

**TC 3-04.71**

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**Commander's Aviation Maintenance Training  
Program**

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**Headquarters Department of the Army**

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# **Commander's Aviation Maintenance Training Program**

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## Preface

Training Circular (TC) 3-04.71 provides guidance concerning aviation maintainer training and responsibilities from the aviation brigade to the platoon level.

This publication is written for aviation commanders, maintenance leaders, officers, noncommissioned officers (NCOs), and technicians. Trainers and educators throughout the Army also use this publication.

Commanders, staffs, and subordinates ensure their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure their Soldiers operate according to the law of war and the rules of engagement. (See FM 6-27.)

This publication uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which TC 3-04.71 is the proponent publication (the authority) are italicized in the text and are marked with an asterisk (\*) in the glossary. Terms and definitions for which TC 3-04.71 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

This publication applies to the Active Army, Army National Guard/Army National Guard of the United States and United States Army Reserve unless otherwise stated.

The proponent of TC 3-04.71 is Headquarters, United States Army Aviation Center of Excellence (USAACE). The preparing agency is USAACE Department of Training and Doctrine. Send comments and recommendations on Department of the Army (DA) Form 2028 (*Recommended Changes to Publications and Blank Forms*) directly to Commander, United States Army Aviation Center of Excellence, ATTN: ATZQ-TDD-D, Fort Rucker, AL 36362-5263. Or email to DOTD at [usarmy.rucker.avncoe.mbx.doctrine-branch@mail.mil](mailto:usarmy.rucker.avncoe.mbx.doctrine-branch@mail.mil).

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# Introduction

TC 3-04.71 shapes the way the Army trains and develops aviation maintainers and leaders. Aviation maintenance influences the ability of an aviation unit to execute the mission and to provide overwhelming combat power in support of ground forces. It is critical for a commander to evaluate the ability of the unit to perform the required level of maintenance to keep aviation assets in the fight.

Full understanding and application of our training doctrine in Army Doctrine Publication (ADP) 7-0, and the unit training management process on the Army Training Network (ATN) ensures commanders are able to effectively plan, prepare, execute and assess unit training plans to build combat readiness. At battalion level and above, the military decision making process is used to develop the unit training plan. At the company level and below, troop leading procedures are used. Any shortcuts in the plan, prepare, execute, and assess phases of the operations process impact the ability to develop and execute realistic training. This is applicable to maintenance because maintenance is training. Scheduled maintenance is planned and executed as part of the training plan.

Aviation maintenance support has never been more critical than in today's operating environment, where personnel and aircraft remain in high demand due to high operational tempo. Demand for technically complex aircraft equals the demand for experienced aircraft maintainers and maintenance managers. The ability of an aviation unit to perform its wartime mission is numerically represented by its aircraft operational readiness rates, and its maintenance efficiency rates. Higher operational readiness rates are a direct result of effective and efficient maintenance and logistics management by all aviation commanders, maintenance officers, NCOs, and Department of the Army civilians.

Maintenance is critical for all aircraft weapon platforms, systems, subsystems, and aviation ground support equipment. The failure of an operating aircraft system or subsystem, resulting from improper maintenance procedures, can have catastrophic and deadly consequences to personnel and equipment. Aviation maintainers must adhere to the latest applicable aircraft technical manuals (TMs) and references when conducting maintenance on their assigned aircraft.

Commanders and leaders must balance mission requirements while continuously assessing a unit's maintenance posture. The critical links between training, maintenance, and readiness cannot be emphasized enough. This TC serves as the primary reference for effectively training aviation maintainers. It is intended to complement TC 3-04.11, and does not relieve or reduce any requirements of the Commander's Aviation Training and Standardization Program.

This revision clarifies and better explains the use of aviation maintenance training records and the assessment and designation of maintainers prior to conducting aviation maintenance tasks. The progression framework helps leaders rapidly identify the appropriately trained and designated personnel. By incorporating more industry-wide accepted terminology, the Aviation Maintenance Training Program (AMTP) better aligns with civilian counterpart professional recognition systems. Additionally, a numeric maintenance level (ML) designation was added, using a scale from ML0-ML4. The purpose of adding a numeric designation is to provide more clarity in understanding the hierarchy of proficiency. A Soldier is assessed and designated by the commander at one of these maintenance levels prior to conducting the applicable level tasks. The program is not intended to limit the commander's ability to execute maintenance actions. Designation of a maintenance level in the maintenance training records constitutes a trained status.

Maintenance level designations in this revision are: apprentice-ML0, journeyman-ML1, repairer-ML2, senior repairer-ML3, and master repairer-ML4 (figure INT 1, page vi).

<b>Maintenance Level (ML) Designations</b>
<b>Apprentice-ML0</b> Most junior maintainer qualified in a military specialty, typically on their first tour of duty
<b>Journeyman-ML1</b> Skilled maintainers conducting supervised maintenance
<b>Repairer-ML2</b> Leads, trains, and coaches maintainers on ICTL 10 tasks
<b>Senior Repairer-ML3</b> Leads, trains, and coaches maintainers on ICTL 10-20 tasks
<b>Master Repairer-ML4</b> Leads, trains, and coaches maintainers on ICTL 10-30 tasks

**Figure INT-1. Maintenance level designations**

This revision incorporates minor changes to DA form 7817 (*Aviation Maintainer Training Record*). Blocks were added to change the maintainers' rank without being forced to create a new form. Each event entered on the form is recorded by an NCO and initialed by the maintainer.

Also, all training requirements for civilians were removed, and appendix C added a general guide to aid, assist, and provide resources for training opportunities utilized by the civilian or Career Program 64 occupational series. Appendix D was added to help describe common scenarios NCO leaders encounter in the operational training domain.

TC 3-04.71 contains four chapters and four appendices:

- Chapter 1 provides the purpose of the AMTP and outlines the responsibilities of personnel involved in the training process.
- Chapter 2 describes the requirements for qualification, progression, refresher, and sustainment training. It also provides maintainer designations and their roles in the training process
- Chapter 3 describes the requirements for evaluations and the role evaluations play in monitoring the success of unit and individual training
- Chapter 4 describes the documents to be used in the AMTP, the procedures for filling out forms, and records management.
- Appendix A contains instructions for maintaining a Soldier's individual critical task list (ICTL), the fundamental element used for evaluations in the AMTP.
- Appendix B is designed to provide Soldiers and leaders with the self-development opportunities related to aviation maintenance.
- Appendix C describes access to training for civilian maintainers.
- Appendix D contains examples to help readers visualize counseling sessions for several commonly occurring circumstances.

The AMTP began phased implementation starting October 2018. In phase I, commanders and maintenance leaders implemented training compliant with chapter two and appendix A of this publication. This revision coincides with phase II. Beginning October 2020, quality control sections evaluated their technical inspectors to prepare them to evaluate individual maintainers compliant with chapter three of this publication. Leaders also recorded individual training per chapter four. The program is considered fully implemented in October 2021. Prior to full implementation commanders do not remove Soldiers or NCOs from specific positions based on this publication. However, after October 2021, Soldiers and NCOs are not assigned a duty listed in paragraphs 2-27 through 2-33 until the Soldier or NCO meets the requirements for that duty. Once the program is fully implemented, commanders clearly indicate the expected job performance using descriptions in chapter two.



## Chapter 1

# Program Intent and Responsibilities

This chapter provides the intent of the AMTP and outlines the responsibilities of personnel involved in the progression training process.

### GENERAL

*Building and sustaining combat readiness is both a science and an art, requiring commanders, subordinate leaders, and staffs to use the operations process to develop and execute effective unit training plans. Leaders must plan unit training with the same deliberate focus as a combat operation. Aviation commanders and leaders need to synchronize individual and collective training requirements with the aircrew training program, gunnery program, and maintenance program to achieve a progressive, rigorous, comprehensive and repetitive path to achieving unit readiness. (PB 1-16-1, Aviation Digest, MG Lundy, January - March 2016)*

1-1. Commanders at all levels establish, maintain, and conduct training of operators, crews, and maintenance personnel to properly use and maintain equipment. AMTP standardizes aviation maintenance training across the Army, Army Reserve, and National Guard. It also provides predictability and builds the knowledge base needed to provide maintenance excellence and skills through a progressive, cumulative, and regulatory training path that professionally develops maintainers' skills and understanding of their craft.

### PURPOSE

1-2. The program's purpose is to enhance readiness and ensure individual maintainers and maintenance teams develop and sustain the required capabilities necessary to successfully complete maintenance missions. It provides unit leadership with reasonable assurance of the level of training, and it provides maintainers with—

- Technical proficiency and professional development process and resources.
- Individual progression and sustainment process by which maintenance competence can be accurately measured.
- Standardized task requirements and procedures.
- Standardization of maintenance training records.

1-3. This program is not intended to limit the commander's ability to execute maintenance actions in any way. Maintainers always perform maintenance actions with appropriate supervision.

1-4. A challenge for commanders is understanding complex training requirements for many different military occupational specialties (MOSs). By following the AMTP, this challenge is simplified to determining whether any maintainer or maintenance leader is trained or untrained. Designation of a maintenance level in the maintenance training records on the DA Form 7817 constitutes a trained status. Making this distinction, the commander can determine objectively if the unit is properly trained.

1-5. By comparing the number of assigned Soldiers to the number of trained and designated Soldiers the commander objectively evaluates the organization. For example, an AH-64 repair section has 14 maintainers assigned at grades E-4 and below. If the section reports 7 of the 14 maintainers are still designated as apprentice-ML0, the section is only 50 percent trained. The systems repair section in the same company has 13 of 16 assigned maintainers (or 81 percent) properly trained and designated as journeyman-ML1. After comparing the two sections, the company commander and maintenance leaders in the organization can clearly see the AH-64 section needs more focused training.

## SCOPE

1-6. This publication provides a standardized AMTP for maintainers in the following MOSs:

- 15B, aircraft power plant repairer.
- 15D, aircraft powertrain repairer.
- 15E, RQ-7 unmanned aircraft systems repairer.
- 15F, aircraft electrician.
- 15G, aircraft structural repairer.
- 15H, aircraft pneudraulics repairer.
- 15M, MQ-1 unmanned aircraft systems repairer
- 15N, avionic mechanic.
- 15R, AH-64 attack helicopter repairer.
- 15T, UH-60 utility helicopter repairer.
- 15U, CH-47 cargo helicopter repairer.
- 15Y, AH-64 armament/electrical/avionic systems repairer.

## PROGRAM RESPONSIBILITES

1-7. It is the commander's responsibility to plan, prepare, execute, and assess unit training plans, which not only result in a unit proficient in executing mission essential tasks but also incorporate low-density or small section training opportunities to ensure and improve individual task proficiencies and contribute to overall unit readiness. Commanders and small section leaders also emphasize the use of ATN to access Army center of excellence network hosted products to further develop MOS-based skills.

1-8. Each NCO and officer must be capable of performing the task required of their immediate subordinates and understand the relationship between individual job requirements, Soldiers manuals, and collective tasks. (See Army Regulation [AR] 350-1 for more details.)

## BRIGADE

1-9. Brigade commanders—

- Provide training guidance, set training objectives, sub-allocate resources, and reduce training distractors and unit turbulence.
- Evaluate each battalion's AMTP.
- Are members of the brigade commander/command sergeant major (CSM) and above user group in digital training management system (DTMS).

1-10. Brigade aviation maintenance officers assist the brigade commander in evaluating each battalion's AMTP.

1-11. Brigade command sergeant majors—

- Assist command sergeant majors with resources and personnel to train maintenance actions across the brigade.
- Are members of the brigade commander/CSM and above user group in DTMS.

## BATTALION

1-12. Battalion commanders—

- Develop, coordinate, implement, supervise, and evaluate performance-oriented training programs.
- Establish and enforce the AMTP.
- Approve unit specific individual task training.
- Prioritize and allocate resources and training guidance.
- Chair the monthly standardization meeting.
- Are members of the battalion commander/CSM user group in DTMS.

- 1-13. Battalion aviation maintenance officers—
- Standardize all aviation maintenance training, evaluations, and record keeping for all assigned maintenance personnel.
  - Train and evaluate all maintenance officers within the battalion.
  - Provide technical advice and expertise to the commander on all AMTP related subjects.
  - Integrate the AMTP and the commander's training program to support the unit's mission essential task list (METL) by reviewing and advising the battalion commander on each ICTL and on locally created training requirements related to aviation maintenance.
  - Research, staff, and prepare authoritative responses to AMTP related correspondence.
  - Attend the monthly standardization meeting.
- 1-14. Battalion command sergeant majors—
- Coordinate with first sergeants to assign maintainers to appropriate organization based on AMTP individual records review.
  - Cross-level experience within the battalion.
  - Assist with integration of the AMTP and the commander's training program, supporting the unit's METL by reviewing and advising the battalion commander on each ICTL, and on locally created training requirements related to aviation maintenance.
  - Advise the brigade S-3s on maintainer training during the quarterly training meetings.
  - Are members of the battalion commander/CSM user group in DTMS.
- 1-15. Production control officers or NCOs—
- Chair the production control meeting.
  - Assist platoon sergeants, ensuring aircraft repairs and back shops work become formal training or evaluation events.
  - Coordinate with the aviation support battalion when organic trainers and evaluators are not available.
- 1-16. Quality control officers or NCOs—
- Exemplify standards for conducting maintenance.
  - Attend production control meetings.
  - Assist the platoon sergeant by providing trainers when they do not have other qualified trainers available.
- 1-17. Technical inspectors—
- Are designated by the battalion commander on orders. (See Department of the Army Pamphlet [DA PAM] 738-751.)
  - Serve as the most proficient maintenance technicians in the battalion.
  - As seasoned maintainers, conduct training for any tasks in which they are proficient.
  - In ICTL30 positions, conduct evaluations on ICTL10-30 tasks.
  - In ICTL20 positions, conduct evaluations on ICTL10-20 tasks.
  - If a limited TI, only evaluate the limited tasks designated in TI orders.

## **COMPANY**

- 1-18. Company commanders—
- Assist the training managers in developing training plans, and prepares and executes the training program.
  - Initiate and maintain a maintenance personnel training program that addresses MOS sustainment and continuation training requirements by skill-level.
  - Ensure the AMTP is nested within company training program at company training meetings.
  - Are members of the company commander/ISG user group in DTMS.
  - Attend the monthly standardization meeting.

1-19. Maintenance officers—

- Are designated by the commander on orders. (See AR 750-1.)
- Serve as senior aviation maintainer for the company
- Provide technical advice and expertise to the company commander on all AMTP related subjects.
- Minimize conflicts between maintenance events and scheduled training.
- Assist the commander in integrating the AMTP and the commander's training program to support the unit's METL by reviewing and advising the company commander on each ICTL and on locally created training requirements related to aviation maintenance.
- Attend the company training meeting.

1-20. Safety officers—

- Ensure compliance with job hazard analysis and other safety training requirements.
- Identify safety training required and frequency of training.

1-21. First sergeants—

- Are key to integrating the company training plan with the battalion's training plan.
- Integrate individual Soldier training into the company's training plan.
- Ensure maintainers have the correct training and evaluations before being assigned to a position of higher technical responsibility.
- Advise the battalion S-3 on maintainer training during the quarterly training meetings.
- Are members of the company commander/ISG user group in DTMS.

## PLATOON

1-22. Platoon leaders—

- Identify training resources and ensures training is meaningful and according to the AMTP.
- Identify strengths and weaknesses of the training program and report to the commander, providing recommendations for improvement.
- Understand the AMTP and the commander's training program intent, to include the unit's METL.
- Administer and record maintenance training according to this publication.
- Are members of the platoon sergeant/leader user group in DTMS.
- Attend the company training meeting.
- Attend a production control meeting weekly at a minimum, but platoon leaders often alternate attendance so that at least one platoon leader from each flight company is at each production control meeting, daily, depending on unit schedule and mission requirements.

1-23. Platoon sergeants—

- Coordinate, schedule, develop, and prioritize all training events.
- Evaluate maintainers conducting tasks if designated as a technical inspector for that task level.
- Recommend to the commander Soldiers best able to serve in leadership positions.
- Monitor overall performance of maintenance teams, ensuring adherence to applicable standards.
- Outline priorities for training and provide guidance for the master repairer-ML4s.
- Understand the AMTP and the commander's training program intent, to include the unit's METL, and supervise the training program.
- Train maintainers conducting ICTL10-30 tasks.
- Identify and recommend additional maintenance trainers/evaluators when warranted.
- Coordinate actual maintenance requirements to conduct hands-on training and evaluations when possible.
- Are members of the platoon sergeant/leader user group in DTMS.
- Attend the company training meeting.
- Attend the production control meeting if the master repairer-ML4 is absent.

1-24. Master repairers (ML4)—

- Lead, train, coach, and mentor (ICTL10-30) maintainers.
- Evaluate maintainers conducting tasks if designated as a technical inspector for that task level.
- Understands this program and the commander's training program intent, to include the unit's METL, and administer the training program.
- Monitor the status of the section's maintenance training, its capabilities, and the proficiency level of individual maintainers.
- Administer and record maintenance training according to this publication.
- Keep the commander, maintenance officer, and platoon sergeant advised on individual maintainer proficiency and recommends maintainer progression.
- Attend the daily production control meeting.
- Coordinate actual maintenance requirements to conduct hands-on training and evaluations when possible.
- Is a member of the squad leader/section leader user group in DTMS.

1-25. Senior repairers (ML3)—

- Lead, train, coach, and mentor maintainers in ICTL10-20 tasks.
- Evaluate maintainer conducting tasks if designated as a technical inspector for that task level.
- Continuously review and refine training techniques, procedures, and contents of the AMTP, and makes recommendations to the master repairer-ML4 or platoon sergeant for changes.
- Monitor the status and advise the master repairer-ML4 of the squad's maintenance training, its capabilities, and the proficiency level of the individual maintainers.
- Administer and record maintenance training according to this publication.
- Are members of the squad leader/section leader user group in DTMS.

1-26. Repairers (ML2)—

- Lead, train, coach, and mentor maintainers on ICTL10 tasks.
- Perform all maintenance and non-maintenance tasks that pertain to their section with high levels of proficiency, without supervision or direct guidance.
- Administer and record maintenance training according to this publication.
- Are members of the user (view only) group in DTMS.

1-27. Journeyman (ML1)—

- Conduct maintenance under the limited supervision of a repairer-ML2.
- Seek guidance and advise the appropriate personnel of their specific training needs in regard to ICTL status.
- Use Army Knowledge Online and "My Training" to review assigned ICTL.

1-28. Apprentice (ML0) - An apprentice-ML0 is the junior most maintainer qualified in a military specialty, typically a private or a private-first-class. Soldiers reclassifying into an aviation maintenance MOS may also be considered an apprentice-ML0. Apprentices (ML0)—

- Conduct training and maintenance under direct supervision.
- Seek guidance and advise appropriate personnel when specific assigned tasks are beyond their ability.
- Are familiar with their ICTL.

## PROGRAM MANAGEMENT

1-29. The quality control section serves as the unit's core for maintenance standardization and for standardization in the AMTP. The quality control section—

- Maintain a current ICTL and task details for each MOS as necessary.
- Maintain the battalion commander's designated tasks list for evaluations.

- Maintain a familiarization chart and technical publications that support all tasks necessary to the unit METL.

1-30. A *familiarization chart* is a record of publications required to be used as a reference while conducting maintenance actions; the chart helps the Soldier remain current when changes occur to technical data or policy.

1-31. The production control section is instrumental in organizing maintenance to support training and in organizing training to support maintenance. The production control NCO, platoon sergeants, and master repairer (ML4) must make a daily effort to include formal training and evaluations concurrent with repairing aircraft or with back shops work. Special training events not coordinated with required repair work creates an unmanageable workload for the unit.

1-32. The aviation support battalion assist each battalion within the brigade by conducting unbiased third-party evaluations as requested by the commander. The aviation support battalion also assist with training. Aviation support battalion personnel training aviation-maintenance-company personnel is more prevalent in low density MOSs. Training requests may come through the production control section in the form of a work order, or through the operations process in the form of an operations or fragmentary order.

## Chapter 2

# How to Train

This chapter provides the requirements for qualification, progression, refresher, and sustainment training. It also provides maintainer designations and their roles in the training process.

### TRAINING STRATEGY

*As with any program, much will depend on the how we train these tasks. Critical to this training is explaining the “why”—why we are doing what we do, not just the how. In order to train a task to standard, the trainer must explain everything that leads up to the task, everything that follows, why each of these actions are needed, and how they tie into a larger system. Maintainers need to train and demonstrate an understanding of how to manage available resources to complete the assigned task successfully. This includes describing how the elements of individual tasks work within the larger context of the respective system. (Army Aviation Magazine, CSM Chambers, 2017)*

2-1. Commanders and other leaders exercise mission command in training as well as in operations. They provide their commander’s intent to subordinates, who determine how to achieve success. Leaders encourage initiative and innovation in their subordinates by allowing them to determine the most effective ways to achieve the standards and meet training objectives.

2-2. NCOs are the primary trainers of enlisted Soldiers, crews, and small teams. NCOs take broad guidance from their leaders; identify the necessary tasks, standards, and resources; and then plan, prepare, execute, and assess training. They ensure their Soldiers demonstrate proficiency in their MOS skills, warrior tasks, and battle drills. NCOs instill in Soldiers discipline, resiliency, the Warrior Ethos, and Army Values. In their assessment, NCOs provide feedback on task proficiency and the quality of the training. (See ADP 7-0 for more details.)

2-3. One of the foundation blocks to building an effective training program is the individual critical task list (ICTL). Individual task selection is a result of collective task development, job analysis, new equipment fielding, or other triggering events. The MOS proponent produces a Soldier’s ICTL. Commanders may modify the list or create unit specific tasks to enhance the Soldier’s ability to support METL tasks. (See appendix A for more on ICTL management.) Unit-created tasks are written in a similar format to tasks downloaded from ATN or CAR. (See appendix A.) Unit-created tasks will be assigned a number and title and have all appropriate sections (such as conditions, standards, special considerations, evaluation considerations, performance steps, performance measures). Unit-specific tasks are trained and evaluated similar to other ICTL tasks.

2-4. The TRADOC process to update ICTLs is called a critical task and site selection board (CTSSB). It is cyclical in nature; development and potential changes are always in-progress. NCO leaders check ATN regularly to ensure the most current information is available to train the Soldier. (See websites recommend in the references section.)

### INSTITUTIONAL DOMAIN

2-5. In schools and training centers, Soldiers are introduced to Warrior Tasks and focus on developing individual skills and knowledge—the fundamentals to help them integrate into a team to train on unit collective tasks. Individuals return to schools from operational assignments at certain points to gain the skills, knowledge, and behaviors needed in their current assignment as well as prepare them for the next duty assignment and for higher levels of responsibility.

### **ADVANCED INDIVIDUAL TRAINING**

2-6. Qualification training is conducted at the MOS proponent school. Soldiers graduate from advanced individual training (AIT) with apprentice-level experience. All aviation maintainers must be MOS qualified prior to beginning their progression at a unit. Commanders do not assume AIT graduates are proficient in all tasks.

### **ADVANCED LEADERS COURSE**

2-7. The Advanced Leaders Course (ALC) is a branch-specific course designed for the Soldier's MOS and is normally conducted at the MOS proponent school. Completion of ALC is a requirement for promotion to Staff Sergeant and is required for most ICTL30 positions within a typical aviation battalion. This course provides Soldiers with an opportunity to develop the skills, knowledge, and attitude needed to lead squad/platoon size elements.

### **SENIOR LEADERS COURSE**

2-8. The Senior Leaders Course is a branch-specific course designed for the Soldiers MOS and is normally conducted at the MOS proponent school. Completion of Senior Leaders Course is a requirement for promotion to Sergeant First Class and is required for most ICTL40 positions within a typical aviation battalion. This course provides an opportunity for Soldiers to acquire the leader, technical, and tactical skills, knowledge, and experience needed to lead platoon/company size units.

### **OTHER INSTITUTIONAL TRAINING**

2-9. Other institutional development is available to the aviation maintainer. (See appendix B for additional schools.)

### **OPERATIONAL DOMAIN**

*...leaders need to deliberately plan maintenance training. Training takes time to accomplish and it's no different for training Soldiers on maintenance tasks. (Army Aviation Magazine, CSM Vela, 2017)*

2-10. Units conduct training even when the unit is engaged in operations. As units operate, they learn from formal and informal after action reviews—during and after operations. Leaders continuously evaluate observations, insights, and lessons on planning, preparing, and execution. They also incorporate corrective action into training before the unit conducts the next operation. An after action review is a facilitated self-analysis of an organization's performance with the objective of improving future performance. Usually, training during operations is more decentralized than training at home station.

### **SERGEANT'S TRAINING TIME**

2-11. Commanders emphasize battle focused training, in support of unit METLs. Allocating dedicated training time for NCOs is essential to good individual training. The sergeant's training time recognizes the NCO's primary role in conducting individual, crew, and small team training. The sergeant's training time develops junior leaders and builds cohesive teams. Sergeant's training time requires dedicated time on the training schedule and must be planned, resourced, rehearsed, and executed with no external distractions. NCOs select battle focused individual, crew, and small team tasks that support the unit's METL, based on their training assessment and platoon leader guidance. Commanders approve the selected tasks, provide the resources, allocate time to prepare, train and certify NCOs leading training, and monitor the training. (See AR 350-1 for more details.) Maintenance training is also battle focused training in support of the unit METL and is an example of training that is scheduled and supported during Sergeant's Training Time.

### **METL TRAINING EVENTS**

2-12. Individual and collective tasks ultimately combine to create success in the unit METL. Some of the best technical or MOS experience comes from training center rotations, aerial gunneries, and other major



movements. Replacing an aircraft transmission at a field site may be the best training a maintainer ever receives. Section sergeants and platoon sergeants must know their Soldier’s ICTLs and take advantage of every opportunity for multi-echelon training. Leaders carry a simple list of tasks and use DA Form 5164-R (*Hands-on Evaluation*) or DA Form 5165-R (*Field Expedient Squad Book*) to record training and evaluations at field sites.

2-13. While developing the training plan, the commander ensures it allows subordinates adequate time to plan their own training events. Commanders select the few, major training events necessary for the unit to attain intended METL proficiency levels. Leaving time between these events is essential. It allows subordinate commanders the ability to accomplish the training necessary to support the higher unit’s mission and achieve their own training objectives. Adequate allocation of time at each echelon facilitates training down to individual Soldier tasks. Commanders and staffs leave ample time available for company and below training without designating a separate special event.

## SELF-DEVELOPMENT DOMAIN

*For aviation to be a reliable combat multiplier, highly effective leaders must be employed. Those leaders cannot be mass produced or produced only when the need arises. Empowered and competent leaders make the mission happen and cannot be replaced by technological advances. (Army Aviation Magazine, 1SG McKoy, 2016)*

2-14. Self-development is a personal responsibility. Self-development enhances qualifications for a current position or helps prepare an individual for future positions. Individuals are responsible for their own professional growth and for seeking out self-development opportunities. Soldiers sustain their individual strengths and address gaps in their skills and knowledge. However, for self-development to be effective, all Soldiers must be completely honest with themselves to understand both personal strengths, and gaps in skills, knowledge, and behaviors.

2-15. The Army Career Tracker website provides Soldiers and leaders with a career map for each MOS. Figure 2-1 is an example career map for a 15E. See websites recommended in the references section for the Army Career Tracker website.

		ACT Career Map - 15E - Unmanned Aircraft Systems Repairer				
		SKILL LEVEL	1	2	3	4
		TIS	0-4	4-8	8-12	12-18
		GRADE / RANK RCP	PVT(E1)-SPC (E4) PVT-PFC 5 YEARS CPL/SPC 8 YEARS CPL/SPC(P) 8 YEARS	SGT (E5) SGT 14 YEARS SGT(P) 14 YEARS	SSG(E6) SSG 20 YEARS SSG(P) 20 YEARS	SFC (E7) SFC 24 YEARS SFC(P) 24 YEARS
		RCP Info...				
SOLDIER FOR LIFE	DA PAM 600-25	More Info...				
	Operating		• UAS System Repairer -	• UAS System Repairer/Team Chief - • UAS System Technical Inspector -	• Section Chief - • UAS System Technical Inspector -	• Platoon Sergeant - • Senior UAS System Chief -
	Generating					
	Broadening					
Organizational						
			<b>Legend:</b> ACT – Army Career Tracker DA PAM – Department of the Army Pamphlet RCP – Retention Control Point TIS – Time in Service UAS – Unmanned Aerial System			

Figure 2-1. Army Career Tracker Career Map example

2-16. The Army Credentialing Opportunities On-line website is also a good tool for self-development. Service Members access information on credentials related to their MOS at the Army Credentialing Opportunities On-Line website. (See websites recommend in the references section.)

2-17. Many additional self-development opportunities related to aviation maintenance are covered in appendix B of this manual.

## **INTEGRATING NEW SOLDIERS AT THE UNIT**

2-18. The purpose of the integration process is to determine a maintainer's proficiency and corresponding maintainer designation. Maintainers are processed into their assigned section and are counselled by their first-line leader on the requirements of this program as part of their in-processing. Integration includes the leader clearly communicating what is expected, and how long the Soldier or NCO has to meet the expectation. See appendix D for vignettes developed for specific common scenarios.

2-19. The program is designed so that each level of progression builds on the previous level. Paragraph 2-26 through 2-32 describe the training requirements for each level. When a new Soldier begins work at their first assignment they are designated as an apprentice-ML0. Subsequent duty designations are sequential over the Soldier's career. Soldiers reintegrating after more than one-year away from maintenance (for example recruiting duty) use these progression requirements to assess themselves in addition to unit assessment and designations. The commander and program managers focus training resources to improve the organization overall.

## **MAINTAINER INTEGRATION AND DESIGNATION**

2-20. Maintainers receive a maintenance orientation as part of their initial progression training. The orientation is a counseling event. It includes, but is not limited to, introduction to the AMTP, hangar orientation, local area orientation, basic expectations, and unit specific tasks. (See developmental counseling in ATP 6-22.1.) It includes any applicable support activity essential to mission execution and/or equipment maintenance or test activity commonly used.

2-21. Maintainers train and maintain proficiency in the tasks they are designated to perform as outlined in their ICTL. This does not restrict them from performing other tasks to complete the mission at hand. Ultimately this is a commander's assessment of risk and participating in or performing other tasks while supervised is encouraged.

2-22. First-line leaders access and conduct a records review using DTMS and Army Career Tracker and integrate the Soldier into the training plan. The Soldier's records are updated and accurate before the Soldier or NCO performs any maintenance on an aircraft.

### **Leader Development by Designation**

Leaders at all levels ensure Soldiers are rotated through as many positions in their respective and associated field of training as possible to develop well-rounded skill sets. Upon reception and in-processing, Soldiers and NCOs are screened for their past duty positions and given different jobs to ensure they are as well-rounded as possible.

## **RECLASSIFICATION OF MILITARY OCCUPATIONAL SPECIALTIES**

2-23. Soldiers reclassifying into an aviation maintenance MOS are at a significant disadvantage. Reclassifying Soldiers are not assigned directly to the quality control section or as a master repairer-ML4. These highly technical positions are critical to safe maintenance actions. These Soldiers must pursue self-development through self-study, in addition to unit training, and take on additional iterations of repair work to close the technical knowledge gaps.

## **PROGRESSION REQUIREMENTS**

2-24. Graduation from AIT is not considered the end of individual training. The gaining unit commander is responsible for enhancing and expanding the training that Soldiers received in AIT. The enhanced unit training increases the maintainers' attitude, skills, and knowledge.

2-25. The commanders, maintenance officers, and NCOs identify all training resources, and are tasked with making their Soldiers' training meaningful. The commander and the maintenance manager uses these resources to maximum advantage. To a maintenance company commander, training on technical tasks is as important as training on tactical skills. USAACE establishes the requirements for technical maintenance training, and publishes the task, condition, and standard on the Army Training Network.

### **APPRENTICE-ML0**

2-26. Aviation AIT graduates are considered apprentice-ML0 and are not considered proficient maintainers. An apprentice-ML0 is not designated as journeyman-ML1 until they successfully demonstrate proficiency in an evaluation (see chapter 3).

### **JOURNEYMAN-ML1**

2-27. Journeyman-ML1 are technically competent to perform any ICTL10 task. They have working knowledge of their training record and Army Knowledge Online (AKO) My Training, as well as—

- Must demonstrate and maintain proficiency in ICTL10 tasks as determined by the unit commander during an evaluation.
- Must be up-to-date on the unit's familiarization chart.

### **REPAIRER-ML2**

2-28. Repairer-ML2 are technically competent maintainers capable of leading a field maintenance team. See ATP 3-04.7 for field maintenance teams. They demonstrate leadership qualities and the ability to train an apprentice-ML0. Repairer-ML2 also—

- Must demonstrate and maintain proficiency an ICTL10 task.
- Must be up-to-date on the unit's familiarization chart.
- Must be trained and properly licensed on all aviation ground support equipment (AGSE) in the unit.
- Must demonstrate the ability to train an apprentice-ML0.

### **SENIOR REPAIRER-ML3**

2-29. Senior Repairer-ML3s are hand-selected by the platoon sergeant with input from the platoon leadership, and maintenance officer. They must be selected not only for their technical qualifications but also for their leadership abilities. Senior Repairer-ML3 also—

- Must demonstrate and maintain proficiency in any ICTL10-20 tasks as determined by the unit commander during an evaluation
- Must demonstrate proficiency in navigating AKO My Training to view self-development training and ICTL tasks.
- Must be properly licensed on all AGSE used by the unit.
- Must be up-to-date on the unit's familiarization chart.
- Must demonstrate the ability to train an ICTL20 task.

### **MASTER REPAIRER-ML4**

2-30. Master repairer-ML4s are selected not only for their technical qualifications, but also for their performance and leadership ability. These NCOs assist the maintenance officer in administering the AMTP. Master repairer-ML4 also—

- Must be an ALC graduate.
- Must demonstrate and maintain proficiency in ICTL10-30 tasks as determined by the unit commander during an evaluation.
- Must have a strong understanding of aircraft forms and records, the work-order process, the supply process, and other functions generally associated production control.

- Must be properly licensed on all AGSE used by the unit.
- Must have appropriate roles in DTMS.
- Must demonstrate the ability to manage their sections' familiarization chart.
- Must be a certified corrosion monitor.
- Must have formal test, measurement, and diagnostic equipment (TMDE) training.
- Must have formal aircraft weight and balance software (AWBS) training.
- Must have working knowledge of The Army Maintenance Management System-Aviation (TAMMS-A)/ Maintenance Consolidated Database System (MCDS).

### TECHNICAL INSPECTORS

2-31. Technical inspectors are selected not only for their technical qualifications but also for their demonstrated performance, objectivity, judgment, maturity, and ability to observe and provide constructive comments. technical inspectors also—

- Must be properly licensed on all AGSE used by the unit.
- Must have a strong understanding of aircraft forms and records, the work-order process, the supply process, safety and maintenance messages, and other functions generally associated with quality control.
- Must be up-to-date on the unit's familiarization chart.
- Must have Army Oil Analysis Program (AOAP) training. (See appendix B.)
- Must have TMDE training. (See appendix B.)
- Must have AWBS training. (See appendix B.)
- Must be a certified corrosion monitor. (See appendix B.)
- Must have working knowledge of TAMMS-A.
- Must have working knowledge of the MCDS.
- In ICTL30 positions:
  - Must be an ALC graduate.
  - Must be proficient in ICTL10-30 tasks as determined by the unit commander during an evaluation.
  - Must demonstrate the ability to train and evaluate ICTL10-30 tasks.
- In ICTL20 positions:
  - Must be proficient in ICTL10-20 tasks as determined by the unit commander during an evaluation.
  - Must demonstrate the ability to train and evaluate ICTL10-20 task.

2-32. Maintenance officers do not receive the same training NCOs receive to conduct maintenance; care must be taken to ensure maintenance officers are only on orders as TIs for the level of maintenance for which they are properly trained. The battalion maintenance officer ensures the training and evaluation for officers is documented and standardized throughout the battalion.

## **Chapter 3**

# **Evaluations**

This chapter describes the requirements for evaluations and the role evaluations play in monitoring the success of unit and individual training. Commanders use these evaluations not only to assess an individual, but to also assess their training programs.

### **GENERAL**

- 3-1. An evaluation is a tool used to ensure maintainers develop and maintain task proficiency to produce and sustain warfighting proficiency. An individual's lack of proficiency may indicate a need for increased task iterations and/or frequency for that Soldier. While an evaluation is primarily a method to assess individual proficiency, an adjustment to the AMTP may be required if a sufficient number of maintainers in a unit fail to demonstrate proficiency in a specific task or tasks. These evaluations should not be confused with Soldier boards or promotion boards.
- 3-2. Evaluation guidance is published for each individual task as part of the TRADOC training development process. The guidance in an individual task is essentially a rubric for grading. The evaluations governed by this chapter serve as an objective tool for commanders to determine efficiency and/or competency according to AR 600-8-19.
- 3-3. Maintainers are not evaluated on any tasks until they receive appropriate training on the task to be evaluated. It is also not necessary to evaluate every task in the ICTL.
- 3-4. Battalions may modify the approved ICTL for local requirements. The battalion commander-approved list must be published in the unit training plan or standard operating procedure (SOP), and in maintainers' records. See appendix A for examples on ICTL management.

### **TYPES OF EVALUATIONS**

- 3-5. The three types of evaluations are discussed in the following paragraphs.

#### **COMMANDER'S EVALUATION**

- 3-6. During integration, each maintainer receives a commander's evaluation before being assigned to a duty position within the unit. The Soldier or NCO must meet the recommended performance criteria for the expected duty position. The commander's evaluation includes tasks from the ICTL for the appropriate level of maintenance. The commander's evaluation is not required to designate an apprentice-ML0 maintainer.
- 3-7. A commander's evaluation is used to increase each maintainers' level of responsibility. For example, a repairer-ML2 is not advanced to senior repairer-ML3 without an evaluation.

#### **ANNUAL EVALUATION**

- 3-8. Like a weapons qualification, each maintainer must complete an ICTL evaluation annually to perform aviation maintenance duties. A commander's evaluation, no-notice evaluation, or an evaluation to progress to a position of higher responsibility meets the requirement for an annual evaluation. An annual evaluation includes tasks from the ICTL for the appropriate level of maintenance. Soldiers scheduled for a permanent change of station within 60 days of the close of their annual period may request early training and evaluation to maintain currency.

3-9. Unit commanders must be notified if a Soldier or NCO has exceeded 12 months without an evaluation. The Soldier's leaders must be counseled, and a course of action determined to complete the required training and evaluations.

### **NO-NOTICE EVALUATION**

3-10. A comprehensive no-notice evaluation program allows commanders to monitor training effectiveness at all levels. Each commander must establish a no-notice evaluation program in the unit SOP. No-notice proficiency evaluations may be academic, hands-on, or a combination thereof. The results of no-notice proficiency evaluations are used to ensure individual standardization and readiness and to tailor the unit's ICTL training program. A no-notice evaluation includes tasks from the ICTL for the appropriate level of maintenance.

## **METHODS OF EVALUATION**

3-11. Each of the three types of evaluations may use academic, and hands-on evaluation methods.

### **HANDS-ON EVALUATION**

3-12. Hands-on evaluations are conducted on an aircraft or equipment whenever possible. When aircraft are not available, hands-on evaluations may be conducted on a simulation device. Information for simulation devices is maintained by Program Executive Office (PEO) Simulation, Training, and Instrumentation. The PEO produces a catalog of fielded devices and updates the catalog annually. A link to the Training Support System (TSS)—Enterprise Training Aids, Devices, Simulators, and Simulations (TADSS) index and catalog (or TADSS Catalog) is found in the websites recommended section of this book.

3-13. The examinee must demonstrate a complete understanding of all safety precautions (hazardous material, personal protective equipment, posting of signs, and special procedures) pertaining to the task.

3-14. The examinee must demonstrate knowledge of and proficiency in the task and appropriate standards. Task standards are based on an ideal situation, and grading is based on meeting the minimum standards. The evaluator must consider deviations from the ideal situation during the evaluation. If other than ideal conditions exist, the evaluator must make appropriate adjustments to the standards.

### **ACADEMIC EVALUATIONS**

3-15. Units are encouraged to conduct written academic evaluations for knowledge. Any written evaluation is standardized by the battalion quality control section as part of the units' AMTP. The test requirements are published in the unit SOP.

3-16. Additionally, maintainers may be evaluated verbally on tasks. For example, see Task 552-918-3203 (Monitor Compliance with Controlled Exchange Procedures) on the ATN. Tasks similar to 552-918-3203, that can be evaluated using simple question and answer, are considered academic evaluations.

3-17. The examinee must be able to clearly articulate why a task is required and describe how it works within the larger context of the system. He or she must explain the basic theory of operation and explain how the task supports the system. Some tasks require the maintainer to isolate a fault or to troubleshoot. The evaluator must use an approved publication as a reference for theory of operation when evaluating these tasks.

3-18. The examinee must demonstrate a complete understanding of all publications required in the performance of the task. The evaluator asks questions about the task to be performed (such as personnel and tools required; write-ups to be made; and warnings, cautions, and notes).

## **EVALUATION PRINCIPLES**

3-19. The value of any evaluation depends on adherence to fundamental evaluation principles as follows:

- Method of evaluation. The method used to conduct the evaluation must be based on uniform and standard objectives. In addition, the method must be consistent with the unit's mission and strictly

adhere to the appropriate SOPs and regulations. The evaluator must ensure a complete evaluation is given in all areas.

- Participant understanding. All participants must completely understand the purpose of the evaluation.
- Participant cooperation. All participants must cooperate to guarantee the accomplishment of the evaluation objectives. The emphasis is on all the participants, not just the examinee.
- Purpose of evaluation. The evaluation determines the examinee's ability to perform essential hands-on/academic tasks to prescribed standards.

## GRADING CONSIDERATIONS

3-20. Personal experience is extremely valuable and is necessary to help maintainers apply their knowledge. However, evaluators do not fail maintainers based on the evaluator's job experience. Always use an approved reference publication listed on the unit's familiarization chart, and references listed in the specific task.

3-21. The examinee must demonstrate a working knowledge and understanding of the required tasks listed in their ICTL. The ICTL for every MOS and skill level, including task, condition, and standard is available on the AKO My Training webpage.

3-22. For tasks that involve leading other maintainers or a maintenance team, the guidelines for an objective evaluation are the Army's leadership attributes, competencies, and the leader requirements model. (See ADP 6-22 for more details.)

3-23. Evaluations must also include the trainee's ability to manage available resources to successfully complete the assigned mission to include all applicable forms and records and the ability to explain how the task fits into the operation of the system and the effects of incorrectly documented actions.

3-24. In all phases of evaluation, the evaluator is expected to perform as a team member in good faith. If at any point during the evaluation circumstances prevent the technical inspector/evaluator from performing as a team member, the evaluator must balance the outcome of the evaluation with safety of the repair work. The trainee must know he or she is being supported by a fully functioning team member, and the aircraft must be properly returned to service.

3-25. In all cases, maintainers must follow published requirements in Army technical manuals, critical tasks, safety and maintenance messages, ARs, DA PAMs, and the unit SOPs.

## RECOMMENDED PERFORMANCE AND EVALUATION CRITERIA

3-26. The apprentice-ML0 must demonstrate a working knowledge of tasks listed in ICTL10 and/or unit specific task. In addition, the apprentice-ML0 is familiar with supporting technical manuals and the unit SOP.

3-27. The journeyman-ML1 must demonstrate technical proficiency and sound judgment while conducting tasks listed in ICTL10 and/or unit specific task. In addition, the journeyman-ML1 must correctly comply with supporting technical manuals and the unit SOP and make entries on aircraft forms and records without error.

3-28. The repairer-ML2 must meet the requirements of a journeyman-ML1 and demonstrate a working knowledge of tasks listed in ICTL20 and/or unit specific task. The repairer-ML2 can troubleshoot aircraft systems. In addition, the repairer-ML2 must be able to instruct ICTL10 tasks, lead a team, and recognize errors in other's performance.

3-29. The senior repairer-ML3 must meet the requirements of a repairer-ML2 and demonstrate technical proficiency and sound judgment while conducting tasks listed in ICTL20 and/or unit specific task. The senior repairer-ML3 must be able to train, counsel, and mentor junior Soldiers.

3-30. The master repairer-ML4 must meet the requirements of a senior repairer-ML3 and demonstrate a technical proficiency in tasks listed in ICTL30 and/or unit specific task. The master repairer-ML4 must also be able to implement a unit-training plan and administer the AMTP.

3-31. The technical inspector must meet the requirements of a senior repairer-ML3. They also demonstrate comprehension and application of all tasks in their ICTL (20 or 30 depending on assignment). They

understand and correlate all appropriate aviation maintenance publications. The technical inspector must also objectively evaluate, and document performance during evaluations.

3-32. Repairer-ML2, senior repairer-ML3s, and master repairer-ML4s are developed and evaluated as leaders as part of the AMTP. For objective standards in leadership, see ADP 6-22.

## **EVALUATION SEQUENCE**

3-33. The evaluation sequence consists of four phases—introduction, academic evaluation topics, hands-on evaluation, and debriefing. The evaluator determines the amount of time devoted to each phase. The evaluation does not have to begin and end on the same day. For example, evaluating a senior repairer-ML3 for designation as a master repairer-ML4 may take several weeks.

3-34. Phase 1-Introduction. In this phase a leader—

- Reviews the maintainers AMTP record and any counseling forms related to maintenance actions.
- Determines if the maintainer is current on training requirements such as familiarization chart, corrosion training, non-destructive inspection training, etc.
- Determines the maintainer's man-hour experience using personnel/maintenance detail report from the Aircraft Notebook (ACN) dashboard.
- Confirms the purpose of the evaluation, explains the procedure, and discusses the standards for the evaluation.
- Coordinates with a technical inspector/evaluator

3-35. Phase 2-Academic evaluation. This phase of the evaluation may be conducted simultaneously or independent of phase 3. In this phase the evaluator—

- Follows the preparation and guidance written in the specific task (see appendix A for individual task management).
- Includes appropriate publications.
- Limits questions to the appropriate maintainer's ICTL.

3-36. Phase 3-Hands-on evaluation. In this phase the evaluator—

- Follows the preparation and guidance written in the specific task. (See appendix A for individual task management.)
- Includes general safety practices.
- Includes aircraft forms and records.
- Ensures time required is consistent with the maintenance allocation chart.

3-37. Phase 4-Debriefing. In this phase the evaluator—

- Advises the maintainer and first-line supervisor whether the maintainer passed or failed the evaluation and discuss any tasks not performed to standard.
- Discusses the maintainer's strengths and weaknesses.
- Offers recommendations for improvement.
- Create entry on DA Form 7817.
- Completes DA Form 4856 (*Developmental Counseling Form*) and inform the maintainer of procedures to follow in the event of a failed evaluation.

## **FAILED EVALUATIONS**

3-38. If a maintainer fails any evaluation, they must be counselled on DA Form 4856. The form is generally self-explanatory; however, the key points of discussion include—

- The name and number of the tasks evaluated.
- The reference technical publication or SOP describing the required action or application.
- The specific reason for failure.

3-39. If a maintainer fails an evaluation, they are restricted from performing maintenance duties unsupervised. During the counseling following a failure, an appropriate plan of action is clearly described on



DA Form 4856. It includes a specific timeline for re-evaluation and return to normal duty. If the maintainer fails while being evaluated to perform duties of the next higher maintenance level, they may continue to perform current duties. The intent should be recorded clearly on DA Form 4856. Failed evaluations are entered in the maintainer's permanent DTMS record. Additional restrictions or actions may be required at the discretion of the unit commander or unit SOP.

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# Chapter 4 Records

This chapter describes the documents to be used in the AMTP and the procedures for filling out the forms.

## RECORDS SYSTEM

4-1. The AMTP records system provides commanders a complete and continuous performance record on each maintainer in their unit. These records reflect the performance of specific individuals at a given time and serve as the commander's AMTP quality control and standardization tools. Upon any transfer that changes the commander's task list, the platoon sergeant ensures the individual's training folder is closed out. This close out includes a written counselling by the platoon sergeant.

4-2. Aviation maintainer training is recorded in DTMS. Each leaders' access is described in chapter 1. NCO instructors and managers in the institutional domain also record training in DTMS. The unit maintains the hardcopy manual records to facilitate continued operations during DTMS data entry.

4-3. Each Soldier must have DA Form 3513 (*Individual Flight Records Folder, U.S. Army*). The records folder includes DA Form 7817 and any DA Form 4856 forms related to aviation maintenance events. If DA Form 3513 is not available use national stock number 7530-01-484-0001, heavy duty tri-fold tile folder.

4-4. AMTP records meet Army Records Information Management System and the Privacy Act requirements. See AR 25-400-2 and AR 25-22.

4-5. Figure 4-1 is an example of a complete AMTP record.

Figure 4-1. Example AMTP record

## COMPLETING FORMS

4-6. The importance of accurate records cannot be overstated. The forms must be filled out carefully, completely, legibly, and in a timely manner. Every possible event or occurrence cannot be anticipated. If situations arise that are not covered by these instructions, use sound judgment, and enter the event in the most logical manner.

4-7. Keep entries to the records as clear, and concise as possible. Avoid use of abbreviations and acronyms whenever possible.

4-8. No-entry blocks are blocks that do not require an entry. Enter any commonly understood letters or symbols, for example, N/A or dash (-) for "not applicable." Do not leave any block blank.

## **GENERAL INSTRUCTIONS FOR RECORDS**

4-9. Commanders ensure a file is prepared and maintained for each maintainer who is conducting maintenance, service, modifications, or inspections to any aircraft or component. Each time a leader signs an entry they are affirming the accuracy of that entry.

### **MAINTENANCE RECORDS FOLDER**

4-10. Use DA Form 3513 to file the maintainer's records. If DA Form 3513 is not available use national stock number 7530-01-484-0001, heavy duty tri-fold tile folder. Label the folder according to AR 25-400-2.

### **CHANGE OF DUTY STATION**

4-11. Maintainers transport their AMTP records with them when changing duty stations. Losing units, except for AIT units, maintain a scanned copy for one year. All training is captured in DTMS by the losing unit prior to PCS.

4-12. Maintainers present their training records to the commander or the commander's designated representative within 14 calendar days of arrival at the unit.

### **RELEASE FROM DUTY**

4-13. Release from duty includes an individual's release from active duty without immediate follow on duty with component 2 or 3, retirement, discharge, resignation, assignment to the United States Army Reserve control group, or death. The individual retains their records. Those records left with the unit may be destroyed after 1 year from the date of removal from the active duty list.

## **INDIVIDUAL CRITICAL TASK LIST AND DA FORM 4856**

4-14. Each maintainer's ICTL is the top item on the left side of the records folder. Previous unit ICTLs may be discarded once all training is captured and verified in DTMS. All maintenance related counseling forms are on the left side of the folder, under the ICTL.

## **AVIATION MAINTAINER TRAINING RECORD**

4-15. DA Form 7817 is used to permanently record major events for each individual maintainer. The DA Form 7817 is on the right side of the maintainer's record folder. The current copy of DA Form 7817 is on top of previous copies, where applicable.

4-16. Each time an evaluation is recorded on DA Form 7817, also record the number of maintenance man-hours the maintainer performed since the last evaluation. Use the personnel/maintenance detail report from the ACN dashboard. (Currently the ACN dashboard will only record man-hours for the assigned unit. Add the current report man-hours to the previously recorded entry to show total experience.) The intent is to record maintenance man-hours in the training record to demonstrate on-the-job experience.

### **EVENTS TO RECORD**

4-17. The following list of events are recorded on the DA Form 7817:

- Unit of assignment, duty title, and maintainer designation.
- DA skill qualification courses, and professional military education.
- Completion of training or retraining to include annual training requirements. Some examples are—
  - Annual corrosion training.

- Compressed gas cylinder training.
- All evaluations; enter hands-on or academic as appropriate.
- Medical suspensions and then return to full duty.
- Any suspension from duty.
- Any involvement in an accident/incident if the accident is attributed to human error by the maintainer.
- Receipt of safety and any other awards the platoon sergeant determines appropriate.
- Open blocks on the DA Form 7817 are lined out prior to beginning a new sheet.
- Departing for permanent change of station, temporary change of station, or expiration term of service.

**MAJOR CORRECTIONS**

4-18. Corrections to DA Form 7817 may be needed for several reasons. Careful and timely entry of events as they occur eliminates most major errors. If an event is not entered at the proper time and other events have been recorded, enter “(late entry)” in the remarks block. If enough mistakes accrue to make the form unusable, transcribe the data to a new form. Place a diagonal line across the front of the unusable form, label it "transcribed," and retain this copy of the form under the current form. Do not destroy or discard any DA Form 7817 that contains an entry. See figures 4-2 and 4-3 (page 4-4) for examples.

AVIATION MAINTAINER TRAINING RECORD									
For use of this form, see TC 3-04.71; the proponent agency is TRADOC.									
NAME Wrench, Best D.	RANK PFC	RANK SPC	RANK SGT	RANK SSG	RANK	RANK	SHEET NUMBER 1 OF 1		
MOS 15R	DATE OF RANK 20161010	DATE OF RANK 20190201	DATE OF RANK 20211201	DATE OF RANK 20230909	DATE OF RANK	DATE OF RANK	DoD ID 123456789		
DATE	EVENT (Remarks may be continued on back of form)					RECORDED BY (Print/Sign)		GO / NOGO / NA	INITIALS
20171002	Completed 15R AIT (see comment)					SSG Aldridge	<i>B. Aldridge</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20171105	Assigned to A Co 1-101st - designated apprentice-ML0 (no comment)					SSG Aldridge	<i>B. Aldridge</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20180106	No-notice eval (see comment) [man-hour report 40 hours]					SGT Smith	<i>B. Smith</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20180222	Corrosion training					SGT Knue	<i>T. Knue</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20180915	Completed TMDE support coordinator on line training (no comment)					SSG Aldridge	<i>B. Aldridge</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20181001	Written test per unit SOP (no comment)					SSG Davis	<i>T. Davis</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20181201	CDRs Eval - designated journeymen-ML1 (see comment) [255 hours total]					SSG Aldridge	<i>B. Aldridge</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20190115	Unit coin awarded for aircraft recovery mission (no comment)					SSG Hernandez	<i>J. Hernandez</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20190327	Assigned to B Co 96th - designated journeymen-ML1 (no comment)					SSG Calkins	<i>C. Calkins</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20190403	Ground accident, Class E (see comment)					SSG Calkins	<i>C. Calkins</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20190506	Commanders Eval for accident (no comment) resume normal duty					SSG Quackenbush	<i>N. Quackenbush</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20190629	Completed AMCOM corrosion monitor course (no comment)					SSG Calkins	<i>C. Calkins</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20190902	CDRs Eval - designated repairer-ML2 (see comment) [38 man-hours]					SSG Devlin	<i>L. Devlin</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20200228	CDRs Eval - designated senior repairer-ML3 (see comment) [950 hours]					SSG Devlin	<i>L. Devlin</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20191104	(Late entry) TCS to Afghanistan for Operation Freedom's Sentinel					SSG Devlin	<i>L. Devlin</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20200422	Aircraft recovery mission under enemy fire. ARCOM w/V					SSG Devlin	<i>L. Devlin</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20200828	TCS end - return to Ft. Campbell					SSG Reed	<i>N. Reed</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20201104	No notice eval - senior repairer-ML3 (see comment) [1780 hours]					SSG Reed	<i>N. Reed</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20210218	PCS - Assigned to recruiting duty					SSG Reed	<i>N. Reed</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20230202	Assigned to 4/6 Attack! (see NCO support form)					SSG DiGeorgio	<i>E. DiGeorgio</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20230323	Commander's evaluation - designated technical inspector (see backside comment)					SSG DiGeorgio	<i>E. DiGeorgio</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.
20230329	Assigned battalion AOAP NCO					SSG DiGeorgio	<i>E. DiGeorgio</i>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	B.D.W.
20240123	Commander's evaluation - designated master repairer-ML4 [2348 hours]					SFC Bustamante	<i>T. Bustamante</i>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B.D.W.

Figure 4-2. Sample DA Form 7817 (Front)



HANDS-ON EVALUATION		DATE	
For use of this form, see STP 11-25S14-SM-TG; the proponent agency is TRADOC.		14NOV07	
TASK TITLE Troubleshoot Auxiliary Power Unit		TASK NUMBER 552-815-3001	
ITEM a	PERFORMANCE STEP TITLE b	SCORE (Check One)	
		PASS c	FAIL d
1. a.	1. Perform pre-maintenance procedures a. Obtain and utilize current publications required to perform task.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
1. b.	b. Review the task procedures for safety concerns, resources required, equipment pre-conditions, and task steps.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
1. c.	c. Review applicable forms and records for accuracy and completeness in accordance with DA PAM 738-751.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
	d. Obtain all tools/special tools, consumable/expendable material, repair parts, and AGSE required to accomplish the task.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
1. e.	e. Check the calibration data on all special tools and test equipment before use.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
2.	2. Troubleshoot Aux Power Units in accordance with TM 1-2835-208-23&P and TM 1-2835-209-23&P and document maintenance activities by making appropriate entries on applicable forms.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
3.	3. Inspect removed hardware, mounting locations, and replacement components for wear, damage, and continued serviceability.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
4.	4. Request a TI at appropriate times throughout the maintenance procedure.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
5. a.	5. Perform post maintenance procedures. a. Document any required MOCs on appropriate systems and components.	<input type="checkbox"/> P	<input checked="" type="checkbox"/> F
5. b.	b. Account for and secure all tools, equipment, and materials used for the task.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
5. c.	c. Verify that removed equipment, if applicable, is tagged with appropriate serviceability DD Form.		
5. d.	d. Enter follow-on maintenance on DA Form 2408-13-1 and DD forms.		
5. e.	e. Conduct final FOD check of the aircraft or maintainar		
EVALUATOR'S NAME SFC Usetoturn Wrenches		Legend: AGSE – Aircraft Ground Support Equipment DA PAM – Department of the Army Pamphlet DD – Department of Defense FOD – Foreign Object Damage MOC – Maintenance Operational Check SM – Soldier Manual STP – Soldier Training Publication TG – Training Guide TI – Technical Inspector TM – Technical Manual TRADOC – Training and Doctrine Command NOV – November	
SOLDIER'S NAME SGT Wantsto Fixaircraft			

DA FORM 5164-R, SEP 1985

EDITION OF DEC 82 IS OBSOLETE

APD LC v2.01

Figure 4-4. DA Form 5164-R





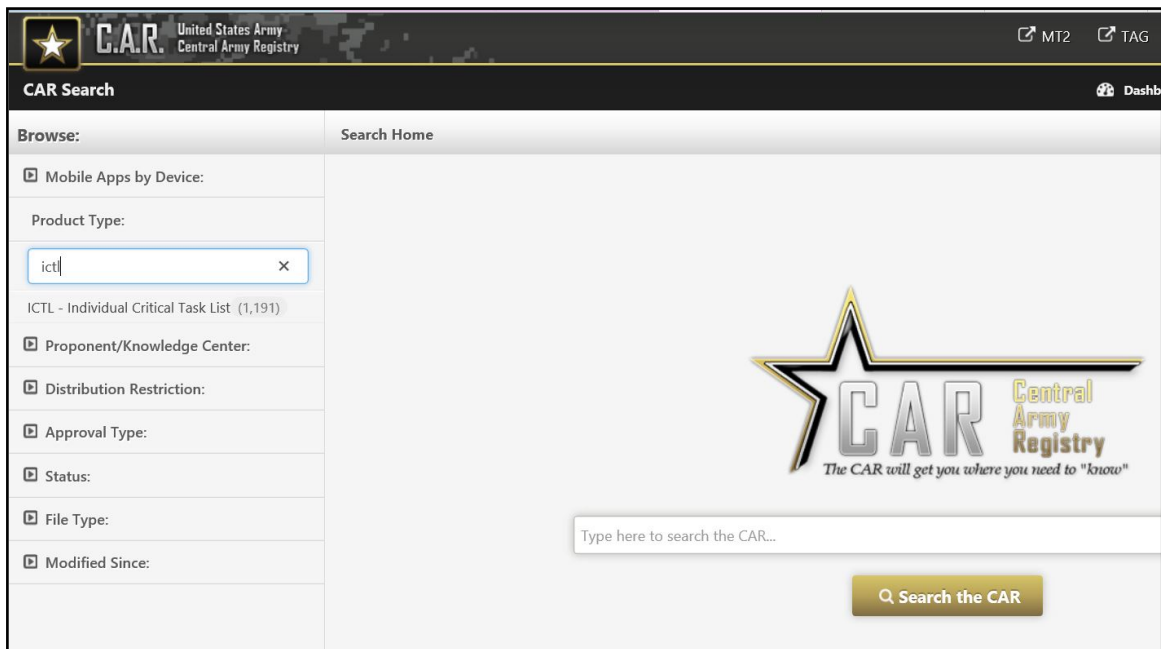
## Appendix A

# TRAINING PRODUCTS MANAGEMENT

This appendix contains instructions for maintaining a Soldier's ICTL. Leaders follow this step-by-step guide when creating and maintaining AMTP records.

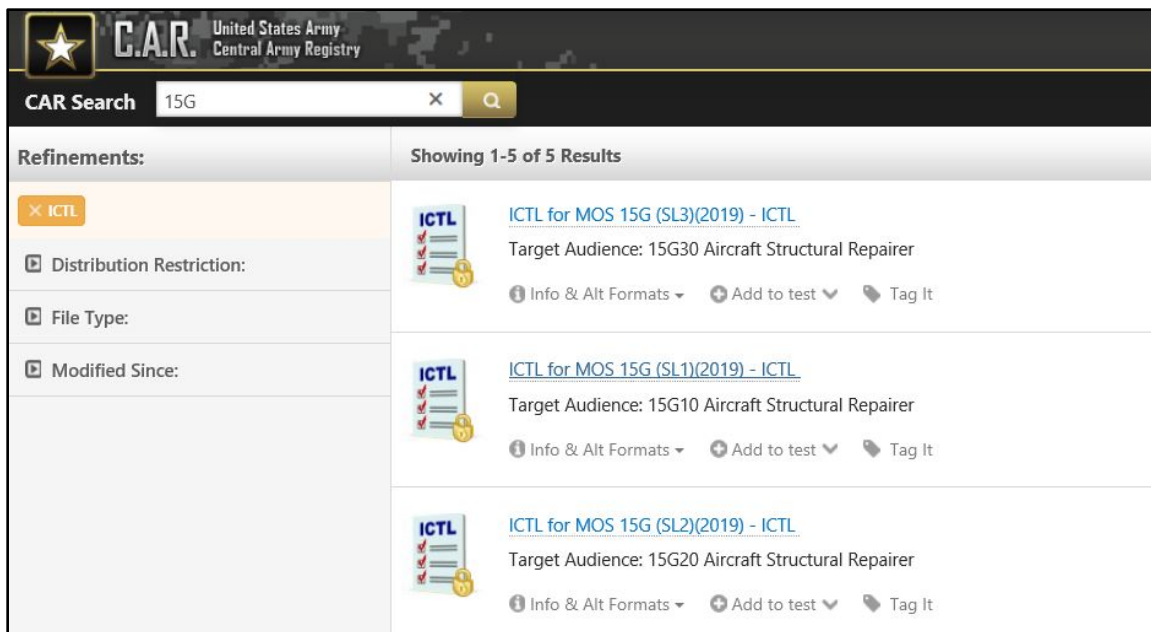
## INDIVIDUAL CRITICAL TASK LIST MANAGEMENT

- A-1. The following steps outline the process to locate an ICTL on Central Army Registry (CAR):
- Step one-access the dashboard on the CAR webpage. (See websites recommend in this book.)
  - Step two-click product type on the left side of the webpage to refine your search, then type ICTL. Then click on ICTL-Individual Critical Task (figure A-1).



**Figure A-1. Refine product type for individual critical task lists**

- Step three-after refining by product type, enter desired any MOS in the CAR search bar. In figure A-2, page A-2, 15G was entered as an example.



**Figure A-2. Download an individual critical task list**

- Step four-click on the desired ICTL to view or download.

A-2. To create a task list—

- Follow the steps in paragraph A-1.
- Strike any tasks your unit cannot train on due to aircraft configuration. (Example: 15R cannot train for AH-64E specific tasks while assigned to an AH-64D equipped unit.)
- Add local tasks that are approved by the battalion commander, see chapter 1 and 2.
- Add the list to the maintainer's record, see chapter 4.

## INDIVIDUAL TASK MANAGEMENT

A-3. Once an ICTL has been created, click on any task and the link opens the task. You must have a connection to the CAR website for the link to work.

A-4. Individual task may be downloaded from the same website without using the ICTL. Use the same CAR webpage

A-5. Select product type and type task. Click ITASK-Individual Tasks to refine the search, see figure A-3, page A-3.

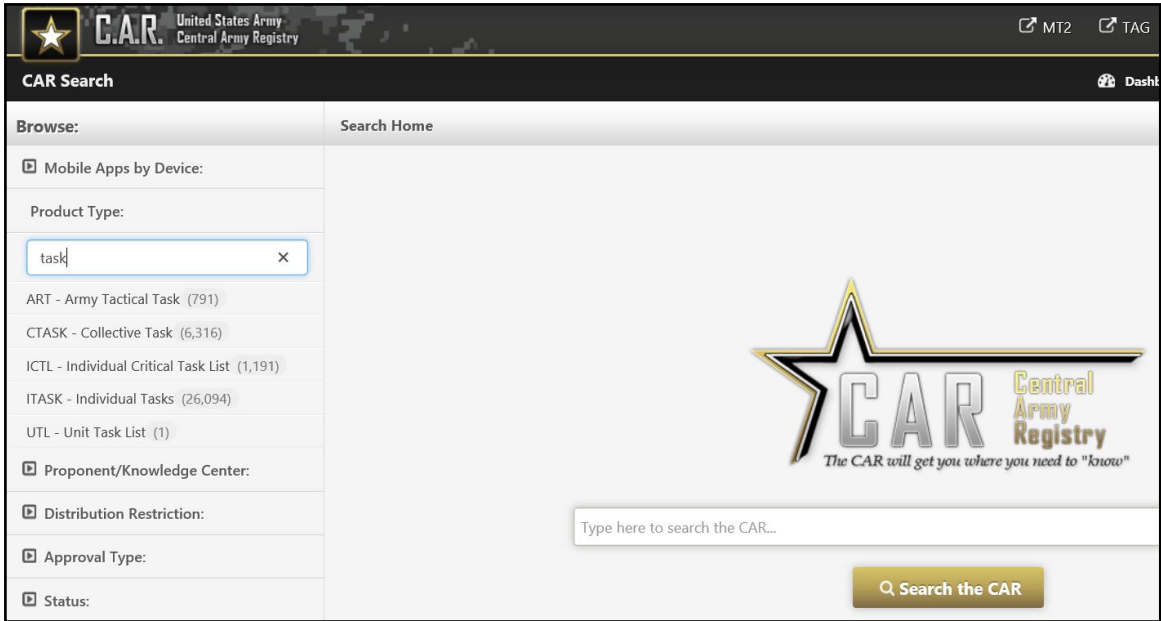


Figure A-3. Refine product type for tasks

A-6. Search for a task by number, title, or subject. In figure A-4, rotor was used as an example.

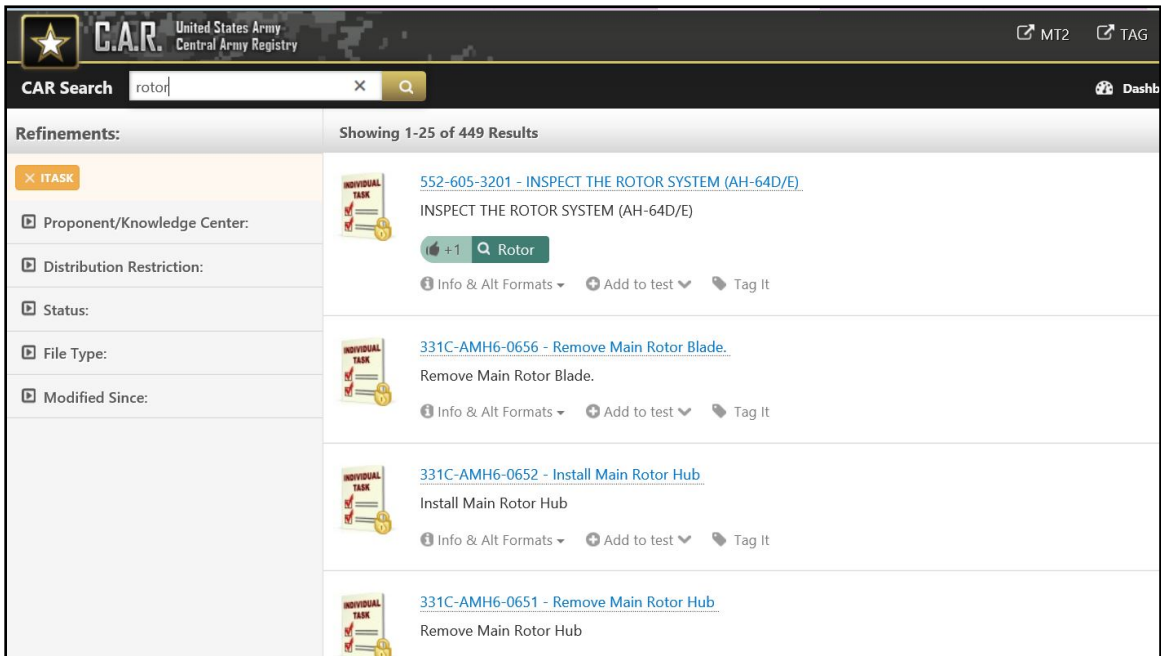


Figure A-4. Search for tasks related to rotors

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## **Appendix B**

# **SELF-DEVELOPMENT TRAINING**

This appendix is designed to provide Soldiers and leaders with the self-development opportunities related to aviation maintenance. Soldiers strive to accomplish training related to their occupational specialty.

The following information does not reflect preferred treatment by the United States Army for any industry partner or contractor. The intent is to describe options available for training United States Army Soldiers. To recommend adding or removing training to this appendix, send an email to the mailbox listed in the preface statement.

### **ADVANCED COMPOSITES TRAINING**

B-1. The Army Aviation Missile Research and Development Center prototype integration facility (PIF) offers four courses for advanced composites, which are applicable across many airframes including the UH-60M Black Hawk, AH-64E Apache, CH-47F Chinook, and MQ-1C Gray Eagle. The first is a 5-day course for the airframe maintainer, the second is a 3-day course for the TI, the third is a 5-day course for the engineer or acquisition professional, and the fourth is a 5-day class for rotor blade repair. See the websites recommended section for a link to the Prototype Integration Facility contacts.

### **ADVANCED COMPOSITES REPAIR AND MAINTENANCE (40 HOURS)**

B-2. Some maintenance background (15G or equivalent) is recommended, but not required. The Advanced Composites Repair and Maintenance course is a 5-day course for airframe maintainers. The format is roughly 20 percent classroom lecture and 80 percent hands-on lab exercises. Students use the UH-60M Composite Stabilator Repair interactive electronic technical manual work packages as a basis to understanding vacuum bagging, bleeder/breather schedules, epoxy resin mix ratios, carbon fiber wet-layup techniques, honeycomb core replacement, wire mesh (lightning strike) application, hot bonder and thermocouple use, and damage removal. Again, the techniques learned here are applicable across all platforms. Units can military interdepartmental purchase/procurement request (MIPR) or 1095 funding directly to the PIF. It does not include temporary duty (TDY) costs of the individuals attending the class.

### **TECHNICAL INSPECTION OF ADVANCED COMPOSITE REPAIRS (24 HOURS)**

B-3. Some maintenance background (15G/R/T/U or equivalent) is required. The Technical Inspection of Advanced Composite Repair course is a 3-day course teaching inspectors to identify defects in damaged and repaired composite structure. The format is roughly 50 percent classroom lecture and 50 percent hands-on lab exercises. Students learn the basics of advanced composite materials and repair and focus on inspection and flaw identification. Units can MIPR or 1095 funding directly to the PIF. It does not include TDY costs of the individuals attending the class.

### **FUNDAMENTALS OF COMPOSITES (40 HOURS)**

B-4. No prerequisites are required. Fundamentals of Composites course is a 5-day course designed to give students of all backgrounds a broad introduction to advanced composites, detailing the benefits, uses, limitations and lifecycle support considerations of composite materials on weapons systems. Students spend a day each on (1) materials and tools, (2) safety and production, (3) design, structural substantiation, and test, (4) sustainment and repair, and (5) non-destructive inspection and quality. The class is comprised of lecture and practical hands-on exercises, where every student manufactures their own composite panel and performs

a "wet lay-up" repair. Students earn 40 continuous learning points for successful completion. Units can MIPR or 1095 funding directly to the PIF. It does not include TDY costs of the individuals attending the class.

### **ROTOR BLADE REPAIR (40 HOURS)**

B-5. No prerequisites are required. The Rotor Blade Repair course is a 5-day course designed to give maintainers an understanding of the intricacies of rotor blade repair. The format is roughly 25 percent classroom lecture and 75 percent hands-on lab exercises. Students use repairs authorized for the UH-60M Wide Chord Blade and the CH-47F Blade as a basis to understanding damage evaluation, surface preparation, vacuum bagging, bleeder/breather schedules, epoxy resin mix ratios, glass fiber wet-layup techniques, honeycomb core replacement, wire mesh (lightning strike) application, hot bonder and thermocouple use, and damage removal. Units can MIPR or 1095 funding directly to the PIF. It does not include TDY costs of the individuals attending the class.

### **AIRCRAFT WEIGHT AND BALANCE SOFTWARE TRAINING**

B-6. The objective for AWBS training is to use the software to create and maintain aircraft records related to weight and balance. This is a three-day training event that can be requested or scheduled as a mobile training team or by sending the individual Soldier to a scheduled class. The unit is only responsible for TDY costs. The website for weight and balance software training is in the websites recommended section of this book.

### **ARMY OIL ANALYSIS TRAINING**

B-7. The project management office for AOAP provides computer-based training. The training includes information for the whole range of AOAP; from taking the sample to laboratory operations. The training is available from the Logistics Information Warehouse or from your local supporting AOAP laboratory. (See TB 43-0211 for more details.)

### **CORPUS CHRISTI ARMY DEPOT TRAINING**

B-8. The Aviation Maintenance Training Office provides technical training to the Corpus Christi Army Depot (CCAD) Workforce as well as Active, Reserve, and National Guard components. The CCAD training office currently provides 22 programs of instruction including: Airworthiness, Advance Depot Maintenance Work Requirement Course, AH-64D interactive electronic technical manual, AH-64E Familiarization, Basis Removal and Installation of Solid Rivets, Blueprint Reading Fundamentals, Blueprint Reading Intermediate, Condition Code Tags, Detergent and Oil Flow Test Stands, Direct Labor Initial Technical Training, Non-Destructive Testing Repetitions, Electrostatic Discharge Control, Flight Line Operations, Foreign Object Damage, Gear Inspection, Hand Tools and Torque Procedures, Hardware Safety Wire and Consumables, Introduction to Precision Measurements, Introduction to Sheet Metal Familiarization, Lock Wire, Welding, and Solder Certification. The unit LAR can provide CCAD contacts for Soldier training programs.

### **CORROSION MONITOR TRAINING**

B-9. The Army Aviation and Missile Life Cycle Management Command (AMCOM) Corrosion Center of Excellence pledges to educate, promote, and assist United States Army units and individual soldiers in establishing and maintaining a successful corrosion program for their equipment according to the goals outlined in AR 750-59. More information about the training is available on the AMCOM corrosion program webpage. To support this effort, the Corrosion Center of Excellence provides corrosion training and analysis to ensure that managers and maintainers have access to the most current materials and processes available for Corrosion Prevention and Control. On-site assistance visits are designed to reduce the maintenance burden on United States Army Warfighters by providing classroom and hands-on instruction. Utilizing presentation techniques aids to engage interest and motivate Soldiers to be involved in daily corrosion identification and repair. The Army Aviation and Missile Life Cycle Management Command Corrosion Center of Excellence also offers training for care of supplies in storage.

## **DEFENSE ACQUISITION UNIVERSITY**

B-10. The Defense Acquisition University is a corporate university that was established by the Department of Defense. It is an educational activity that serves as a strategic tool in providing a global learning environment to develop qualified acquisition, requirements and contingency professionals who deliver and sustain effective and affordable warfighting capabilities. Defense Acquisition University courses are offered online and resident, and enrollment is required through Army Training Requirements and Resources systems. See the Defense Acquisition web page in the Reference section.

## **T700 ENGINE TRAINING**

B-11. A military T700-series engine course that provides academic and hands-on maintenance training. The course is specifically designed for unit and intermediate level maintenance personnel. The course covers United States Army 701C/D engine models. The course uses the T700 Flight Line Maintenance and Intermediate Maintenance Manuals for all work and inspections. The course includes engine familiarization, engine history, basic engine overview, engine systems, performance, maintainability, the removal and installation of engine system components and modules. The course schedule is published annually in the Apache and Utility Newsletters, and applicable Field Service Representatives can provide more information on attending this course. Units only incur TDY/travel costs for the individuals attending the class.

## **LOGISTICS ASSISTANCE REPRESENTATIVE UNIVERSITY**

B-12. Logistics Assistance Representative University Electronic (ELAR) courses for AH64, UH60M, CH47F, UAS electronics, ELAR re-currency training, and Soldier hybrid training can be provided through AMCOM. The unit LAR can provide contact information.

## **NON-DESTRUCTIVE TESTING TRAINING**

B-13. AMCOM provides multiple course for non-destructive testing (NDT). For more information contact the NDT Center of Excellence through the AMCOM corrosion/NDT website (See websites recommended).

## **SENIOR MAINTAINER COURSE**

B-14. The senior maintainer course provides United States Army aviation maintenance managers detailed technical knowledge to understand applied mechanical principles and practices. The course material is specifically designed to demonstrate the relationships between different levels of aircraft/aerospace technical data and the corresponding levels of maintenance practices and procedures. The target audience is senior maintenance managers at the battalion level, SFC with 30-level technical inspector experience, maintenance officers with production control/quality control experience. The quality control noncommissioned officers in charge and the battalion aviation maintenance officer attend this course. This is an 80-hours resident course and the unit incurs TDY costs. Attendance in this course can be scheduled through the course manager or the unit's logistics assistance representative.

## **TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT TRAINING**

B-15. TB 750-25 identifies the duties and responsibilities of the TMDE support coordinator in chapter 3. AR 750-43 explains the calibration program and identifies the responsibility for units owning TMDE to appoint a TMDE support coordinator. For more information go to the United States Army TMDE Activity homepage.

## **CREDENTIALING PROGRAMS**

B-16. The Army credentialing opportunities online helps Army service members find information on certifications and licenses related to their MOS, to help close gaps between Army training and civilian certification, and to find resources related to the training. For more information go to Army Credentialing Opportunities Online.

B-17. The USAACE credentialing program encourages aviation Soldiers to capitalize on training and development opportunities so they can grow and develop as Soldiers. Army appropriated funds may pay for

the fees associated with coursework, licensing and examinations leading to credentialing, licenses, and certifications. Appropriated funds may also pay for the maintenance of credentials, licenses, and certifications, once obtained.

B-18. Army Aviation Soldiers of the Active, Guard, and Reserve components, less IRR, may be afforded the opportunity to obtain funding for coursework, credential examinations, renewals, maintenance fees, and other mandatory examination administrative fees.

B-19. The credentials approved for funding may change due to availability of funds. Step-by-step instructions for requesting funds can be obtained by emailing the USAACE Credentialing Program Inbox at [usarmy.rucker.avncoc.mbx.atzq-cdf-credentialing@mail.mil](mailto:usarmy.rucker.avncoc.mbx.atzq-cdf-credentialing@mail.mil).

## **AIRFRAME AND POWERPLANT CERTIFICATION**

B-20. The Vice Chief of Staff of the Army initiated the Army Airframe and Powerplant Certification Program. This program enables aviation MOS-trained Soldiers to validate their military aviation training and experience through a joint service program to facilitate the process of obtaining a Federal Aviation Administration airframe and powerplant license. The 128th Aviation Brigade manages the program for the Aviation Branch.

B-21. The Federal Aviation Administration and Joint Service Aviation Maintenance Technician Certification Council provide a military applicant certification program by completely specifying the applicant's military training and experience. Applicants must currently be on Active, Reserve, or National Guard status. The scope of this program is geared towards advance leader's course student level. In order to meet requirements, applicants for a Mechanic Certificate or rating must show either an appropriate graduation certificate or Certificate of Completion from a certificated Aviation Maintenance Technician School (AMTS) or documentary evidence, satisfactory to the Administrator, of 18 months of experience for each rating sought separately; if a combined rating of A&P is sought at the time of application, only 30 months of experience is required. Soldiers interested in enrolling can visit the A&P Certification Program milSuite group.

## **FEDERAL COMMUNICATIONS COMMISSION GENERAL RADIOTELEPHONE OPERATOR LICENSING**

B-22. The Federal Communications Commission (FCC) PG is an intermediate-level technician license. A PG is required to adjust, maintain, or internally repair FCC licensed radiotelephone transmitters in the aviation, maritime, and international fixed public radio services. A PG is also required to operate: any compulsory equipped ship radiotelephone station operating with more than 1500 watts of peak envelope power; and voluntarily equipped ship and aeronautical (including aircraft) stations with more than 1000 watts of peak envelope power. FCC requires candidates to be a legal resident of the United States and be fluent in the English language. Candidates must pass a written and/or telegraphy examination(s). A PG is issued for the length of the holder's lifetime.

## **FOREIGN OBJECT ELIMINATION**

B-23. National Center for Aerospace and Transportation Technologies (NCATT) foreign object elimination (FOE) recognizes the knowledge base of the advanced aerospace technician and promotes integrity, safety, and professionalism in the aerospace workforce. FOE knowledge and skills include housekeeping, tool accountability, hardware accountability, lost items, physical entry and personnel control, reporting and investigating, material handling, parts protections, hazardous materials, wildlife/environment, and foreign object damage (FOD) effects. There are no FOE eligibility requirements. The FOE written exam is open to all individuals regardless of career field, training, education or experience.

## **AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING CENTRAL CERTIFICATION PROGRAM LEVEL II**

B-24. American Society for Nondestructive Testing Central Certification Program (ACCP) Level II shall have the skills and knowledge to set up and calibrate equipment, to conduct tests, and to interpret, evaluate, and document results in accordance with procedures approved by an ACCP Professional Level III or



American Society for Nondestructive Testing (ASNT) NDT Level III. An ACCP Level II shall be thoroughly familiar with the scope and limitations of the method to which certified and should be capable of directing the work of trainees and Level I personnel. An ACCP Level II shall be able to organize and report NDT results. An ACCP Level II shall be capable of developing an NDT instruction in conformance with a procedure. An ACCP Level II shall be knowledgeable in the NDT subject matter contained the NDT Body of Knowledge for Level II in the applicable test method(s).

### **AIRCRAFT ELECTRONICS TECHNICIAN**

B-25. National Center for Aerospace and Transportation Technologies (NCATT), aircraft electronics technician (AET) is NCATT's primary certification and is required for NCATT endorsements in the career field. AET certification recognizes the knowledge base of the advanced aerospace technician and promotes integrity, safety, and professionalism in the aerospace workforce. AET knowledge and skills include basic electronics facts, terminology, and principles, common maintenance practices, fundamentals of equipment maintenance, and aircraft fundamentals.

### **BASIC COMPOSITES CERTIFICATION**

B-26. The CertTEC Basic Composites certification is an entry-level credential designed for composite technicians. The exam tests the technician's skills and knowledge focused on composite history, fiber reinforcements, matrix systems, and processes related to basic composite fabrication, inspection, damage assessment and repair using methods common to the composite fabrication and repair industry. Applicants have different options to meet the eligibility requirements, active duty or veteran military personnel whose rating or assignment is/was in the composites field meet the eligibility requirement for Basic Composite certification.

### **ENVIRONMENTAL PROTECTION AGENCY CERTIFICATION**

B-27. EPA regulations Part 82, Title 40, Code of Federal Regulations (40 CFR 82) under Section 608 of the Clean Air Act (Section 7671, Title 42, United States Code [42 USC 7671]) require that technicians who maintain, service, repair, or dispose of equipment that could release ozone depleting refrigerants into the atmosphere must be certified. As of January 1, 2018, this requirement also applied to appliances containing most substitute refrigerants, including HFCs. Technicians must pass an EPA-approved test to earn Section 608-Technician Certification. The tests are specific to the type of equipment the technician seeks to work on. Tests must be administered by an EPA-approved certifying organization. Section 608-Technician Certification credentials do not expire. Core tests taken as an open book exam cannot be used to get your universal certification. The core test must be taken as a proctored exam in order to attain universal certification.

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## Appendix C

# CIVIL OCCUPATIONAL SERIES INFORMATION

C-1. Information included throughout this training circular is not prescriptive or mandatory for Army Civilians. This appendix is included as a general guide to aid, assist, and provide resources for training opportunities.

C-2. Career Program (CP) 64 (CP-64)-Aviation is the Army Aviation Civilian Personnel Proponent Office for Army aviation-related civilian occupational series. CP-64 is a relatively new, and is still maturing. Many of the occupational series career maps managed by CP-64 remain under development for the foreseeable future.

C-3. Visit the Army Career Tracker for civilian training and development opportunities and other important information listed for your job series.

C-4. Table C-1 is a general cross-walk for comparing Army aviation-maintenance MOSs in the scope of this training circular with civilian occupational series. The chart is not all inclusive of all CP-64 occupation series and some series position descriptions vary. Some the occupational series on the chart are shared series with other career program proponents. The chart is not prescriptive or restrictive in any way.

**Table C-1. Civil to military series crosswalk**

Civil Series	Title	Military Series	Title
1152	Production Control Series (Aircraft)	15K or 15L	Production Control
2185	Aircrew Technician Series	15T or 15U	Crew Chief/Flight Engineer
2604	Electronics Mechanic (Aircraft)	15N	Avionics Repairer
2610	Electronics Integrated Systems Mechanic	15Y	Armament/Electrical/Avionics System Repairer
2892	Aircraft Electrician	15F	Aircraft Electrician
3806	Sheet Metal Mechanic (Aircraft)	15G	Aircraft Structural Repairer
8268	Aircraft Pneudraulics Systems Mechanic	15H	Aircraft Pneudraulics Repairer
8602	Aircraft Engine Mechanic	15B	Aircraft Powerplant Repairer
8810	Aircraft Propeller Mechanic	15D	Aircraft Powertrain Repairer
8852	Aircraft Mechanic	15R/T/U	Repairer
8862	Aircraft Attending	15R/T/U	Crew Chief
1670	Equipment Specialist Series (Aircraft)		Off-Aircraft Component Repairer
1910	Quality Assurance Series (Aircraft)		Off-Aircraft Component Inspector

C-5. For the current list of CP-64 occupational series visit CP-64 on milSuite. If you have questions or comments contact the CP-64 proponent at [usarmy.rucker.avncoe.mbx.cp-64-aviation-proponency@mail.mil](mailto:usarmy.rucker.avncoe.mbx.cp-64-aviation-proponency@mail.mil).

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## Appendix D

# COMMON EXAMPLES OF APPLICATION

D-1. These example vignettes were designed to aid when integrating Soldiers under common circumstances. This information is included for technique only and is not prescriptive.

### SCENARIO FOR A SOLDIER ARRIVING FROM AIT

D-2. In this scenario, PV2 Henderson arrives to Bravo Company, 96th ASB. As a recent graduate of the Avionics Repairer AIT, SGT Jones is PV2 Henderson's repairer-ML2. SSG Brown is the master repairer-ML4. SSG Brown watches over this first counseling session because it is very important to set PV2 Henderson up for success.

D-3. SGT Jones conducts initial counseling including the AMTP and job performance expectations. Some key points included in the summary of counseling are:

- Command group information.
- Clarifying PFC Henderson's sponsor.
- Giving a timeline for the standard duty day.
- Providing AMTP designation (apprentice-ML0).
- Describing what is expected for job performance:
  - Training required for PFC Henderson to be successful.
  - How much time PFC Henderson has to complete training expectations.
  - How the team uses maintenance and training records to communicate and stay organized.

D-4. Included in the summary of counseling is a plan of action. In this scenario, SGT Jones builds a plan of action that includes the following:

- Read and understand command policy letters.
- Read and understand the unit SOP.
- Study the subject area 1 tasks on the 15N10 ICTL, and study the references listed in the tasks.
- Use the section's FAM chart. After studying a technical publication related to one of the tasks, initial that publication on the FAM chart.
- Look for opportunities to train on the tasks listed on 15N10 ICTL. If you have the opportunity to work hands-on, get the NCO in charge to initial that task on your task list.
- Make sure your maintenance man-hours are entered on a work order, or against an aircraft fault.
- In 90 days we will assess your performance and training. Part of that assessment will include an automatic report that shows how many man-hours you worked on maintenance. Between now and then, do not hesitate to ask questions.

D-5. SGT Jones shows PFC Henderson his training record during the counseling. The ICTL is on the left side of the packet, the DA Form 7817 is centered, and the DA Form 4856 is on the right (see figure 4-1, page 4-1).

### SCENARIO FOR ADVANCING AN APPRENTICE-ML0 TO JOURNEYMAN-ML1

D-6. In this scenario, PFC Whillie is an apprentice-ML0 and a 15R10. She has completed all of the training her repairer-ML2 assigned during the last 90 days. Recently, she was evaluated while conducting a repair and performed well.

D-7. SSG Gary is PFC Whillie's master repairer-ML4. In the company training meeting, SSG Gary talks with the 1SG, company commander, and other platoon leadership about designating PFC Whillie as a journeyman-ML1. With the leaders in agreement, SSG Gary conducts performance-oriented counseling.

D-8. The key points included in SSG Gary's summary of counseling are—

- Excellent performance in the last three months.
- Achieved all of the action items from your last counseling and passed a no-notice evaluation.
- Assigned as a journeyman-ML1, and you will work on the next phase scheduled for aircraft #368.
- Be ready for your part of the phase inspection; train on the following tasks:
  - 552-704-1206.
  - 552-704-1210.
  - 552-704-1212.
  - 552-706-1206.
- Report to SGT Long for the duration of the phase maintenance.

D-9. A good plan of action in the summary of counseling includes important details. The bullets below describe SSG Gary's plan for PFC Whillie:

- Read phase inspection requirements for aircraft areas 5 thru 8.
- Work with SPC Weaver to create a list of tools, and a list of parts for your areas.
- Pass the diagnostic PT test on 5 October.
- Attend the hangar hoist training on 9 October.
- Complete the ACN phase team training 15-19 October.
- Check and update your training record after the phase is complete.

### **SCENARIO FOR ADVANCING A JOURNEYMAN-ML1 TO A REPAIRER-ML2**

D-10. In this scenario, SPC Hernandez is a journeyman-ML1. He performed well on his last annual evaluation, and has experience as the TMDE representative for his section. He has completed all of the training necessary to be a repairer-ML2. SSG Westbrook is SPC Hernandez' master repairer-ML4. She discusses SPC Hernandez' advancement at the company training meeting, and most of the leaders agree to increase SPC Hernandez' level of responsibility.

D-11. SSG Westbrook expects SPC Hernandez to advance to repairer-ML2 during the next 90 days. She conducts performance oriented counseling to ensure all expectations are clearly understood. The key points in the summary are—

- Great performance in the last three months.
- The company 1SG and commander agree, we want to advance you to repairer-ML2.
- You have met all of the requirements in the AMTP except for demonstrating the ability to train an apprentice-ML0.
- You are going to lead the scheduled maintenance on aircraft number 964. You need to demonstrate your ability to train PV2 Generic to conduct part of the inspections.

D-12. SSG Westbrook works with SPC Hernandez to ensure success. SSG Westbrook built this plan of action for the summary of counseling:

- First week-Read the Warrior Leader Skill Level 2 tasks, subject area 29. Then meet to discuss what was learned, and how to apply it to aircraft maintenance.
- Second week-Read subject area 22, then meet to discuss what was learned and how to apply it.
- Third week-I will observe you leading the scheduled maintenance event, and training PV2 Generic. The maintenance will also be evaluated by an unbiased technical inspector from a different section. If all goes well, you will become a repairer-ML-2.

## SCENARIO FOR A MASTER REPAIRER-ML4 ARRIVING IN A UNIT AFTER A TOUR ON RECRUITING DUTY

D-13. Being designated as a master repairer-ML4 implies significant increased responsibility. These NCOs are transitioning to career oriented NCOs. We expect them to stay in service and carry the weight of the force. This is a challenging transition. It is even more challenging when the NCO is returning from a broadening opportunity.

D-14. SSG White is returning from a three year tour as a recruiter, and is being assigned to the UH-60 repair section in an aviation maintenance company. SSG White's section has 26 Soldiers assigned.

D-15. SSG White determines her own path to success. During and after a counseling session with SFC Green and the company 1SG, she prepares DA Form 2166-9-1A (*NCO Evaluation Report Support Form*) (See AR 623-3). This form clearly communicates performance expectations between the NCOs. Her performance goals and expectations are—

- Develop a positive work atmosphere with zero SHARP/EO violations.
- Regain, and demonstrate my technical proficiency in performing 10, 20, and 30 level tasks.
- Prepare the UH-60 repair section, and complete four PMI 1 or PMI 2 inspections.
- With my team, log more than 4,000 hours of repair work on unscheduled maintenance.
- Maintain a work efficiency rating above 75 percent for the repair section.
- Advance at least five journeyman-ML1 to repairer-ML2 using the AMTP.
- Advance at least two repairer-ML2 to senior repairer-ML3 using the AMTP.
- Train twenty Soldiers and NCOs to conduct downed aircraft recovery operations.
- Increase the average PT score for the section.

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# Glossary

## SECTION I – ACRONYMS AND ABBREVIATIONS

<b>ISG</b>	first sergeant
<b>ACCP</b>	American Society for Nondestructive Testing Central Certification Program
<b>ADP</b>	Army Doctrine Publication
<b>AGSE</b>	aviation ground support equipment
<b>AIT</b>	advanced individual training
<b>AKO</b>	Army Knowledge Online
<b>ALC</b>	advanced leaders course
<b>AMCOM</b>	Army Aviation and Missile Life Cycle Management Command
<b>AMTP</b>	Aviation Maintenance Training Program
<b>AOAP</b>	Army Oil Analysis Program
<b>AR</b>	Army Regulation
<b>ASNT</b>	American Society for Nondestructive Testing
<b>ATN</b>	Army Training Network
<b>AWBS</b>	aircraft weight and balance software
<b>CAR</b>	Central Army Registry
<b>CCAD</b>	Corpus Christi Army Depot
<b>CFR</b>	Code of Federal Regulations
<b>CSM</b>	Command sergeant major
<b>CTSSB</b>	Critical Task and Site Selection Board
<b>DA</b>	Department of the Army
<b>DA PAM</b>	Department of the Army pamphlet
<b>DTMS</b>	digital training management system
<b>ELAR</b>	logistics assistance representative electronics
<b>FCC</b>	Federal Communications Commission
<b>FOD</b>	foreign object damage
<b>FOE</b>	foreign object elimination
<b>ICTL</b>	individual critical task list
<b>LAR</b>	logistic assistance representative
<b>MCDS</b>	Maintenance Consolidated Database System
<b>METL</b>	mission essential task list
<b>MIPR</b>	military interdepartmental purchase/procurement request
<b>ML</b>	maintenance level
<b>MOS</b>	military occupational specialty
<b>NCATT</b>	National Center for Aerospace and Transportation Technologies
<b>NCO</b>	noncommissioned officer

<b>NDT</b>	non-destructive testing
<b>PFC</b>	private first class
<b>PIF</b>	prototype integration facility
<b>SGT</b>	sergeatn
<b>SOP</b>	standard operating procedures
<b>SPC</b>	specialist
<b>SSG</b>	staff sergeant
<b>TADDS</b>	training aids, devices, simulators, and simulations
<b>TAMMS-A</b>	The Army Maintenance Management System-Aviation
<b>TC</b>	training circular
<b>TDY</b>	temporary duty
<b>TM</b>	technical manual
<b>TMDE</b>	test, measurement, and diagnostic equipment
<b>TRADOC</b>	Training and Doctrine Command
<b>TSS</b>	training support system
<b>USAACE</b>	United States Army Aviaton Center of Excellence

## SECTION II – TERMS

### **\*familiarization chart**

a record of publications required to be used as a reference while conducting maintenance actions; the chart helps the Soldier remain current when changes occur to technical data or policy

# References.

All websites accessed on 10 November 2020

## REQUIRED PUBLICATIONS

These documents must be available to the intended users of this publication.

ADP 1-02. *Terms and Military Symbols*. 14 August 2018.

*DoD Dictionary of Military and Associated Terms*. June 2020. <https://www.jcs.mil/Doctrine/>.

## RELATED PUBLICATIONS

These documents contain relevant supplemental information.

### ARMY PUBLICATIONS

Unless otherwise indicated, Army doctrinal publications are available online:

<https://armypubs.army.mil>.

ADP 6-22. *Army Leadership and the Profession*. 31 July 2019.

ADP 7-0. *Training*. 31 July 2019.

AR 25-22. *The Army Privacy Program*. 22 December 2016.

AR 25-400-2. *The Army Records Information Management System (ARIMS)*. 02 October 2007.

AR 350-1. *Army Training and Leader Development*. 10 December 2017.

AR 600-8-19. *Enlisted Promotions and Reductions*. 16 May 2019.

AR 623-3. *Evaluation Reporting System*. 14 June 2019.

AR 750-43. *Army Test, Measurement, and Diagnostic Equipment*. 24 January 2014.

AR 750-59. *Corrosion Prevention and Control for Army Materiel*. 22 June 2020.

ATP 3-04.7. *Army Aviation Maintenance*. 20 October 2020.

ATP 6-22.1. *The Counseling Process*. 01 July 2014.

DA PAM 611-21. *Military Occupational Classification and Structure*. 19 July 2018.

DA PAM 738-751. *Functional User's Manual for the Army Maintenance Management System-Aviation*. 28 February 2014.

FM 6-27. *The Commander's Handbook on The Law of Land Warfare*. 07 August 2019.

TB 43-0211. *Army Oil Analysis Program (AOAP) Guide for Leaders and Users (This Item is Included on EM 0178)*. 30 April 2010.

TB 750-25. *Maintenance of Supplies and Equipment Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support (C&RS) Program*. 01 March 2020.

TC 3-04.11. *Commander's Aviation Training and Standardization Program*. 21 September 2019.

## OTHER PUBLICATIONS

The following publication is available at <https://www.ecfr.gov/>.

40 CFR 82. *Protection of Stratospheric Ozone*.

The following publication is available at <https://uscode.house.gov/>.

42 USC 7671. *Stratospheric Ozone Protection*.

## PRESCRIBED FORMS

Unless otherwise indicated, DA forms are available on the Army Publishing Directorate website at

<https://armypubs.army.mil>.

DA Form 7817. *Aviation Maintainer Training Record*.

### REFERENCED FORMS

Unless otherwise indicated, DA forms are available on the Army Publishing Directorate website at <https://armypubs.army.mil>.

DA Form 2028. *Recommended Changes to Publications and Blank Forms*.

DA Form 2166-9-1A. *NCO Evaluation Report Support Form*.

DA Form 3513. *Individual Flight Records Folder, United States Army*. (Available through normal supply channels.)

DA Form 4856. *Developmental Counseling Form*.

DA Form 5164-R. *Hands-on Evaluation*.

DA Form 5165-R. *Field Expedient Squad Book*.

### WEB SITES RECOMMENDED

AKO/Army Homepage: <http://www.army.mil>

AMCOM Corrosion Program: <https://amcomcorrosion.army.mil/Corrosion/>

AMCOM NDT Program: <https://amcomcorrosion.army.mil/Corrosion/NDT/>

Aviation and Missile Center Prototype Integration Facility: <https://www.amrdec.army.mil/amrdec/pif/>

Army Aviation Association of America (AAAA) Homepage: <http://www.quad-a.org/>

Army Career Tracker: <https://actnow.army.mil/>

Army Credentialing Opportunities On-Line: <https://www.cool.army.mil>

Army Training Network: <https://atn.army.mil/>

A&P Certification Program milSuite group: <https://www.milsuite.mil/book/groups/128ab-a-and-p>

Career Program 64 on milSuite: <https://www.milsuite.mil/book/groups/career-program-64-cp-64-aviation>

Center for Army Lessons: <http://usacac.army.mil/cac2/call>

Defense Acquisition University: <https://www.dau.mil/>

Defense Technical Information Center: <http://www.dtic.mil/dtic/>

Directorate Home Page Association of the United States Army  
<http://www.ausa.org/Pages/default.aspx>

Fort Rucker-Home: <http://www.rucker.army.mil/>

Joint Electronic Library: <https://www.jcs.mil/Doctrine/>

Joint Technical Data Online (aircraft weight and balance): <https://www.jtdi.mil/group/awbs>

Logistics Data Analysis Center: [www.logsa.army.mil](http://www.logsa.army.mil)

Military.com: <http://www.military.com/>

Redstone TMDE Support: <https://tmdehome.redstone.army.mil/support.asp>

TRADOC Homepage: <http://www.tradoc.army.mil/>

Training Support Systems (TSS)-Enterprise Training Aids, Devices, Simulators, and Simulations (TADSS) Index and Catalog (or TADSS Catalog):  
[https://www.us.army.mil/content/armyako/en/mycommunities/Home/groups/hqda/Groups/OfcSecArmy/Groups/OASA\\_ALT/Groups/\(STRI\)/Groups/PEOSTRIG4/Groups/TADSS-CAT1.html](https://www.us.army.mil/content/armyako/en/mycommunities/Home/groups/hqda/Groups/OfcSecArmy/Groups/OASA_ALT/Groups/(STRI)/Groups/PEOSTRIG4/Groups/TADSS-CAT1.html)

United States Army TMDE Activity: <https://tmdehome.redstone.army.mil/support.asp>

USAACE Credentialing Program: <http://www.rucker.army.mil/usaace/credentialing>

USAACE SIPRNET: <http://www.usaace.army.mil/asdat>

## Source Notes

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1-1 Lundy, Mike, 2016. “*The Command Corner.*”

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2-1 Chambers, Greg, 2017. “*Gaining Back Aviation Maintenance Proficiency.*”

<http://www.armyaviationmagazine.com/index.php/archive/not-so-current/1446-gaining-back-aviation-maintenance-proficiency>

2-2 Vela, Glen, 2017. “*Moving Forward – Green Suit Maintainers in the Lead.*”

<http://www.armyaviationmagazine.com/index.php/archive/not-so-current/1287-moving-forward-green-suit-maintainers-in-the-lead>

2-3 McKoy, Dennis, 2016. “*Maintenance competence and Empowerment.*”

<http://www.armyaviationmagazine.com/index.php/archive/not-so-current/1110-maintenance-competence-and-empowerment>

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**TC 3-04.71**  
**14 December 2020**

By Order of the Secretary of the Army:

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