	Perform inspections, Backup oxygen system (BOS) servicing		2b
A4.1.9.2.2	Before operations servicing (BOS)	1b	3c
A4.1.9.2.3	Inter-operations servicing (IOS)		2b
A4.1.9.2.4	Post operations servicing (POS)	1b	3c
A4.1.9.2.5	Aircraft dispatch actions (ADA)	1b	3c
A4.1.9.2.6	Aircraft return actions (ARA)	1b	3c
A4.2.1	Airframe systems, Low observable concepts	B	
A4.2.2.1	Open/close, Weapons bay door (manual)	1b	
A4.2.2.3	Forward MLG doors	1b	
A4.2.2.4	Weapons bay doors (hydraulic)	2b	
A4.2.3.4.3	Remove/install, Power drive units	b	
A4.3.1	Landing gear, Components and system operation	A	
A4.3.2	Fault isolate	1b	
A4.3.3.5	Strut (MLG) check X dimension	b	2b
A4.3.3.6	Strut (NLG) check X dimension	b	2b
A4.3.5.2	Remove/install, Control valve (emergency)	1b	
A4.3.6.1.1	Service MLG, Strut (hydraulic, ground)	b	2b
A4.3.6.1.3	Strut (pneumatic, ground)	b	2b
A4.3.7.1	Anti-skid operation	A	
A4.3.7.2	Perform brake system (anti-skid) functional test	1b	
A4.3.7.3.1	Remove/install, Wheel/tire assembly (NLG)		2b

<b><u>STS Element</u></b>	<b><u>TASK</u></b>	<b><u>Phase 2</u></b>	<b><u>Phase 3</u></b>
A4.3.7.3.2	Wheel/tire assembly (MLG)	1b	2b
A4.3.7.3.4	Brake assembly (MLG)	1b	
A4.3.7.4.1	Service tires, Main (pneumatic)	b	2b
A4.3.7.4.2	Nose (pneumatic)		2b
A4.3.8.1	Perform nose wheel steering functional test	1b	
A4.3.8.2	Remove/install steering motor valve assembly (NLG)	1b	
A4.3.9.1	Arresting hook, Lower/raise arresting hook	1b	2b
A4.4.1.1	Fire protection system, Components and system operation	B	
A4.4.2.1	Ice detection system, Components and system operation	B	
A4.5.1	Flight control system, Components and system operation	B	
A4.5.4.2.1	Remove and install, Horizontal stabilizers, Electrohydrostatic actuators	1b	
A4.6.1	Hydraulic power system, Components and system operation	B	
A4.6.2	Fault isolate	1b	
A4.6.3.1	Perform, Bleed/Leak check, hydraulic system A or B		2b
A4.6.3.2	Check valve functional test (GMMP)	1b	
A4.6.3.5	Hydraulic – fill (fluid)		2b
A4.6.5	Release pressure, hydraulic, system A/B		2b
A4.6.7.3	Remove and install, Hydraulic pump (engine driven system A/B)	1b	
A4.6.7.6	Filter module (pressure, system A/B)	1b	
A4.6.7.11	Engine driven pump system A	1b	
A4.7.1	Maintenance Concepts	A	
A4.7.3.1	System familiarization/constructional features, Propulsion system	A	
A4.7.3.2	Fan module	A	
A4.7.3.3	Power module	A	
A4.7.3.4	Augmenter duct module	A	
A4.7.3.5	Nozzle module	A	
A4.7.3.6	Gearbox module	A	
A4.7.4.1	Subsystems familiarization, Lubrication system	A	
A4.7.4.2	Fuel distribution system	A	
A4.7.4.3	Electrical power system	A	
A4.7.4.4	Ignition system	A	
A4.7.4.5	Control and monitoring system	A	
A4.7.4.6	Modes of operation	A	

<b><u>STS Element</u></b>	<b><u>TASK</u></b>	<b><u>Phase 2</u></b>	<b><u>Phase 3</u></b>
A4.7.5.6	Inspect, Detectors (metal chip)		2b
A4.7.13.1	Service, Engine replenishing (oil)	b	2b
A4.7.14	Sample oil (engine oil analysis)	b	2b
A4.8.1	Fuel system, Components and system operation	B	
A4.8.5.1	Refuel aircraft, battery power		2b
A4.8.5.5	Defuel aircraft, power on	b	
A4.9.1	Power Thermal Management System (PTMS), Components and system operation	B	
A4.9.3.1	Perform Integrated Power Pack (IPP) ground operation, Ground	1b	3c
A4.9.4.5	Remove and install, PTMS ducts	1b	
A4.9.4.6	PTMS valves	1b	
A4.9.5.1	Perform engine starter generator replenishing (oil)	b	
A4.9.7.5	Perform, Reservoir PAO replenishing (hot liquid loop)	b	
A4.10.1.1	Cart, liquid coolant system (PAO), Purpose and description	B	
A4.10.2.1	Cart, hydraulic power, Purpose and description	B	
A4.10.2.2	Pre-use inspection and operate		2b
A4.10.3.1	Perform pre-use inspection and use, Servicing unit (engine, IPP, ESG)		2b
A4.10.3.2	Servicing unit (hydraulics)		2b
A4.10.5.1	Engine removal and installation trailer, Operational fundamentals	A	

**NOTE:** STS elements annotated with 2b/1b will be trained as soon as updated course material becomes available.