TO 00-5-3

TECHNICAL MANUAL

METHODS AND PROCEDURES

AIR FORCE TECHNICAL ORDER LIFE CYCLE MANAGEMENT

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INTRODUCTION

1 GENERAL.

This Technical Order (TO) provides methods and procedures for life cycle management of TOs, Time Compliance TOs (TCTOs) and updates to support initial acquisition, sustainment and modification of system and equipment hardware and software.

CHAPTER 1
TECHNICAL ORDER SYSTEMS AND TOOLS

1.1 GENERAL.

The procedures in this TO are designed to implement the Air Force TO Vision: …to provide user-friendly, technically accurate, secure and up-to-date digital technical data at the point of use that is acquired, sustained, distributed and available in digital format from a single point of access for all technical data users. This TO is used in conjunction with the referenced and related publications and forms listed in Appendix A.

1.1.1 Terms and Acronyms. In this TO, the word SHALL is used to express a provision that is binding. The word WILL may be used to express a mandatory declaration of purpose or when it is necessary to express a future event. The word SHOULD indicates a preferred method of accomplishment. The word MAY indicates an acceptable or suggested means of accomplishment. Terms and acronyms used in this TO are defined in the Glossary (Appendix A). Point of Contact (POC) addresses for organizations and activities with who TO management personnel may require direct communication are listed in Appendix B.

1.1.2 Changes and/or Supplements to this TO. MAJCOMs and Air Force Materiel Command (AFMC) Centers may supplement this TO in accordance with (IAW) TO 00–5–1, *AF Technical Order System*. Copies of all supplements will be sent to HQ AFMC/A4F, 4375 Chidlaw Rd, Suite 6, Wright-Patterson AFB, OH 45433-5006, email: afmc.a4.af.topp@us.af.mil. Submit suggested changes to this TO IAW TO 00-5-1.

1.1.3 TO Precedence. The hierarchy for Air Force TO policy can be found in TO 00-5-1.

1.2 CONCEPT.

Air Force Publications AFPD 63-1/AFPD 20-1, *Integrated Life Cycle Management*, and AFI 63-101/20-101, *Integrated Life Cycle Management*, specify TO System policies and instructions. TO 00-5-1, *AF Technical Order System*, contains TO user procedures. This TO covers life-cycle TO management methods and procedures; TO 00-5-15, *Air Force Time Compliance Technical Order (TCTO) Process*, provides additional management procedures supporting equipment modifications; TO 00-5-18, *USAF Technical Order Numbering System*, provides TO numbering procedures; and TO 00-5-19, *Security Assistance Technical Order Program (SATOP)*, provides procedures for Foreign Military Sales (FMS) programs. AFI 11-215, *USAF Flight Manuals Program (FMP)*, contains policy and procedures unique to flight manuals. AFI 63-125, *Nuclear Certification Program*, contains policy and procedures for nuclear certification systems/equipment.

1.2.1 Policy. Paper and Compact Disc-Read Only Memory (CD-ROM)/Digital Versatile Disc (DVD) TO versions shall be reproduced and distributed by the Defense Logistics Agency (DLA) Data Management Services, Technical Order Distribute and Print Gateway (TODPG), using Print on Demand (POD) for follow-on requisitions. Digital TOs distributed electronically (eTOs) shall be numbered and indexed with a -WA-1 TO number suffix, and shall be optimized, uploaded and delivered through the Enhanced Technical Information Management System (ETIMS). TO proponent organizations shall use the Comprehensive Air Force Technical Order Plan (CAFTOP) to plan and schedule compliance with these requirements. Exemptions and deviations must be authorized by waivers (see waiver procedures and format at https://cs2.eis.af.mil/sites/12837/default.aspx). All waivers will be submitted to the local TO Site Functional Office per AFMCI 21-301, *Air Force Materiel Command Technical Order System Implementing Policies*, who, in turn, will coordinate with the TO Home Office (AFLCMC/LZSA) and forward to HQ AFMC/A4F for evaluation and final disposition. TOs created using S1000D, Type 2 IETMS, and legacy Type 2 non-TMSS specifications are exempt from distribution to ETIMS until such time as ETIMS becomes capable of handling these eTOs.

1.2.2 Definitions.

1.2.2.1 TO Acquisition. (Reference Chapter 3) TO acquisition includes the development and/or procurement of technical data and TOs to operate and maintain centrally-acquired and managed military systems and commodities. TOs for individual systems and commodities are acquired by assigned Technical Order Management Agent/Agency (TOMA) (Paragraph 2.1.4). Flight Manual Managers (FMMs) manage the acquisition of Flight Manual Program (FMP) publications (AFI 11-215) under the guidance of the TOMA. It also includes acquisition of new TOs and TCTOs to support program modifications during

sustainment. Acquisition and sustainment of TOs must be effectively managed through the life cycle of the military system or commodity that the TOs support, as envisioned by the Air Force TO Vision and Concept of Operations (CONOPS) (https://cs2.eis.af.mil/sites/12837/default.aspx).

1.2.2.2 TO Sustainment. (Reference Chapter 4) TO sustainment refers to all activities required to maintain the currency, accuracy, and availability of USAF TOs, Country Standard Technical Orders (CSTOs) and M-Symbol TOs in the post-acquisition phases of a program life cycle. It includes TO updating, verifying, indexing, configuration control, storing, archiving, distributing, superseding, rescinding, and reactivating. This includes the TOs necessary for, or associated with, reclamation, re-use, and cannibalization of the system and its associated commodities. Continuing support for FMS customers is also part of TO sustainment.

1.3 TECHNICAL ORDER MANAGEMENT SYSTEMS AND PRODUCTION TOOLS.

All TO system data input, management practices, and TO acquisition, sustainment and use procedures will be performed using ETIMS and AF-sanctioned interfacing program tools. Exceptions are listed in TO 00-5-1 and this TO.

1.3.1 Enhanced Technical Information Management System (ETIMS). ETIMS, a secure web GCSS-AF application accessible via the AF portal, is the AF TO System of Record. ETIMS functions include TO cataloging, ordering and TO Distribution Office (TODO) account management support. ETIMS is used to acquire, improve, publish, catalog, manage, store, distribute and display the official TOs needed for the safe and effective operation of AF weapon systems and equipment. ETIMS users are assigned roles that include a set of system privileges using a specific role to provide capability to perform various functions. ETIMS interfaces with two other components of the AF Standard TO Management System; Technical Order Distribution Print Gateway (TODPG) and Security Assistance TO Data System (SATODS). ETIMS also features an active eTO content repository, an eTO publisher/transformer, and an eTO viewer with online (connected) and portable (disconnected) modes. Primary users are TOMAs, TODO personnel, TO Distribution Account (TODA) personnel, TO Library Custodians, and eTool administrators. To access ETIMS, prospective users must first obtain a CAC or an External Certificate Authority (ECA) with a minimum of a favorable National Agency Check and Inquiries (NACI) to establish access to the AF Portal. Once logged on to the AF Portal home page, ETIMS is accessed from the Application A-Z Listing.

1.3.2 Automated Technical Order System (ATOS). ATOS is a loose-leaf publication and document management system for developing, maintaining and sustaining Air Force TOs. ATOS receives, stores and maintains digital TOs and TO change page data and is capable of producing Adobe® Portable Document Format (PDF) output to meet POD requirements. ATOS consists of seven subsystems; production control, text capture, text generation, graphics capture, graphics generation, review and output. ATOS has the capability to convert technical data from a paper source to Standard Generalized Markup Language (SGML) and accept SGML deliveries from outside sources. The SGML output data is Technical Manual Specifications and Standards (TMSS) compliant.

NOTE

- The ATOS system is being consolidated with the Integrated Data for Maintenance (IDM) and will continue to be known as ATOS, a component of the AF Standard TO Management System. The tech-refreshed ATOS system will provide AF enterprise capability to manage, author and publish TO publication source content data; e.g., AF TMSS SGML/S1000D XML. The enterprise tech-refreshed ATOS system will be the preferred system for managing vendor / OEM delivered TO source content and for organic TO Authoring and Publishing (TOAP).

- TO programs are encouraged to work with their TO Home, Site Functional Offices and ATOS offices to help plan migration strategies. All ATOS TO content data must be migrated to the tech-refreshed ATOS by 13 April 2018. ATOS TO content not migrated by April 2018 will be archived on the consolidated TOAP System and will require a revision to be prepared when an approved AFTO Form 252, *Publication Change Request* is published.

- TO Programs currently using contractor or other organic editorial capabilities are encouraged to evaluate the tech-refreshed ATOS capabilities to reduce TO program costs.

1.3.3 Product Support Tool Kit (PSTK) (formerly A&S Tool Kit). The PSTK Tool Kit is designed to provide standard, repeatable processes to guide the acquisition and sustainment workforce and facilitate life cycle up front planning and programming. The Tool Kit consists of the Processes Matrix and Checklists. Specific TO management development and sustainment checklists are provided within the PSTK Tool Kit and should be used as a guide for Program Managers (PMs)

and TOMAs throughout the TO life cycle. These files and checklists can be accessed at https://cs2.eis.af.mil/sites/20955/EnterpriseMgt/Toolkit/SitePages/Home.aspx. AFLCMC/LG sponsors the PSTK Tool Kit and its content. PSTK Tool Kit training has been incorporated into several Air Force Institute of Technology (AFIT) and Defense Acquisition University (DAU) courses.

1.3.4 Commercial and Government-Furnished Software. Some TOMAs and Technical Content Managers (TCMs) will require additional software applications to manage digital TO files. Adobe® Acrobat Pro™ is required for publishing and managing PDF digital files. Some programs use commercial publishing tools to develop SGML-tagged TO files, and government personnel will need these tools to establish an organic TO sustainment capability. TOMAs and their support organizations will need Display Formatting Output Specification Instances (DFOSI) ArborText Editor and Command Publishing Suite (CPS) software to publish SGML-tagged files as HTML eTOs for the AF eTO viewer.

1.3.5 Security Assistance TO Data System (SATODS). SATODS controls the release of TOs/TCTOs to foreign countries. This system provides documentation and records for Foreign Military Sales (FMS) accounts, including Country Standard TO (CSTO) indexing, TO processing and shipping labels, TO tracking, and TO cost calculations. Refer to TO 00-5-19.

1.3.6 Automated Explosive Ordnance Disposal (EOD) Publication System (AEODPS). The AEODPS is a subset of the Joint EOD Mobile Field Kit (JEOD MFK) software.

1.3.7 Comprehensive Integrated TO Management System (CITOMS). CITOMS is used in conjunction with ETIMS to manage TOs at Hill AFB and the AF Nuclear Weapons Center (AFNWC). CITOMS is also used as a digital TO repository for active and archived TOs for CITOMS managed programs.

1.3.8 Digital Legacy Data Storage System (DLDSS). DLDSS is a platform to deliver, approve/disapprove, and sustain typeset technical order updates for ATOS customers.

1.3.9 Defense Integrated and Management of Nuclear Data Services (DIAMONDS). A classified system used by the Defense Threat Reduction Agency (DTRA) and the AF Nuclear Weapon Center (AFMWC/NCL Logistics Operations Branch [NCLL]) to manage and distribute Joint Nuclear Weapons Publications System (JNWPS). The capability to use DIAMONDS must be approved by DTRA and the AFNWC, and a stand-alone DIAMONDS terminal must be installed. DIAMONDS is available through SIPRNET to limited users.

1.3.10 Prime TO Warehouse System (PTOWS). At Robins AFB (AFLCMC/LG), PTOWS is used to track inventory of classified TOs, generate labels outside of other TO systems (i.e. TODPG, SATODS) if required, track printing (Robins-DLA) and shipping of TOs.

1.3.11 Centralized TO Repository (CTOR) System. CTOR is used as a digital TO repository for active and archived TOs for CTOR managed programs. The Robins AFB CTOR will provide archive functionality for other programs at other locations upon request. CTOR also provides a configuration control mechanism for page-oriented, unclassified technical orders and associated increments.

1.3.12 Secure TO Repository (STOR). STOR is located at Robins AFB, (AFLCMC/LZP), and is a digital repository for classified active and archived TOs up to and including SECRET. STOR also includes a classified TO authoring facility that provides the capability to sustain and author classified TO updates. Programs that have a requirement to author classified TO updates can utilize this capability. For more information, contact the Robins TO Site Functional Office (Appendix B).

1.3.13 Integrated Data for Maintenance (IDM) System. IDMs are approved Air Force Systems located at Tinker AFB and Robins AFB and used to sustain eTOs in Portable Document Format (PDF) and Interactive Electronic Technical Manuals (IETMs). IDMs are web platforms with an associated IETM viewer. Tinker IDM is managed by AFLCMC/LZP-Tinker and Robins IDM is managed by AFLCMC/LZP-Robins.

1.3.14 Reliability Asset Monitoring (RAM) System. The RAM System is the AF Maintenance Information System used to track serialized TCTO compliance, weapon configuration, inspections and other key maintenance data and Operational Safety, Suitability and Effectiveness (OSS&E) support of missiles/munitions listed in TO 21M-1-101, *Operational Instructions - Field/Depot Level - Reliability Asset Monitoring System.*

1.3.15 Reliability and Maintainability Information System (REMIS). REMIS is the AF Maintenance Information System and is used to track TCTO compliance and equipment configuration IAW TO 00-20-1 and TO 00-20-2.

1.3.16 Comprehensive Air Force Technical Order Plan (CAFTOP). The CAFTOP applies to all Air Force programs regardless of support concept and life cycle. The CAFTOP is a management plan for a specific list of TOs. The CAFTOP identifies PM and Lead Command mutual agreements about sustainment and digitization processes, future plans, etc. CAFTOPs establish technical requirements for acquiring, sustaining, and distributing TOs, and can provide a basis of estimate for TO requirements. CAFTOP also identifies current status, overall health, and provides a future roadmap for each program's TOs to include plans, schedules, and progress in converting to appropriate digital formats. CAFTOP is an annual process that ends with these requirements being published in the CAFDEx Weapon System Management Support (WSMS) and Logistics Requirements Determination Process (LRDP) for input into the Program Objective Memorandum (POM).

CHAPTER 2
ROLES AND RESPONSIBILITIES

2.1 PROGRAM ROLES.

2.1.1 Program Manager (PM). The PM is responsible for, and with the authority to, accomplish program objectives for development, production, and sustainment to meet the user's operational needs. PMs provide TO management for the life cycle of assigned system/commodity TOs by establishing and assigning qualified personnel to staff the TO Management Agency (TOMA) functions. The PM is also responsible for assuring the Operational Safety, Suitability, and Effectiveness (OSS&E) of the system, subsystems, or end items. Delegation of specific OSS&E responsibilities are documented in writing and approved by the PM / Chief Engineer (CE). PMs ensure the accuracy and adequacy of TOs by assigning the appropriate, documented, OSS&E authority to Technical Content Managers (TCMs).

2.1.1.1 Management Location. The TOMA responsibilities shall be established at the location of the acquisition or modification program office. The responsible PM or Supply Chain Manager (SCM, reference Paragraph 2.1.2) must establish authorizations and funding for personnel to staff the TOMA function at the appropriate location IAW 00-5-series TOs. It is imperative the TOMA be established as soon as possible, but no later than the Technology Development phase of a program or during initial staffing for any system or commodity buy, modification or sustainment effort. TO management personnel will be shown in the ETIMS Catalog for each TO. The local TO Site Functional Offices (Appendix B) at the location of the primary program office shall also be notified in writing of the assignment or changes in TOMA personnel. This notification shall include name, phone number, email address and role. For AFLCMC managed programs, the PM shall also request assistance from the AFLCMC TO Home Office (AFLCMC/LG) in the assignment of qualified TO personnel.

2.1.1.2 For aircraft programs, the TCM function for FMP publications is assigned to a Flight Manual Manager (FMM), who may also perform the TOMA functions in some cases (AFI 11-215), or programs involving the acquisition or sustainment of aircraft, the PM will appoint FMMs to perform similar functions for flight manual TOs, IAW AFI 11-215, *USAF Flight Manuals Program (FMP)*.

2.1.1.3 The PM requests training and guidance from their local TO Site Functional Office, as required, for newly assigned personnel.

2.1.1.4 Programs involving nuclear systems must be coordinated with the AF Nuclear Weapons Center per AFI 63-125 and Chapter 7 of this TO.

2.1.1.5 For acquisition and modification programs, the PM's functional Offices of Primary Responsibility (OPRs) will participate in requirements determination and preparation of inputs for the Request for Proposal (RFP) and TO Life-Cycle Management Plan (TOLCMP), help determine TO types and depth of coverage required, and review and approve or disapprove Contractor Furnished (Aeronautical) Equipment (CFAE/CFE) Notices (CFEN). Ensure requirements meet the MAJCOM's digitalization plan/requirements. Ensure sufficient technical data rights are obtained to provide life-cycle support of the weapon system, including priced options for additional rights if support concepts change. (Also refer to Chapter 3, Acquisition).

2.1.1.6 The PM will manage the pre-notification, development, release approval and issue of Interim Technical Orders (ITOs) and Rapid Action Changes (RACs) for TOs supporting program equipment and commodities.

2.1.2 Supply Chain Manager (SCM). SCMs are designated individuals responsible for managing a line of National Stock Number (NSN)-coded items. SCM functions include requirements determination; cataloging, standardization and engineering data management; stock control and distribution; technical management functions; and pricing for their assigned items. SCMs are responsible for supplying, repairing, and managing materiel (including TOs) to support PMs. SCM functions are combined with PM functions in this TO.

2.1.3 Chief Engineer (CE). As the chief technical authority, the CE leads the implementation of a program's systems engineering processes and ensures their integrity including technical risk assessment focused on ensuring OSS&E IAW AFMCI 63-1201, *Implementing Operational Safety Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)*.

2.1.4 TO Management Agent/TO Management Agency (TOMA). At the written direction of the PM, the TOMA is responsible for managing some or all of the TOs for a specific military system or commodity program for the entire life cycle. Management responsibilities typically include acquisition, sustainment, format, publishing, storage, distribution and archiving of TOs and related technical data IAW AFPD 63-1/AFPD 20-1, AFI 63-101/20-101, AFMCI 21-301, AFMCMAN 21-1 and 00-5-series TOs. TOMAs will:

2.1.4.1 Initiate and coordinate pre-contract planning for procurement and/or maintenance of TOs. Ensure that all affected commands and agencies Chapter 3) identify and document TO-related requirements. Review and coordinate on test plans to ensure that sufficient time and resources are allocated for TO verification.

2.1.4.2 Prepare, coordinate, and distribute a TO Life Cycle Management Plan (TOLCMP) and a TO Life Cycle Verification Plan (TOLCVP) to all agencies affected. The TOLCMP's and the TOLCVP's are mandatory for all programs unless exempted by TO 00-5-1. These plans will be developed as soon as possible in the acquisition program, and updated as required throughout the program life cycle. See AF TOMA SharePoint site https://cs2.eis.af.mil/sites/10531/default.aspx for templates. Once developed, the TOLCVP will be attached to the TOLCMP and the completed package shall be attached to the Weapon System Life Cycle Sustainment Plan (LCSP). The TOLCMP will be a required attachment/annex to the LCSP during all Milestone Decision Authority (MDA) reviews IAW DoDI 5000.02, *Operation of the Defense Acquisition System.* For AFLCMC managed programs, copies of the TOLCMP and TOLCVP and all updates shall be sent for review to the local TO Site Functional offices at the location of the Program Office Appendix B(Appendix B). The local Site Functional Office will upload current TOLCMP and TOLCVP to the AFLCMC LG SharePoint at https://cs2.eis.af.mil/sites/20955/Logistics%20Program%20Support/TOLCMP%20TOLCVP, unless distribution restrictions do not allow.

NOTE

Personnel on other .mil domains should request SharePoint access through the Air Force Enterprise Service Desk (ESD) at https://esd.us.af.mil/esdportal/ContactUs.aspx or DSN 510-HELPDESK (510-435-7337), COMM 210-925-2900.

2.1.4.3 Include processes to review and formalize TOs, review and approve TO and Preliminary TO (PTO) change requests, and review and recommend corrective actions on deficiency reports affecting TOs. Establish controls to ensure that verified TOs are distributed prior to or concurrently with deployment of operational assets. For FMP publications, the FMM performs these functions IAW AFI 11-215.

2.1.4.4 Establish satellite activities, such as TO Control Units (TOCUs) and Central TOCUs (CTOCUs) when required to assist with management of TO acquisition and sustainment functions. This may include exercising program insight over contractors, assisting with reviews, providing local printing specialist support, or performing government receiving inspection.

2.1.4.5 When cost effective, establish a Memorandum of Agreement (MOA) with the local Defense Contract Management Agency (DCMA) to provide expertise and assistance with contractor TO Program management.

2.1.4.6 Prepare TO-related inputs to all applicable contractual documents and other program documentation. Participate in contract fact finding and negotiations as required. Ensure that RFPs include Contract Line Item Numbers (CLINs) for data rights adequate to support the weapon system for its entire life cycle. If the support concept includes contractor support, ensure that priced options are included for additional data deliveries and increased data rights if support concepts change from contract to organic. (Chapter 3) The TOMA is responsible for evaluating contractor proposals to ensure that exit criteria for TO verification are adequately defined in the Integrated Master Plan (IMP), that adequate resources and Government Furnished (Aeronautical) Equipment (GFE/GFAE) are planned for incremental verification, and that costs are reasonable and supported by the proposal. (Chapter 3)

2.1.4.7 Ensure that the TM-86-01, *Technical Manual Contract Requirements (TMCR)*, TMSS, Data Item Descriptions (DID), and other contract documents are tailored to the extent necessary to impose only the essential needs for a particular application. Air Force acquisition programs shall use the latest version of TMSS specified in the TMCR to develop MIL-SPEC TOs, unless existing commercial manuals can be used with no degradation of system or equipment OSS&E.

2.1.4.7.1 Ensure the manner and degree of TMCR tailoring accomplished during contract development is limited to selection of options allowed in the specification or standard itself, and does not alter Document Type Definition (DTD) requirements. Submit TMCR tailoring that applies to multiple programs and suggested changes/updates to the local TO Site Functional Office IAW AFMCI 21-301. The local TO Site Functional Office will coordinate with AFLCMC/LZSA Home

Office (AFLCMC Managed Programs Only) and HQ AFMC/A4F, 4375 Chidlaw Rd Suite 6, Wright-Patterson AFB, OH 45433-5006, email: afmc.a4.af.topp@us.af.mil, for possible incorporation into the TMCR.

2.1.4.7.2 Ensure all requested TMSS waivers and deviations are controlled and documented. All program waiver requests will be submitted IAW Paragraph 1.2.1. AFMC/A4F will coordinate requests with AFLCMC/HIAM for possible incorporation into affected documents. The TOMA will also ensure any contractor proposals to use commercial, Non-Government Specifications (NGS) follow the same procedures above. These NGS will be reviewed and approved by HQ AFMC/A4F and by AFLCMC/HIAM.

2.1.4.7.3 Early in the TO acquisition program, use the ETIMS Request TO Number process to obtain new TO numbers from the Numbering Specialists (IAW TO 00-5-18). EXCEPTION: 11N TO numbers are managed by AFNWC/NC. ICBM will submit numbering requests to AFLCMC/LZPTP-TINKER IAW TO 00-5-18. As Preliminary TOs are developed, index them in ETIMS so prospective users can begin establishing subscriptions. For each new TO category, the TOMA will establish a TCTO Series Header and electronic TCTO (eTCTO) Series Header for the program's TOs. (Chapter 4).

2.1.4.8 Plan, conduct and co-chair all TO conferences, meetings, reviews, and other joint agency efforts related to the TO acquisition program (Chapter 3). Coordinate with the MAJCOM and support agencies to ensure their participation in all TO acquisition activities. Request contracting officer representation in meetings with the contractor as required.

2.1.4.9 Evaluate the contractor's certification process (Chapter 3) (IMP entrance and exit criteria, site visits, past performance) during proposal evaluation. Ensure TO development processes have adequate checks and balances, and procedures to cover standardization of writing. Ensure prime contractors levy certification requirements on vendors and subcontractors.

2.1.4.10 Provide the Responsible Test Organization (RTO) with PTOs to use during Operational Test and Evaluation (OT&E) or TO verification.

2.1.4.10.1 Support the Air Education and Training Command (AETC) with PTOs and other materials for training programs. The TO development effort will not be accelerated solely to furnish PTOs for training purposes.

2.1.4.10.2 During acquisition, deliver copies of preliminary data to verifying units prior to the scheduled verification or in-process review. Advance delivery requirements shall be defined in the TMCR and TOLCVP. For verification of TO updates during sustainment, deliver draft updates to the verifying unit as early as possible before the scheduled verification.

2.1.4.11 Coordinate with other PM functions, and the MAJCOM(s) to ensure that TOs are compatible with the eTO viewer, computer programs and equipment used in the maintenance and operation of systems and commodities.

2.1.4.12 During acquisition, ensure that TO technical content, method of presentation, style and level of writing are in line with the established maintenance concept, and within the skills and training of personnel projected to operate and maintain the equipment. That is, TOs comply with the Technical and System Requirements Documents (TRD/SRD) and applicable TO MIL-SPECs. Ensure existing source data is used to the maximum extent possible and is not duplicated for TO development. Review source data to detect errors, deficiencies and nonessential material.

2.1.4.13 Establish and manage a quality Air Force Verification Program. Develop a TOLCVP (see TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531) no less than 120 days prior to the scheduled start of verification. Involve all appropriate government and contractor agencies. Coordinate with the MAJCOM to obtain personnel to perform the tasks to be verified. Develop and submit adequate budgets to support verification.

2.1.4.14 Document the CFAE/CFE and Support Equipment Recommendation Data (SERD) review processes in the TOLCMP. Review and, in coordination with the MAJCOM and support agencies, recommend contractual approval or disapproval of CFAE/CFE Notices (DI-TMSS-80067) recommending program manuals. Review SERD for any TO impacts.

2.1.4.15 Develop budget requirements for TO acquisition and sustainment. Temporary Duty (TDY) expenses incurred as a result of attending TO acquisition or management functions will be funded IAW AFI 65-601V1, *Budget Guidance and Procedures*. Budget inputs will include modification-related TO update integration costs and the removal of before and after data.

2.1.4.15.1 Identify TO technical requirements to Lead Commands; prepare CAFTOP Narratives and TO Information Sheet (TOIS). Manage TO technical requirements as documented in the CAFTOP Handbook. This handbook is located at https://cs2.eis.af.mil/sites/10792/default.aspx. Review, analyze, and dialogue as necessary with Lead and Supported Com-

mands to collaborate and concur on the Narrative on improvements and enhancements for the particular portfolio of technical data, and financial requirements necessary to achieve those goals. Various options for accomplishing goals and objectives may need to be explored.

2.1.4.15.2 Submit approved program Narratives and TOISs on the CAFTOP EIM/SharePoint site (https://cs2.eis.af.mil/sites/10792/default.aspx).

2.1.4.16 Authorize the use of verified PTOs (red-line, mark-up, or clean copies) on required programs, with the written agreement of the lead commands and MAJCOMs. For Flight Manuals, refer to AFI 11-215.

2.1.4.17 Ensure proper Distribution Statements (AFI 61-201, *Management of Scientific and Technical Information (STINFO)*), are applied to the title pages of all assigned TO-numbered technical manuals and related data, and both the statement code (A-F) and primary reason are reflected in the ETIMS Catalog for the TOs (see Paragraph 3.19.4 and DoDI 5230.24, *Distribution Statements on Technical Documents*). Ensure TOs authorized for public release have been assigned a case number by the local Public Affairs (PA) office (AFI 35-102, *Air Force Security and Policy Review Program*). Ensure other required title page statements and warnings are applied IAW AFI 16-201, *Air Force Foreign Disclosure and Technology Transfer Program*, and MIL-STD-38784, *Manuals, Technical: General Style and Format Requirements*.

2.1.4.18 Develop and submit digital TO reproduction master files to DLA Data Management Services (Chapter 5).

2.1.4.19 Issue all ITOs/RACs affecting the assigned weapon system/commodity. The FMM will perform this duty for changes affecting flight manuals.

2.1.4.20 In conjunction with the MAJCOM, determine the need for a TO command review based on the number of modifications made to affected equipment, the complexity and extent of modifications and resultant TO changes, and the number of Recommended Changes (RC) from other sources (Air Force TO[AFTO] Form 22, *Technical Manual (TM) Change Recommendation and Reply*, or AF Form 847, *Recommendation for Change of Publication*) received since the last review.

2.1.4.21 Submit new items discovered during TO acquisition and sustainment to the local TO Site Functional Office for possible inclusion or correction of TO policy.

2.1.4.22 When programmatic issues interfere with the timely delivery of TOs or updates, ensure TO customers are informed of possible delays using TODO organizational email address lists.

2.1.4.23 Ensure all TO updates during sustainment are verified unless waived by the PM IAW AFI 63-101 and the verification activities are fully documented.

2.1.4.24 Establish, document and maintain archive copies of all TOs and updates developed as part of the program throughout the program life cycle (Paragraph 5.7).

2.1.4.25 Resolve any ETIMS Data Discrepancy Reports (DDR) within 7 calendar days (Chapter 4).

2.1.4.26 Update the ETIMS Index information for assigned TOs anytime TOMA or TCM management responsibilities change.

2.1.4.27 Request access to the Air Force Technical Order Manager SharePoint site at https://cs2.eis.af.mil/sites/10531 and set alerts to the Functional Users Guide (FUG) folders to ensure automatic email alert when new or revised FUGs are uploaded.

2.1.5 Technical Content Manager (TCM)/Equipment Specialists (ES). At the written direction of the PM/CE, the TCM/ES is an individual or office responsible for the accuracy, adequacy, modification, classification and review of TO procedures, engineering data and the related technical contents of a TO. For new acquisitions or major modifications, the TCM role is usually performed by a PM-designated logistician, TOMA or prime contractor, assisted by an Integrated Product Team (IPT) of engineers, ESs and users. The TCM role for TOs supporting equipment in the sustainment phase is usually performed by the ES responsible for the equipment. During sustainment, TCMs are identified by name in the ETIMS record for their assigned TOs. TCMs are not generally responsible for style and format or other non-technical aspects of TOs. TCMs will:

2.1.5.1 Manage TO content by evaluating and coordinating recommended changes, deficiency reports, accident/incident reports, and other source data. In conjunction with program engineers, ensure approved changes will not negatively affect system or equipment OSS&E IAW AFMCI 63-1201.

2.1.5.1.1 Verify TO procedural changes and ensure updates do not alter the distribution or security restrictions of the parent manual.

2.1.5.1.2 In conjunction with the TOMA, perform a Pre-publication Review on Change/Revision packages before they are reproduced and/or distributed.

2.1.5.2 Manage the content of assigned TOs, and apply the most appropriate Distribution Statement (AFI-61-201 & DoDI 5230.24) to control the content's dissemination.

2.1.5.3 Ensure newly-developed TO procedures prevent pollution by reducing the use of hazardous materials and the release of pollutants into the environment. TO contents should comply with AFPD 32-70, *Environmental Quality*, Air Force 32-70 series instructions and Federal Acquisition Regulations (FAR).

2.1.5.4 Approve release of assigned limited distribution TOs to personnel and organizations not on Initial Distribution (ID) subscription IAW the Distribution Statement. (During acquisition, this function is performed by the TOMA.)

2.1.5.5 Evaluate Recommended Changes (RCs) for assigned TOs.

2.1.5.6 Develop and coordinate updates to assigned TOs, including ITOs and RACs when urgency requires electronic distribution of the updates.

2.1.5.7 In coordination with the TOMA and lead/MAJCOMs, verify all procedure, maintenance or operation task changes. This includes TOs in acquisition and the sustainment phase of the TO program life cycle.

2.1.5.8 Perform currency reviews on unclassified TOs which have not been changed for five years and on classified TOs annually. TCMs must ensure their TOs are reviewed in a timely manner.

2.1.5.9 Determine if Service Bulletins, Operations Manual Bulletins, Federal Aviation Administration (FAA) Airworthiness Directives, temporary revisions and like data apply to TO-numbered flight and maintenance manuals, and whether they will be referred to by their commercial numbers or have the data extracted for inclusion in the TO(s).

2.1.6 PM, CE, TCM and TOMA Checklists. PMs, CEs, TCMs and TOMAs may complete their self-assessments using the Management Internal Control Toolset (MICT) checklists.

2.1.7 Flight Manual Manager (FMM). The FMM is assigned by the PM as part of the TO Management Agency and is responsible for managing the technical content and format of assigned FM publications. The FMM may also perform some of the TOMA functions for some Flight Manual TO publications. These duties encompass initial acquisition and verification, maintenance, and periodic reviews. See AFI 11-215.

2.1.8 ETIMS TO System Site Functional POC. The ETIMS TO System POC serves as a focal point available to assist users with implementation and use. The TO system POC will normally be available through the TO Site Functional Office. The TO System POC will be the coordinator at the functional site for ETIMS system issues, including proponent transfers and system technical problems. The ETIMS POC will:

2.1.8.1 Guide and assist ETIMS users to become proficient and productive with system tools and processes to accomplish assigned TO System duties. Assist TOMAs in uploading and validating eTOs to ETIMS for distribution to subscribers. Assist TODOs and TO users to establish libraries and eTools for eTO viewing.

2.1.8.2 Consolidates and forward TO policy and procedure issues impacted by the ETIMS system to HQ AFMC/A4F.

2.1.8.3 Assist in submission of Field Support Center tickets and to establish ETIMS user organization structure and assign system roles. Serves as the primary interface with the Field Support Center.

2.1.8.4 Guide and direct personnel to obtain and complete necessary ETIMS functional training, troubleshooting tasks, and functional issues. Interface regularly with other functional site POCs and ETIMS users at the local functional site.

2.1.8.5 The ETIMS POC will submit Field Support Center ticket to establish TOMA roles in ETIMS for site TOMAs.

NOTE

TOMAs should submit a Field Support Center ticket when a TOMA role is no longer required in ETIMS.

2.1.8.6 Assist ETIMS SA with evaluation of ETIMS system performance.

2.1.9 S1000D CSDB Manager. Technical data developed IAW ASD-S1000D, *International Specification for Technical Publications Utilizing a Common Source Database*, is created in a modular form, called a data module. All data modules applicable to the product are gathered and managed in a database, referred to as the Common Source Database (CSDB). When a USAF program develops such technical data, the TOLCMP addresses CSDB management (Paragraph 3.3.2.1). A CSDB manager is normally designated when in-house CSDB management is required. Typical CSDB manager requirements and responsibilities are listed in Appendix C.

2.2 MAJOR COMMANDS.

2.2.1 HQ Air Force Materiel Command (AFMC).

2.2.1.1 Directorate of Logistics - Product Support Management Division (A4F). A4F is the functional manager of the AF TO system, including policy, standardization and end-user devices (i.e., e-tools). A4F issues Air Force policy for managing the TO system and provides the final authority for waivers to that policy, ensures compatibility between the Flight Manuals Program (FMP) and the TO system; and approves all service tests and studies of new techniques for use in all facets of the TO system. A4F is also responsible for developing, coordinating and implementing AFMC TO system policies. In addition, A4F will:

- Be the Air Force and AFMC TO system point of contact for receipt, interpretation and dissemination of AF policy, business practices and procedures on the TO system. Reviews and approves or disapproves requests for waivers to Air Force TO policy, and assists users with problem resolution.

- Ensure AFMC organizations comply with AFI 20-118, *Instructions for the Interservicing of Technical Manuals and Related Technology Program*, for the acquisition and sustainment of joint service military systems and commodity TMs. Cooperates with other services to encourage cross-utilization of TOs.

- Be the TCM for 00-5-series TOs, 00-20-series TOs and Air Force/AFMC policy related to the TO System and Maintenance Data Documentation.

2.2.1.2 Directorate of Logistics - Systems Integration Division (A4N). A4N is the Logistics and Materiel Readiness Mission Area Lead/Portfolio for Log IT systems, to include AF TO Systems.

2.2.1.3 Directorate of Operations - Standardization/Evaluation Division (A3V). A3V is the Air Force Flight Manual Program Management Office of Primary Responsibility (OPR). A3V is the OPR for AFI 11-215 and manages the FMP for HQ AFMC.

2.2.1.4 Directorate of Communications and Information (A6). A6 responsibilities include the Cybersecurity Program and various communications programs.

2.2.1.5 Engineering Directorate (EN). EN is responsible for oversight of the Systems Engineering process for all weapon systems. EN also disseminates and implements AF and AFMC Scientific and Technical Information (STINFO) policy and procedures.

2.2.2 AF Space Command / Cyberspace Support Squadron (CYSS). The CYSS will perform functions and responsibilities similar to those of HQ AFMC (Paragraph 2.2.1) for the 00-33 series TOs for Communication and Information they manage.

2.2.3 Air Education and Training Command (AETC). AETC will assist the TO Manager with TO acquisition by participating in TO Planning/Requirements Conferences, Guidance Conferences, In-Process Reviews (IPRs), verification, and prepublication reviews as required to determine training needs and requirements.

2.2.4 Using Commands/Air Logistics Complex (ALC) Maintenance Wings. The MAJCOM (or the affected ALC Maintenance Wing when depot-level TOs are involved) will:

- Designate a command focal point for each command TO acquisition program and inform the TOMA of the designated name, office symbol, and phone number. For acquisition of TOs to support new depot taskings, the affected ALC maintenance wing will identify a focal point.

- Provide qualified personnel to support TO acquisition activities, with signature authority representing their respective organizations. The using command functional manager or ALC Maintenance Wing maintenance chief will ensure that command/depot systems and end items, support equipment, tools, facilities and consumables are made available to support verification IAW schedules developed in coordination with the TOMA. Program-unique hardware and support equipment will be provided by the PM. Provide qualified personnel, including a Verification Team Manager (VTM) if required, to support the verification effort. The same people should be available for any future related or follow-on verification efforts to provide continuity of effort.

- Perform verification of TOs for assigned military systems and commodity end items IAW approved verification plans. The TOMA, in coordination with the using command, may designate or delegate this responsibility to a separate organization.

- Notify the TOMA of any TOs which require post-publication command reviews.

2.3 AIR FORCE LIFE CYCLE MANAGEMENT CENTER (AFLCMC).

2.3.1 AFLCMC TO Home Office. The duties and responsibilities of the AFLCMC TO Home Office (AFLCMC/LG/LZSA) are defined in AFMCI 21-301.

2.3.2 AFLCMC TO Site Functional Offices. The duties and responsibilities of the AFLCMC TO Site Functional Offices at each operating location are defined in AFMCI 21-301.

2.3.3 Global Ammunition Control Point (GACP). AFLCMC/EBHMA and AFLCMC/EBRM executes the Air Force GACP mission and provides timely, efficient and cost effective inventory, transportation, safety and demilitarization services to Air Force and Foreign Military Sales (FMS) customers for conventional munitions and explosives. The AFLCMC/EBRM executes the GACP Air Superiority Cell (ASC) mission and provides support for Air Superiority Missile logistics, engineering and research, development, test and evaluation, technical sustainment, product assurance, and life cycle sustainment to support all MAJCOMs and FMS customers. The control points are TCMs for all munitions and explosives TOs and custodians of all munitions loading Standard Data Packages (SDP) (Chapter 3). These control points will:

- Assist in development of nonnuclear munitions TO specifications.

- Attend TO acquisition reviews and verification, provide explosive safety standards and criteria, and ensure standardization of terminology and procedures in nonnuclear munitions TOs.

- Incorporate nonnuclear munitions source data into existing general conventional munitions, missile and explosives TOs (categories 11, 21, 31, 33 and 35).

- Publish source data to other agencies responsible for munitions TO development and update.

- (EBHMA SDP Office) Maintain, update and distribute formal munitions family-group SDPs. Prepare and distribute a -33 SDP index quarterly. Current SDP index is located at https://www.my.af.mil/ammoprod/wm within the Munitions Information Section.

2.3.4 Air Force Metrology and Calibration (AFMETCAL). AFMETCAL will:

- Provide an Air Force member to the Department of Defense (DoD) Joint Technical Coordination Group for Calibration and Measurement Technology (JTCG-CMT), IAW AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL)* Program. Provide support to sub-group activities according to the Joint Program Operational Plan.

- Procure and manage calibration TOs numbered in Category 33K, and publish and maintain Air Force Weapon System Calibration and Measurement Summary (CMS) TOs (AFI 21-113). Review and approve calibration procedures in other category TOs.

- Periodically issue routine Category 33K ITO updates with distribution limited to USAF Precision Measurement Equipment Laboratories (PMEL) who require the changed calibration data. This may include use of an AFMETCAL information management (electronic bulletin board) system to manage, index, and distribute electronic versions of Air Force calibration TOs.

2.3.5 Technical Orders and Software Systems Branch (AFLCMC/LZPTP-TINKER). AFLCMC/LZPTP-TINKER will:

- Manage and control the processes for TO/TCTO Header numbering (TO 00-5-18 and TO 00-5-15). Assign TODO accounts for TO System users, and is the ETIMS Site Functional POC for Tinker AFB.

- AFLCMC/LZPTP manages the Automated Computer Program Identification Number System (ACPINS), and is responsible for the ACPINS Database.

- AFLCMC/LZPTP manages the Security Assistance Program and SATODS (reference TO 00-5-19 for further information).

- Reviews numbering specialist privilege request waivers and forwards for AFLCMC/LG and then AFMC/A4F review and approval.

2.3.5.1 Changes to Numbering Policy. AFLCMC/LZPTP-TINKER submits requests for changes to numbering policy to HQ AFMC/A4F for approval. AFLCMC/LZPTP-TINKER provides information copies of the request to all centers for comments and concurrence.

2.3.6 Enterprise Logistics Systems Division (AFLCMC/HIAM).

2.3.6.1 The Technical Data Section of AFLCMC/HIAM manages the sustainment and modification of legacy technical data management systems, including ETIMS, ATOS and the Joint Engineering Drawings Management Information and Control System (JEDMICS), among others.

2.3.6.2 AFLCMC/HIAM is designated as Preparing Activity for the majority of the TMSS for the Air Force (AF), including MIL-STD-3048, *Air Force Business Rules for the Implementation of S1000D*. As such, AFLCMC/HIAM develops and maintains currency of assigned TMSS in coordination with AF and other Services' users and interested industry associations. AFLCMC/HIAM reviews requests for deviation or waiver to AF TMSS and forwards for AFLCMC/LG and then AFMC/A4F review and approval.

2.3.7 Air Force Installation and Mission Support Center (AFIMSC), Air Force Civil Engineer Center, Explosive Ordnance Disposal (EOD) Joint Service Acquisition, Sustainment and Technology Division (AFCEC/CXE). AFCEC/CXE, 2008 Stump Neck Road, Indian Head MD 20640-3681, e-mail: NIPR– afcec_cxe@navy.mil; SIPR – afcec_cxe@jeodnet.smil.mil, is the Air Force focal point and liaison to the Naval Surface Warfare Center Indian Head Explosive Ordnance Disposal Technology Division (NSWC IHEODTD) for nonnuclear Category 60 EOD TOs. AFCEC/CXE will:

NOTE

NSWC IHEODTD develops, manages and assigns Air Force Category 60 TO numbers to Joint Service EOD TOs. They distribute joint service nonnuclear EOD TOs, using the Joint EOD Decision Support System Mobile Field Kit (JEOD DSS MFK), Automated EOD Publication System (AEODPS), for all services.

- Assist the NSWC IHEODTD with joint service verification and determine usability of EOD TOs.

- Manage and assign EOD TODO Account Codes.

- Distribute nonnuclear EOD TOs, using the JEOD MFK software, for all services.

2.4 AIR FORCE TEST CENTER, 46 SK/SKA, AIR FORCE SEEK EAGLE OFFICE (AFSEO).

AFSEO provides support for most nonnuclear munitions and aircraft stores acquisition and modification programs Chapter 3 (reference AFI 63-104, *The Seek Eagle Program*). AFSEO will:

- Assist the munitions and aircraft TOMAs with development of contracts and plans for nonnuclear munitions and stores source data and TO acquisition.
- Act as TCM for nonnuclear munitions TO specifications and data item descriptions. Assist with specification interpretation.
- Attend TO reviews and verifications to ensure use of standardized formats, terminology and procedures.
- Develop aircraft or stores unique procedures for delivery, loading and handling of nonnuclear munitions and aircraft stores.
- Provide technical expertise for development of updates to -33 and -34 data.

2.5 AIR FORCE NUCLEAR WEAPONS CENTER (AFNWC).

2.5.1 AFNWC Nuclear Logistics Division (AFNWC/NCL). AFNWC/NCL is responsible for Category 1 Aircraft (weapons loading, aircrew delivery, and air transport), 11N (AF and JNWPS), and 60N TOs during a nuclear weapon system's life-cycle. Individual managers are assigned as TCMs and FMMs. Authority for acquisition of nuclear weapon system TOs is assigned to Weapon System PM. Acquisition responsibilities are shared between the PM and the assigned AFNWC TOMA.

2.5.2 AFNWC/NCL Technical Support Branch (AFNWC/NCLS). During the acquisition phase of a system, the AFNWC/NCLS will:

- Establish initial requirements by submitting responses to data calls from PM data managers.
- Assist TOMAs or other representatives designated by the TOMA to ensure development of adequate nuclear weapons TOs. Review and coordinate on contractor-prepared plans when nuclear weapons TOs are included. Attend, support, and provide guidance at reviews and conferences for nuclear weapons TOs. Attend verification of nuclear weapon TOs.
- Coordinate, review and approve or disapprove CFAE/CFE Notices related to nuclear weapons systems and commodities.
- Process Recommended Changes (RCs - AF Form 847, AFTO Form 22 and AFTO Form 252, *Technical Order Publication Change Request*) on nuclear weapon TOs IAW applicable directives. Process AFTO Form 27, *Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval*, according to individual acquisition program TOLCMPs.
- Establish and maintain responsibility for numbering, indexing, storing and requisitioning nuclear weapon TOs. Issue Initial Distribution (ID) labels for assigned TOs. Print and distribute formal nuclear weapon TOs and supplements.

2.5.3 Joint Nuclear Weapons Publication System (JNWPS). AFNWC/NCL Logistics Operation Branch (AFNWC/NCLL) is the Air Force Executive agent for JNWPS publications. As such, AFNWC/NCLL staffs, coordinates, approves, and represents the Air Force on all matters relating to JNWPS manuals which bear an Air Force designator. JNWPS procedures and specifications covering publication system management, general style, format, and technical content requirements are in TO 11N-1-1, *Joint Nuclear Weapons Publication System Operating Procedures, Specifications and Standards*. JNWPS

includes maintenance, inspection, transportation, and general procedures manuals for gravity ordnance, warheads, reentry vehicles and bodies, and joint test assemblies. JNWPS manuals provide weapon summary data, assembly, test, maintenance, storage information, EOD and control procedures.

NOTE

For AFLCMC/WWZL B–2 Rotary Launcher Assembly 11N Technical Orders and AFSC/424 SCMS Commodity 11N Technical Orders, Paragraph 2.5.4 is applicable.

2.5.4 AFNWC ICBM (AFNWC/NI) and Cruise Missile (AFNWC/NDMET) Directorate. AFNWC/NI & AFNWC/NDMET will:

- Request TO numbering and indexing, typically outside of ETIMS (see below).
- Review and approve Intercontinental Ballistic Missile (ICBM) & Cruise Missiles prior to publication.
- Establish and maintain responsibility for numbering, indexing, storing and requisitioning ICBM & Cruise Missile TOs, including identification of those TOs which are to be numbered and indexed in ETIMS. Issue Initial Distribution (ID) labels for assigned TOs. Print and distribute (Paragraph 5.2) formal ICBM & Cruise Missile TOs and supplements.
- Evaluate, review changes and maintain process records of proposed Operation Certification (OPCERT) procedures for ICBM & Cruise Missile Critical Components.
- Establish initial ICBM & Cruise Missile requirements by submitting responses to data calls from PM data managers.
- Assist TOMAs, or other representative designated by the TOMA, to ensure development of adequate ICBM & Cruise Missiles weapon TOs. Review and coordinate on contractor-prepared plans when ICBM & Cruise Missile TOs are included. Attend, support, and provide guidance at reviews and conferences for ICBM & Cruise Missile TOs. Attend verification of ICBM & Cruise Missile TOs.
- Coordinate, review and approve or disapprove CFAE/CFE Notices related to ICBM & Cruise Missile systems and commodities.
- Process Recommended Changes (RCs - AF Form 847, AFTO Form 22 and AFTO Form 252) on ICBM & Cruise Missile weapon TOs IAW applicable directives. Process AFTO Form 27, *Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval*, according to individual acquisition program TOLCMPs.

CHAPTER 3
TECHNICAL ORDER MANAGEMENT

SECTION I TECHNICAL ORDER ACQUISITION

3.1 OVERVIEW.

The procedures employed to acquire technical manuals reflect the size and complexity of the weapon system or end items being procured. In every case, there are mandatory events and requirements which must be met to successfully field the new equipment in a supportable manner. The following paragraphs outline a typical TO acquisition program for a new system. Programs of lesser scope (e.g., commodities or modification of existing equipment) may not require all steps or functions. Working in conjunction with the Program Manager (PM) and Product Support Manager (PSM), the TO Management Agency/Agent (TOMA) is responsible for executing and managing the TO program. TOMAs are members of the program office Integrated Product Team (IPT) and will determine how the TO acquisition program will be implemented depending upon the people involved and the complexity of the program. For all acquisition efforts, the TOMA should be designated as early as possible to plan the TO development.

3.2 EVENTS AND MEETINGS ASSOCIATED WITH TECHNICAL ORDER ACQUISITIONS.

Events and meetings associated with TO acquisitions are described below. All or some of these events/meetings may be required for programs with TO requirements depending upon the complexity of the program. TOMAs must be familiar with all acquisition events/meetings regardless of their current workloads. TOMAs should be aware of new systems or programs, updates and changes to systems, and personnel transfers which can impact their workload. Being knowledgeable of TO acquisition and sustainment policies will make these transitions much easier. Reference DoD 5010.12-M, *Procedures for the Acquisition and Management of Technical Data*.

3.3 ACQUISITION STRATEGY.

Acquisition strategy is the responsibility of the PM/SPM assigned to oversee each program. The TOMA must become very familiar with the approach to be taken with each program, for the initial fielding, levels of maintenance, style and format for required TO publications, schedules, funding, and all aspects of the TO program as it relates to the overall program. Planning and knowing how each of these events impact TO management and development is crucial in avoiding any problems later in the program.

3.3.1 Data and Data Management. (Ref: Defense Acquisition Guidebook)

NOTE

DoD policies and procedures for data and data management in this section are directly applicable to procedures for technical order development and management in this TO. Italicized statements were added for clarity.

3.3.1.1 Definition. Data are defined as recorded information regardless of the form or method of recording. The term includes technical data (*including TOs*), computer software documentation, management information, representation of facts, numbers or datum of any nature that can be communicated, stored, and processed to form information required by a contract or agreement to be delivered, or accessed by, the government. The term includes similar information generated directly by government activities, as well. The data are used to gain insight and provide management and guidance to system development programs.

3.3.1.2 Scope. For purposes of this TO, data refers to the TOs and source data necessary for or associated with product development and sustainment, including the data associated with system development; modeling and simulation used in development or test; test and evaluation; installation; parts; spares; repairs; usage data required for product sustainment; source and/or supplier data; reclamation; re-use; and cannibalization of the system and its associated commodities. Data specifically not included would be data relating to tactical operations information; sensor or communications information; financial transactions; personnel data; transactional data; and other data of a purely business nature.

3.3.1.3 Total Life Cycle Systems Management (TLCSM). Under TLCSM, the PM is responsible for Data Management for the system throughout its life cycle. Data Management is an important part of Life-Cycle Logistics. In that context, Data Management consists of the disciplined processes and systems that plan for, acquire and/or access, manage, and use data throughout the total system life cycle.

3.3.1.4 Data Management Defined. Data Management is defined as the process of applying policies, systems and procedures for identification and control of data requirements; for the timely and economical acquisition of such data; for assuring the adequacy of data; for the access, distribution or communication of the data to the point of use; and for analysis of data use. This section concentrates on technical, product, and logistics data in support of the development, production, operation, sustainment, improvement, demilitarization and disposal of a system. This includes both government and contractor created data.

3.3.1.5 Strategy. The PM should develop a long-term strategy that integrates data requirements across all functional disciplines to include logistics. A performance-based approach should be used to identify the minimal data required to cost-effectively operate, maintain and improve the fielded system and to foster source of support competition throughout the system life cycle. Data should be available in a format that is compatible with the intended user's environment and a quality assurance program should be implemented to guarantee the accuracy and completeness of the data. The PM should assess the long-term needs for technical data rights to support weapon systems and correspondingly, to develop acquisition strategies that address those needs. Because a weapon system may remain in the defense inventory for decades, the decisions made at the time of acquisition can have far-reaching implications for weapon system support over the system's life cycle, and the failure to negotiate adequate technical data rights may impede the government's ability to sustain the weapons system. It is during the development of the solicitation and the subsequent negotiation of a proposed contract that the government is in the best position to negotiate and secure required technical data rights. The PM should consider requiring an acquisition strategy that provides for a future delivery of sufficient technical data should the need arise to select an alternative source or to offer the work out for competition.

3.3.1.6 Access vs. Delivery. In many cases, leaving government acquired data in the physical possession of the contractor and having access to the contractor's data system is the ideal solution. In addition to data access, the requirement for government use, reproduction, manipulation, altering or transfer of possession of data should be part of the data acquisition and management strategy. The contract should specify appropriate government rights to the data acquired, in addition to requirements for delivery or access. Data, whenever it is delivered to the government, should be formatted in accordance with accepted data standards to ensure usability by the government. A list of data standard examples can be found in the Air Force TMCR on the TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531. These decisions should be made early in the acquisition life cycle to avoid unexpected costs to procure, reformat and deliver data.

3.3.1.7 Protecting Data. Whether the data is stored and managed by the government or by industry, the PM is responsible for protecting system data. Policy applicable to data protection, marking, and release can be found in the following: DoDI 5230.24, DoDD 5230.25, DoDM 5400.07, and Defense Federal Acquisition Regulations Supplement (DFARS) Part 252.227-7013 & 7014. The Air Force implementing instruction is AFI 61-201

3.3.1.8 Additional Guidance. Industry standards from organizations such as the Government Electronics and Information Association (GEIA), International Standards Organization (ISO) and American National Standards Institute (ANSI), provide high level principles to guide integrated data management planning, and implementation. The GEIA Handbook ANSI GEIA-859, *Data Management Standard* , is a guide that may be helpful for PMs and data managers. This handbook outlines principles and processes for the management of data including data interoperability and longevity, best practices, and long term electronic storage, use, and recovery of data.

3.3.2 Program Planning. The first step in any program or project is to determine the scope and requirements. The TOMA initiates this process for TOs by reviewing program documentation and developing a preliminary plan of action. The TOMA will review the Initial Capabilities Document (ICD), Capability Development Document (CDD), Operational Concept, Maintenance Concept, and other documents to determine the correct acquisition strategy for each new program. This strategy should be reflected in the TO Life Cycle Management Plan (TOLCMP), wording for the Statement of Objective (SOO), Evaluation Criteria, and Instructions to Offeror.

3.3.2.1 Technical Order Life Cycle Management Plan (TOLCMP). A TOLCMP is mandatory for all programs not exempt from the USAF TO System (IAW TO 00-5-1) when TOs must be developed or are impacted. When multiple programs are managed within the same program office, one TOLCMP may be developed and updated, as required, to define specific program requirements for each effort. The TOLCMP shall include a TO Concept of Operations (TO CONOPS) defining the user vision for operation and use of TOs being developed and how the TOs will support operations and maintenance of the system. The TO CONOPS should also be included as part of the TM 86-01, Technical Manual Contract

Requirements (TMCR) developed for the program. When technical data is to be developed IAW ASD-S1000D, *International Specification for Technical Publications Utilizing a Common Source Database*, the TOLCMP shall address how the required CSDB management capability will be acquired and sustained. AF TO Programs desiring to implement S1000D/IETM initiatives shall utilize all available/applicable AF (APL) tools and resources for the implementation and organic sustainment of IETM/S1000D tech data, i.e., Content Management System (CMS), distribution and COTS/GOTS viewing software, etc. Systems and/or tools provided by the contractor shall be made interoperable with AF infrastructure/technology. The TOLCMP is developed by the TOMA, then coordinated and approved at the TO Planning/Requirements Conference (TOP/RC) by the TO IPT members. It outlines management policies and procedures for the development, acquisition, reproduction, distribution and archive procedures of TOs on any military system or commodity program throughout the program and entire TO life cycle. The TOLCMP must address timely acquisition of PTOs or source data with a format and depth of coverage adequate to support test activities. Air Force TO proponents for joint DoD and international weapon system acquisition programs shall develop and maintain copies of the AF TOLCMP and TOLCVP for the life of the program. The TOLCMP shall be attached to the Weapon System Life Cycle Sustainment Plan (LCSP). The TOLCMP is not a static management document and shall be reviewed annually and updated as required by the TOMA during the Comprehensive Air Force Technical Order Plan (CAFTOP) update. Copies of the TOLCMP and all updates shall also be sent to the TO Site Functional Office at the PM location. See generic TOLCMP's on the TOMA SharePoint site (https://cs2.eis.af.mil/sites/10531).

3.3.2.2 Technical Order Life Cycle Verification Plan (TOLCVP). Verification is the formal process by which Air Force personnel evaluate and prove new TOs developed during acquisition and TO updates developed during sustainment are accurate, adequate, safe, and usable in the operational environment to support the program. Planning for verification of TOs shall be initiated at the TO Planning/Requirements Conference (or by the TOMA if no conference is held), based upon the needs of the MAJCOM and other affected agencies. The TOLCVP is mandatory for all programs and should be developed as soon as possible in the acquisition program. For programs with multiple modifications, the TOLCVP should be updated to cover any unique procedures, processes and schedule required. Preparation of a complete new TOLCVP for each modification program is not required provided the base system TOLCVP adequately addresses the verification process to be used. Like the TOLCMP, the TOLCVP is not a static management document and shall be reviewed annually and updated as required by the TOMA during the CAFTOP update. When a TOLCMP is developed, the TOLCVP will be an attachment to the TOLCMP. The TOLCVP shall include identification of procedures to be verified, the verification site, the Verification Team Manager (VTM), support equipment and consumables required, schedules, use of substitute equipment and verification procedures and processes. The TOLCVP shall cover documentation processes and procedures for the verification activities. The TOLCVP shall also be updated to cover the processes and procedures to be used to verify TO updates after the TO is formalized and enters the sustainment phase of the TO life cycle. If contractor support is required during verification, the requirements for support shall be defined in the TMCR. See the generic TOLCVP on the TOMA SharePoint site (https://cs2.eis.af.mil/sites/10531) Copies of the TOLCVP and all updates shall also be sent to the TO Site Functional Office at the PM location.

3.3.2.2.1 The program verification schedule must be developed in conjunction with the Air Force test plan, production schedules and deployment schedules to ensure the availability of hardware, software, and equipment to support the verification effort. If available, the tentative schedule should be provided to offerors in the Request for Proposal (RFP) to allow development of supportive schedules.

3.3.2.2.2 TO verification will make maximum use of other scheduled events, such as test and evaluation, prototyping, and maintainability demonstrations. Activities should not be duplicated. Use unscheduled events such as equipment failure to verify applicable procedures, when possible.

3.3.2.3 Contractor Developed Technical Manual Organization Plan (TMOP). The contract may include the development and delivery of a TMOP through the use of Data Item DI-TMSS-81810. The contractor TMOP does not, however, replace the requirement for a TOLCMP on programs. This TMOP, when developed, should be attached as part of TOLCMP.

3.3.2.4 Technical Manual Content and Product Plan (TMCPP). For S1000D IETM development, the contract should include the development of a TMCPP as a deliverable within the TMCR. The TMCPP should be delivered in contractor format and specify the end-to-end development and integration of the IETM. The current version of the TMCR provides detailed requirements that should be included within the Contractor's plan.

3.3.3 Contractor Logistics Supportability/Total System Integration Responsibility (TSIR) Contracts. If the program will be sustained by the contractor for life, the TOMA must engage in writing technical order requirements to define the role of the contractor sustainment responsibility. Since these arrangements require contractors to sustain technical manuals for the life of the program, considerations must be addressed, i.e., the number of changes to be issued annually, a surge capability

for Urgent or Emergency situations, and the flow of recommended changes. Budgets must also be addressed to ensure the PMs include all TO related cost in their Program Objective Memorandum (POM) submittals. Programs identify TO sustainment funding through the annual CAFTOP process (Paragraph 3.5.2).

3.4 REQUIREMENTS PLANNING CONFERENCE.

3.4.1 Requirements Conference. The TOMA will call and chair a TO Planning/Requirements Conference (TOP/RC), and request support from others as required, for new program starts. TOP/RC membership is the nucleus of the IPT working a TO program and includes the Lead Commands and MAJCOMs, other AFMC managers and support agencies. The TOP/RC finalizes the requirements for input to the RFP. As a minimum, the team must include representatives from other AFMC activities, including the FMM when appropriate, the ESs and Joint Services Managers, and the MAJCOM(s) and any other support agencies (if required). The safety and nuclear surety offices, Air Education and Training Command (AETC) and the Responsible Test Organization (RTO) should be included on the team. Contractor representatives should be included as soon as the contract is issued, with contracting officer concurrence.

3.4.2 TO Planning/Requirements Conference (TOP/RC) Membership Agreements. The TOP/RC, held before the program data call, brings together the members of the TO IPT to plan the TO program. Membership continuity in subsequent conferences and reviews must be maintained whenever possible. Once the program TO requirements is developed, inputs to the RFP are drafted and the TOLCMP is finalized.

3.4.3 Purpose. The TOMA will conduct a joint TOP/RC with the TO IPT. The TOP/RC will identify TO program requirements, prepare TO program schedules, determine what source data is required to support TO development, and plan for TO verification. One critical task often overlooked is to review the TO specifications and standards which will be required on the program. If this is not done by the TOP/RC, then the TOMA must review the contractor-proposed tailoring before the contract is issued to ensure Air Force requirements are met.

3.4.3.1 The conference may be accomplished through face-to-face meetings, correspondence, telephone or other electronic communication. At the completion of the TOP/RC, the TOMA will document all actions and finalize the RFP and the TOLCMP.

3.4.3.2 When more than one MAJCOM or DoD component is involved, the Lead Command or component, as identified in the Program Management Directive (PMD), should be the primary source of requirements information. Requirements from other MAJCOMs should also be considered in TO planning efforts. The planning and requirements derived from this conference must follow the established Air Force operation, maintenance and logistics support concepts and plans.

3.4.3.3 The IPT should plan for the use of existing TOs and commercial manuals whenever possible, identify required new TO types and specifications, and establish program milestones based on the PMD.

3.4.3.4 The TO IPT shall evaluate all TO program requirements. Any changes in scope or increase in requirements will be thoroughly evaluated and documented in the TOLCMP. Consideration should be given to cost versus effectiveness, trade-offs, alternatives, the MAJCOM digitization plan, and the AF TO CONOPS. When disagreements cannot be resolved, the TOMA will elevate the matter for resolution to the PSM and in turn to the PM.

3.4.4 Existing Data Usability. Maximum use will be made of existing data. Available Technical Manuals (TM) from other government departments or agencies will be reviewed to determine adequacy and application to particular programs.

3.4.5 TO Development Planning. Any TOs developed for the government (at government expense) must be developed to current AF TMSS or a government-approved NGS IAW this TO. See Section VIII for digital TO and TMSS requirements.

3.4.5.1 Joint Acquisition Programs. For joint-service acquisition programs, TMs should be developed in a single format usable by all services involved, rather than developing individual manuals for each service.

3.4.5.2 Delivery Requirements. Delivery of PTOs shall be prior to or concurrent with delivery of the hardware for development testing and/or operational need dates. Formal organizational level (on-equipment) TOs and preliminary intermediate level (off-equipment) TOs will be delivered prior to or concurrently with the delivery of the first production configured system or commodity to the first operational unit. Intermediate-level manuals must be formalized by the Initial Operational Capability (IOC) date.

3.4.5.2.1 For the two-level maintenance concept, field level TOs meeting the definitions of on-equipment and off-equipment must meet the delivery requirements of Organizational and Intermediate-level manuals, respectively. Preliminary depot level TOs will be delivered prior to depot prototype overhaul and must be verified and formalized prior to depot activation.

3.4.5.2.2 If TOs cannot be delivered according to this policy, the TOMA must revise verification schedules, update the TOLCMP, and recommend interim support for the MAJCOM, use of verified or partly verified PTOs, Interim Contractor Support (ICS, AFI 63-111, Contract Support for Systems, Equipment and End-Items, etc.) until the manuals are delivered. Any such actions must be coordinated with and approved by the appropriate PM and the MAJCOM/DoD Component.

3.4.5.3 Preliminary Technical Orders (PTOs).

3.4.5.3.1 ETIMS will only manage PTO numbering and indexing. TOMAs establish procedures to manage and control distribution of PTOs prior to formalization and publication as stated in Paragraph 5.2.

3.4.5.3.2 The TOMA requests a TO number for PTOs using the same procedures as in Paragraph 3.9.3.1. AFLCMC/LZPTP-TINKER enters the approved number in the ETIMS Review TO Number Request screen. The TOMA receives a notification on their Home Screen indicating the TO number has been reviewed/approved. The TOMA will use the Manage TO Screens to index the PTO, marking Available for Index to Yes so users are able to establish ID.

3.4.5.3.3 PTOs are prepared in limited quantities during TO acquisition to support In-Process Reviews (IPRs), contractor certification, and government verification activities. A TO is considered 'preliminary' from the time the publication has a number assigned until the TO is formalized. PTOs are formalized after they are successfully verified and all corrections are made and accepted, normally during a pre-pub review. PTOs must complete the contractor quality process before delivery to the government for verification. Air Force personnel may use unverified data during system Test and Evaluation (T&E) on new or modified hardware or software or in the performance of routine maintenance if the intent is to verify the data. Every effort shall be made to replace organizational-level PTOs with formal TOs prior to or concurrent with delivery of the first production-configured system or commodity to the first operational unit. Formatted PTOs should be used to the maximum extent possible to support Air Force T&E (AFI 63-101/20-101). PTOs are also normally used for development of formatted training plans and course syllabuses.

3.4.5.3.4 Verifying and Formalizing PTOs. After the TO has been verified to the maximum extent possible, the TOMA develops a TO update to convert the PTO to a formal TO. Prior to distribution of formal TO/eTO update, the TOMA will enter the publication date. The Available for Distribution flag in the TO index is automatically set to Yes when the content is loaded to TODPG (for distributed media) or eTO is deployed (for–WA-1). ETIMS will automatically enter the estimated distribution date (EDD) from TODPG when the AFD is set to Yes. The Available for Distribution flag shall be manually set to Yes by the TOMA to indicate a -WA-2 is available for distribution. For all media types the Available for Index flag must be set to Yes and Publication Stock Number (PSN) created by ETIMS for catalog to be updated.

3.5 DEVELOPING ESTIMATED BUDGET FOR PM TO COVER TO COSTS.

3.5.1 TO Initial Acquisition Budgeting and Cost Estimating. The TOMA is responsible for estimating the cost of TOs needed to support the military system or commodity. The cost of acquiring TOs includes writing, editing, supporting conferences and reviews, verification, preparation of reproducible masters, printing and distribution, routine maintenance, and TO-related travel (AFI 65-601V1). TO costs are chargeable to the same budget program activity code used to finance hardware costs during initial acquisition. The TOMA must begin the cost estimating process shortly after assignment to ensure adequate program funds are available. All information sources should be explored, including, but not limited to, historical data from other programs, contractor estimates, and prior experience. The PM must ensure the annual program budget submission includes TO requirements.

3.5.2 Sustainment Funding and Program Brochure Transfer. TOMAs must begin planning for the seamless transfer of TO programs from the acquisition phase to sustainment phase as soon as possible after test and evaluation. TOMAs shall use the CAFTOP to plan and schedule compliance with these funding requirements (see Chapter 5 for sustainment CAFTOP processes). Exemptions and deviations must be authorized by waivers (see Paragraph 1.2.1). PMs/TOMAs will use the CAFTOP Working Group SharePoint site (https://cs2.eis.af.mil/sites/10792/default.aspx) to access the CAFTOP Handbook, the Technical Order Requirements Process. Use CAFTOP Handbook procedures to develop a weapon system/commodity-specific CAFTOP Annex for submission to the appropriate Lead Command (AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems,* in time to support a budget submission for the current Future Years Defense Plan (FYDP). AFI 65-601(v1), Section 4E, describes the complete funding requirements for Air Force technical manuals. Funding for physical-distribution digital media (e.g. CD-ROMs or DVDs) is managed the same as funding for individual TOs, through the CAFTOP process.

3.5.3 Modifications Funding. The PM will address all Time Compliance TOs (TCTOs), new Operations and Maintenance (O&M) TOs, and O&M TO updates required to support planned modifications in the Technical Order Financial Brochure (TOFB) and CAFTOP Annex submitted to the Lead Command for funding. However, TCTO and related new TOs or TO updates are funded by the specific modification project.

NOTE

Some acquisition program contracts provide for system upgrades as part of the contracted effort. Sustainment programs must use modification funding for all TCTOs and TCTO-related TO updates, publication and distribution.

3.5.3.1 The TOMA ensures funding requirements for TCTO acquisition, verification, related TO updates, printing and distribution have been considered in modification funding packages. Requirements include costs to remove before and add after data (before and after modification) in TOs. (For S1000D/IETM based TOs, refer to Section VIII).

3.5.3.2 The TOMA annotates the fund citation or modification number in the print package submitted to the Technical Order Distribution Print Gateway (TODPG) (Reference Functional Users Guide (FUG) at https://cs2.eis.af.mil/sites/10531). If the package also contains non-modification-related changes, the annotation will show the related fund citations and the percentage chargeable to each.

3.5.3.3 For Inspection Program (-6 TO) changes that will cause depot maintenance Depot Programmed Equipment Maintenance (DPEM) fund obligations, the responsible Production Management Activity (PMA) (for TCTO modification kits) will contact the DPEM funds point of contact to ensure adequate funds are available. The PMA will procure and manage the available funds per AFI 65-601V1 and associated AFMC supplements.

3.5.3.4 Spares Replacement. Acquisition funds and the stock fund are used to acquire new TOs or TO updates driven by the need to replace existing spare parts and components with new items. The Product Group Manager (PGM) provides the TOMA with a printout of the replacement item cost computation. The TOMA annotates the total dollar requirement for the maintenance of commodity TOs resulting from the acquisition of replacement spare items. The TCM will assist the TOMA with computing the impact of spares replenishment on weapon systems TOs based on history and known future acquisitions. The TOMA provides budget requirements by weapon system.

3.6 CONTRACTING FOR TECHNICAL ORDERS.

TOs will be acquired IAW DoD 5010.12-M, Procedures for the Acquisition and Management of Technical Data, on a separately priced Contract Line Item Number (CLIN) using a contract exhibit consisting of a DD Form 1423, *Contract Data Requirements List (CDRL)*, with a program-specific (tailored) TM 86-01, *Technical Manual Contract Requirements (TMCR)* document. The TMCR is managed by HQ AFMC/A4F in coordination with other acquisition agencies. The latest version of the TMCR, located on the AF TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531 must be used for all new TO contracts. Programs may submit a waiver through their Center TO Home Office if their current TMCR is adequately supporting the program. TOMA/PM must coordinate on the development of CDRLs and TMCR of new contracting actions for the purchase or sustainment of TOs. The local TO Functional Site Office will provide guidance to TOMAs, FMMs and TCMs with TO acquisition, development, review, and verification of assigned systems. This includes providing support to TOMAs and TCMs on the development of new contracting actions and providing local, specialized training IAW AFMCI 21-301.

3.6.1 Technical Manual Contract Requirements (TMCR) Document, TM 86-01. A TMCR is used in all contracts for acquisition, sustainment or modification of systems and equipment when TOs must be developed or updated. The TMCR is included in the RFP either as an exhibit, as part of the system performance specification, or in the Technical Library, and is referenced in Section J. The exhibit will have a separately-priced CLIN in the formal contract (DoD 5010.12-M).

NOTE

TMCR requirements apply equally to contracted TO development efforts and to in-house TO development and updating.

3.6.2 Description. The TMCR Template now consists of two parts: The first for the acquisition of TMSS compliant linear technical manuals, and the second part for the acquisition of S1000D IETMs. Programs will only need to tailor one of the parts for their acquisition activity and delete the unused part. The TMCR consists of three sections; TO Program Requirements, TM Type and Delivery Requirements, and Specification/Standards Interface Records (SIR). Section 1 defines specific

program requirements the contractor shall follow in development or sustainment of the TO data identified in Section 2. Section 2 includes tables listing TO types and related TMSS, source data requirements, specific TOs requiring update to support TO sustainment or modifications, and matrices providing delivery instructions with data formats for various phases of the program. Section 3 contains the SIRs for joint-service TMSS with Air Force tailoring specified and contains links to the TMSS Tailoring Tool and the S1000D Decision Point Tool. TOMAs will utilize both tools to specify their standard TMSS tailoring requirements and/or to specify their S1000D functionality requirements and program business rules. The outputs provided from these tools will be attached to Section 3 as contractual SIR requirements. The TOMA is responsible to tailor the entire TMCR prior to placing the TMCR in an exhibit to the contract. The Contractor/Offeror may propose and submit, in writing, additional tailoring to the TOMA and Procuring Contracting Officer (PCO) for consideration. If approved, this additional tailoring shall be added to the TMCR as part of the contract deliverable. Programs that have developed a TO Concept of Operations (TO CONOPS) may attach the TO CONOPS to the TMCR to aid the contractor in understanding the program requirements. A published overarching Air Force TO CONOPS is available at https://cs2.eis.af.mil/sites/12837/afkn_docs/forms/allitems.aspx.

3.6.3 Tailoring. Tailoring serves two purposes; to delete TMCR requirements excess to program needs, and select options presented within specifications and standards. Only those TM Type Selection Tables, TM Delivery Requirements Matrices and SIRs applicable to a particular contract are left in the TMCR. A TMCR Writing Guide is available on the TOMA SharePoint Site at https://cs2.eis.af.mil/sites/10531/default.aspx to assist programs in tailoring their contractual requirements. Examples of TMCR tailoring can be found in the TMCR folder on the LZSA SharePoint (https://cs2.eis.af.mil/sites/20955/logistics%20program%20support/default.aspx).

NOTE

Updates to existing TOs and new TOs for existing programs may be acquired in same style and format when this is satisfactory to all affected agencies and is cost effective over the program life cycle. In these cases, list the TOs affected in TMCR Table 2. However, if any existing SGML-tagged formats are not TMSS compliant and cannot be viewed on the eTO Viewer (eTOV), revisions and new TOs which will be converted to HTML or XML and distributed as eTOs must be brought into compatibility with the eTOV. If this is not possible (funding limitations, contractual issues, etc.), the PM must obtain approval from the Lead Command and get an AFMC/A4F waiver to host eTOs sites other than the ETIMS repository. For these waived manuals, index the media suffix-WA-2, and list the URL in the TO Details page. If the TOs can be distributed in PDF, no re-writes are required.

3.6.4 DD Form 1423, Contract Data Requirements List (CDRL). The DD 1423 is used to establish a separately priced CLIN. It is usually attached with the TMCR in the contract and listed in the Part I, Section B, Supplies or Services and pricing/cost schedule as well as Part III - List of Documents, Exhibits, and Other Attachments, Section J, List of Attachments. A separate CDRL, identified as an exhibit to the contract, shall be used in conjunction with the CLIN for TOs. CDRL Block 4, Authority, shall list the Air Force TMCR, TM 86-01, in place of a Data Item Description (DID) or TMSS. The TMCR must be tailored to list only the military specifications or standards applicable to the contract. Multiple TO CDRLs may be used to price TOs by work segment, e.g., Organizational level TOs, Depot level TOs, and Operational TOs. The respective TMCRs will be attached to the CDRLs. For convenience, multiple TO CDRLs may be grouped together in one contract exhibit or separate contract exhibits may be established for each CDRL. In either case a separate price for each CDRL should be in the exhibit or on the CDRL.

3.6.4.1 Options. There are two options for the use of CDRLs:

3.6.4.1.1 The TOMA may include draft CDRLs for known data requirements in the RFP. The CDRL for TO delivery (if included), with the TMCR attached, will be referenced in RFP Section J. The Instruction to Offerors will require the offerors to develop Statement of Work (SOW) paragraphs, complete CDRL tailoring and submit any other suggested data requirement CDRLs with the proposals.

3.6.4.1.2 If CDRLs are not included in the RFP, the Instruction to Offerors will require offerors to propose all data requirements, including TOs. In this case, a partly-tailored TMCR may be placed in either the system specification or the Proposal Technical Library.

NOTE

All DIDs can be found on
(https://assist.dla.mil/online/start/)

3.6.5 Data Item Descriptions (DIDs). Following is a listing of most of the TO program-related Data Items which may be required if the contractor will develop/deliver the data:

- DI-TMSS-80067, Technical Manual (TM) Contractor Furnished Aeronautical Equipment or Contractor Furnished Equipment (CFAE/CFE) Notices.
- DI-TMSS-80229, Technical Order Improvement Report and Reply (AFTO Form 22).
- DI-SAFT-80931, Explosive Ordnance Disposal Data.
- DI-TMSS-81532, Aerospace Emergency Rescue and Mishap Response Information (Emergency Services) Source Data.
- DI-ALSS-81531, Time Compliance Technical Order (TCTO) Supply Data (AFTO Form 874).
- DI-TMSS-81810, Technical Manual Organization Plan.
- DI-TMSS-81817, Technical Manual Quality Assurance (TMQA) Program Plan
- DI-SESS-80858, Suppliers Configuration Management Plan
- DI-TMSS-81812, Technical Manual Schedule and Status Report

3.7 PROVIDING INPUT FOR SOO, SOW, ICD, RFP, INSTRUCTION TO OFFERORS, ETC.

3.7.1 Statement of Objectives (SOO).

3.7.1.1 Definition and Purpose. The SOO should specify TO objectives in performance-based terminology. Evaluation criteria must support the SOO and be traceable to the Instruction to Offerors sections. The SOO is a government-prepared attachment to either Section J or L of the RFP. The SOO provides the basic, top-level objectives of the acquisition program. Additionally, program objectives focus on the higher risk areas individually, so each area can be addressed directly in the evaluation criteria. These higher risk areas are usually valid discriminators in the source selection process. Areas of relatively low risk are generally covered by higher level objectives. The SOO allows the offeror maximum flexibility to develop cost-effective solutions and to propose innovative alternatives to meet the stated objectives. The SOO also allows the government to assess offeror understanding of the effort to be performed, by eliminating the how to instructions typically provided in a SOW, (MIL-HDBK-245, *Preparation of Statement of Work (SOW)*).

3.7.1.2 Phrasing Objectives. Depending on the level of risk, TO objectives will be addressed in a variety of ways. For most acquisition programs, the TO objective would be covered with a statement such as: Provide quality technical manuals, source data and options for the government to obtain data acquisition rights to support the objective of Air Force organic system operation and field and depot-level maintenance for the system life cycle. Actual wording will depend on program operations and maintenance concepts. Where TOs are considered a low-risk area, TO objectives may be covered by the more general logistics support objective.

3.7.2 Work Statement Options.

3.7.2.1 Statement of Work (SOW). A SOW defines, either directly or by reference to other documents, all tasks to be performed for the program covered by the contract. The SOW is limited to what is required - qualitative, quantitative and other requirements (how, when and where) will be contained in specifications, the Integrated Master Plan (IMP) and CDRLs (MIL-HDBK-245 and DoD 5010.12-M). Use of a SOW in the RFP is usually limited to follow-on or small program contracts, as directed by the PM.

3.7.2.2 Government-Prepared SOWs. For government-prepared SOWs, TO requirements should be limited to performance-based statements, e.g., The contractor shall develop the technical order types specified in the TMCR (Exhibit) to support (program name) (CDRL (#)). Additional statements, covering the applicable task areas may either be added to the SOW or to the first section of the TMCR as required to fully describe TO program requirements.

3.7.2.3 Offeror-Prepared SOWs. Offeror-prepared SOWs may vary in detail, dependent upon the detail in the IMP. The proposal SOW and IMP together should specify the tasks, events and processes the offeror will use to satisfy RFP requirements. The Instruction to Offerors must be explicit enough to allow the contractor to tailor a TMCR for submittal with the proposal.

3.7.2.4 Performance-Based Work Statements (PWS). A PWS defines the requirements in terms of results rather than the method of performing the work. It cites referenced directives by specific process/procedure (e.g., paragraph or chapter) rather than the entire publication. At a minimum, a PWS includes a description of Services/General Information (definitions, etc.); a Services Summary; a list of Government-Furnished Property and Services, if applicable; and Appendices such as workload estimates, labor hour rates, square footage, etc.

3.7.3 Request for Proposal (RFP).

3.7.3.1 The TOMA will make inputs to the PM data call to ensure that TO-related data is placed on contract. The TOMA must ensure that the proper FAR/DFARS data rights clauses are included in the RFP. These requirements will not be altered by the PM or Data Manager without the concurrence of the TOMA, MAJCOM and support agencies. The Instruction to Offerors will inform contractors responding to the RFP about information to be included in the proposal. Evaluation Criteria (section M of the RFP) must be traceable to both the SOO and Instruction to Offerors. AFI 63-101/20-101 describes the procedures for securing data rights, ensuring technical data is addressed in the RFP and for ensuring costs associated with technical data are visible and contain supporting documentation.

3.7.3.2 CDRL, TMCR and CLIN. The government shall develop a draft TMCR for the RFP. This TMCR shall be updated based on approved contractor data recommendations for inclusion in the final contract. The TMCR is attached to the CDRL for delivery of TOs. The TMCR shall require a separate CLIN for delivery of Technical Manuals, and shall become a separately-priced exhibit to the contract (DFARS 227.7103-2, *Acquisition of Technical Data*, and DoD 5010.12-M). The RFP must include a separate CLIN asking for a priced option to obtain unlimited rights to technical data if the Offeror has proposed only limited rights. (Paragraph 3.20.2.4.)

3.7.3.3 The TO IPT (Paragraph 3.4.1) develops draft TO program objectives and criteria as inputs for the work statement or SOO, Evaluation Criteria and Instruction to Offerors. The drafts are provided to the program contracting office and data manager, along with a partly-tailored TMCR for inclusion in the RFP system performance specification.

3.7.3.4 If the RFP includes TOs releasable under provisions of AFI 61-201, they may be released directly to prospective bidders. If the RFP includes TOs not releasable under provisions of AFI 61-201, they should be made available for review in a bidder's library at the buying location. For those TOs which are only distributed as ETIMS electronic TOs (eTOs), the PM may direct the TOMA to upload the eTOs to the eTO viewer. Release of export-controlled technical orders outside of DoD requires completion of a DD Form 2345, *Military Critical Technical Data Agreement*.

3.7.4 Instructions to Offerors.

3.7.4.1 The Instructions to Offeror, Section L of the RFP, identifies how the offerors must submit proposals and what proposals must cover for the government to evaluate the proposal according to the evaluation criteria in Section M. For example, the Instructions to Offeror may require a tailored TMCR, associated SOW tasks, and IMP program event entrance and exit criteria. The Instructions to Offeror essentially addresses topics contained in TMCR Section 1. Offerors will be required to select and tailor applicable TMSS, listed in the TMCR, for the types of TOs required by the program.

3.7.4.2 Proposals. Offerors respond to an RFP with proposals for satisfying Air Force objectives. Proposals are evaluated IAW the AF Source Selection Plan.

3.7.4.3 Proposal Contents. Offeror proposals submitted in response to an RFP will include any documents the RFP requires. That will usually include some combination of a work statement, completed (separately priced) TMCR for TOs, recommendations for any other data required, an IMP, and/or an Integrated Master Schedule (IMS -Appendix A) covering the management and control of the acquisition program. Offeror responses indicate how the contractor intends to satisfy RFP requirements.

3.7.4.3.1 Request for Proposal Quality Assurance Provisions. The Instructions to Offeror may require the offeror to include details of the contractor QA process in their proposal, if the process has not been previously documented and supported by applicable past performance data or if there is exceptional risk in the program. The process will be evaluated for conformance to accepted commercial standards, such as the ISO 9000 series. The TOMA will obtain insight into process

operation through participation in the IPT. Digital data deliveries are inspected and accepted on several levels: 1) physical media, 2) data exchange formats and, 3) data content and format. Contractors must demonstrate the online access service as the basis for government acceptance. TOs delivered pursuant to the contract must meet the requirements of this chapter and the contractor's tailored TMCR. The quality of proposed commercial manuals will be evaluated according to MIL-PRF-32216, *Evaluation of Commercial Off-the-Shelf (COTS) Manual and Preparation of Supplemental Data.*

3.8 SOURCE SELECTION PROCESS.

During source selection the government will review and clarify any issues with the TMCR and RFP. Source Selection rules determine how the government will ask questions and negotiate unresolved issues. On-site visits to contractors may be required. The final evaluation results are presented to a Source Selection Authority to determine which offeror best satisfies the RFP. That offeror is subsequently awarded the contract. Once contracts are awarded, the provisions may only be changed through the Procuring Contracting Officer (PCO).

3.8.1 Proposal Evaluation Criteria. The following provides guidance for TOMA evaluation of TO acquisition or sustainment contract cost and delivery proposals, and participation in subsequent negotiations with the offeror, under the direction of the PCO. The TOMA should be knowledgeable in all relevant areas of TO acquisition or sustainment, and must thoroughly understand program requirements, the RFP, and the evaluation criteria. Assistance and comments should be solicited from appropriate PM or staff agency personnel if some parts of the proposal are beyond TOMA expertise and experience. During competitive contract bidding, the TOMA must not contact any bidder directly. There must be no bias or any appearance of conflict of interest.

3.8.1.1 Evaluation Criteria. Evaluation criteria, Section M of the RFP, will be developed based upon the SOO and will drive development of the Instruction to Offerors (Section L of the RFP). TO inputs will be prepared by the TOMA to support and establish standards for evaluation of an offeror response to the RFP. Section M informs offerors how the government will evaluate and rank proposals. For TOs, a primary criterion is development IAW Air Force TMSS to ensure ETIMS compatibility. Other criteria include complete program coverage, acceptable in-house processes to ensure delivery of technically accurate documents and data, past performance and support of government verification.

3.8.1.2 Developing Evaluation Criteria and Checklists. Documented criteria must be developed from program requirements prior to RFP release. These evaluation criteria (or a checklist), must be used to analyze any proposals. The criteria should list the requirements in rank order and establish the minimum acceptable level of compliance for a proposal to be considered acceptable, consistent with the evaluation factors. The criteria may be either quantitative or qualitative depending upon the factors or sub-factors addressed. The criteria will allow all proposals submitted against an RFP to be evaluated to the same standards and help to prevent any charges of bias or unfair practices. The TOMA, in conjunction with the IPT, will develop TO program evaluation criteria.

3.8.2 Technical Evaluation. The purpose of the TO technical evaluation is to determine whether offeror proposals meet the requirements of the RFP, and offeror-proposed hours allocated for TO development are realistic, complete, fair and reasonable in relationship to the RFP. The evaluation should assess offeror understanding of and ability to comply with program requirements based on the proposal, Contractor Performance Assessment Reports (CPAR, available from the PCO) or site surveys, interviews, etc. The quality of the contractor processes and ability to provide an acceptable product are primary concerns. The principal TOMA role is to evaluate the technical merit of the TO portion of the proposal.

3.8.2.1 TOMA Role. The TOMAs primary role is to evaluate proposal compliance with an understanding of RFP provisions and the adequacy and accuracy of individual elements relating to technical data development.

3.8.2.2 Assess whether the proposal is realistic or not by comparing offeror proposed efforts with similar contracts on other programs, both by the same offeror and by other contractors of similar size and capabilities.

3.8.2.3 For page-oriented TOs, consider such elements as hours per page (new and changed), number of pages (new and changed), types of pages (text, illustration, and mixed), travel costs (location, duration, number of people), and hours for TO-related plans and reports.

3.8.2.4 For IETM/S1000D based TOs, evaluation elements will depend on the offeror units of measurement. Some elements included could be number and complexity of tasks, lines of software code, number, format and complexity of illustrations, etc. (Section VIII.) Because proposals associated with IETM technical data development include a Common Source Database (CSDB) management component, a CSDB expert should be assigned to the source selection team. Digital

files consist of eXtensible Markup Language (XML) data modules, Standard Generalized Markup Language (SGML) files, FrameMaker® files, etc. DB Manager requirements and responsibilities are contained in Appendix C. All pre-S1000D Type II IETMs that capitalize off data reuse fall under this requirement if they are organically sustained by the AF.

3.8.2.5 If the offeror based proposal costs for some elements on historical data, the TOMA should evaluate the validity of the data used; i.e., Is this effort similar to the baseline used for the calculations? Is the baseline recent? Are the calculations statistically accurate? Has any upgrade to offeror production equipment been considered, etc?

3.8.2.6 When comparing hours with those proposed by other contractors, the TOMA must make allowances for different methods of documenting and allocating labor and hours. The TOMA may want to consult with other PM or staff experts in this area.

3.8.2.7 There are two components of completeness; complete justification of costs and complete coverage of requirements. Costs in this instance are primarily labor hours, with the addition of travel, reproduction, and similar dollar costs.

3.8.2.8 The coverage of offeror proposed efforts must be assessed by comparing the proposal with the RFP scope and effort. Of critical importance are the data rights proposed. Data rights should support future changes in support and operating concepts. If the program is totally funded by the government, the TOMA should propose unlimited rights to all technical data developed for the program. During this portion of the evaluation, the TOMA may discover that the RFP is misleading or incomplete or unneeded requirements have been included. In this case, the TOMA must notify the PCO so that offerors have the opportunity to modify proposals.

3.8.2.9 The TOMA should provide the PCO with an estimate of contract risk (high or low), based on the scope, period, and technical requirements of the RFP. Higher risk technologies would justify higher percentage profits. For example, is the overall program established or leading edge technology? What percentage is new development versus modification or off-the-shelf? How long is the contract period? Are the TOs traditional page-based formats or IETM/S1000D based TOs?

3.8.2.10 Offeror ability to comply with program requirements may be assessed by comparing the offeror proposal with the evaluation factors and criteria (did the proposal indicate a complete understanding of the effort involved?) by reviewing CPARs of past performance on similar contracts, by site visits, interviews, and other investigation methods.

3.8.2.11 Reporting the evaluation results is critical. The TOMA must indicate which portion of each proposal is being evaluated, whether that portion meets the requirements documented in the RFP, whether the RFP has any internal problems, what must be done to correct any shortfalls, and a risk assessment of offeror ability to perform. Accuracy, brevity and clarity are the keys to successfully preparing an evaluation report.

3.8.2.12 During evaluation some aspects or provisions of the proposal may appear deficient or require clarification. If data provided in the proposal fails to address all contract requirements, is inadequate for a proper evaluation or is contradictory, an Evaluation Notice (EN) should be submitted through the PCO. ENs must be specific and limited to the aspect of the offeror proposal causing the problem.

3.8.3 Contractor Costs. Cost for TO development fall into two categories, direct and indirect. Direct refers to those costs incurred solely as a result of the TO development effort, such as writing, editing, printing, and so forth. Indirect refers to costs which would be incurred whether or not TOs were developed, such as company management, facility operation.

3.8.4 Specific Technical Order Proposal Evaluation Guidelines.

3.8.4.1 Areas Subject to Double Charging. Not all TOs or source data packages require all support functions, and the offeror proposal should clearly differentiate these items. For example, some commercial manuals do not require supplementing, and the only allowable costs should be for development of an Identifying Technical Publication Sheet (ITPS), purchase of multiple copies, and administrative processing of the CFE Notices and manual certification. If task development is performed as part of a Supportability Analysis (when on contract), TOs should not also be charged for task development.

3.8.4.2 TO Sizes. The TOMA should estimate page counts (and/or file lengths, database sizes, etc. for digital TOs) by comparing the program to existing programs for similar military systems or commodities when possible. For example, is the offeror proposed number of pages in line with this estimation? If TOs are priced individually or by types, compare the number of pages proposed with the number of pages in published TOs of the same type for similar equipment.

3.8.4.3 Historical Data. If historical data from like systems is not available, the TOMA should solicit inputs from the PM technical services function.

3.8.4.4 Technical Order Data Rights. The TOMA should assess any areas of the proposal where the Offeror has proposed less than full rights to the technical data. The key concern is whether the government will have adequate rights to support the weapon system for its life cycle, including data for alternate repair source selection and competitive spare parts procurement. The TMCR may require a separately priced option that provides for the government's rights to a future delivery of the technical data.

3.8.4.5 Evaluation Assistance. TOMA evaluations should be based on experience and judgment to the maximum extent possible, using the resources of other TOMAs and the TO IPT. When necessary, ask the offerors specific questions regarding their proposals, through the PCO.

3.8.5 Protecting Evaluation and Contract Award. The effectiveness and integrity of the contracting process requires that all data and information be handled with the utmost discretion to avoid any compromise. All data and information received or developed during proposal evaluation shall be protected from unauthorized disclosure IAW the FAR and DoDM 5400.07.

3.8.6 Proposal Evaluation and Contract Award. During source selection, contractor proposals will be evaluated using RFP section M criteria, and will be ranked according to several factors (including such things as past performance, demonstrated understanding of requirements, and price.) A contract is negotiated and awarded to the winning offeror.

3.8.7 Identification of Additional Technical Manual Requirements (Engineering Change Proposal (ECP) Evaluation). Evaluate ECPs, associated TCTOs, and Contract Change Proposals (CCPs) against the baseline contract to ensure costs correspond to the original proposal and were not included in the baseline costs. Some TO updates as a result of ECPs should be included in the routine periodic update program, and some proposed additions to the number of TOs developed or acquired may be included in contract baselines. Evaluate the ECPs/CCPs against similar items previously submitted by the contractor.

3.9 TO DEVELOPMENT PROCESS.

3.9.1 General Guidelines. The TO development process is managed by the TOMA within the framework of a TO program. The conferences, reviews and verification activities conducted by the TOMA are an essential and formal process helping to ensure the data developed meets the needs of the users within the program scope. Attendance at these TO development activities must be limited to the minimum number of personnel required to accomplish the purpose of the conference or review. Personal preference must not affect requirements. After the program contract is signed, any modifications to requirements noted during these conferences and reviews must be documented for PCO action. Minutes of proceedings are not authorization to change contracts.

3.9.1.1 Involvement. The TOMA shall be involved in all aspects of the acquisition program, as there are very few areas that will not affect TO and source data development. The TOMA should participate in such non-TO program meetings as logistics and program management reviews, supportability and provisioning conferences, Preliminary and Critical Design Reviews (PDR and CDR), and Support Equipment Recommendation Data (SERD) Reviews.

3.9.1.2 Preparation. The TOMA shall be prepared to discuss TO issues at logistics and program management reviews. In addition, the TOMA will assess and coordinate changes to schedules and availability of equipment to support future TO events.

3.9.1.3 Participation. In addition to agencies listed above, participation should include local Defense Contract Management Agency (DCMA) personnel. Air Force attendees should be officers and/or E6-E9 enlisted personnel or civilian equivalents. AF attendees should be familiar with Air Force and MAJCOM TO acquisition and system support policies. All participants should understand applicable TMSS, publications, functions, and contract requirements. Conference members must have the authority to make rapid, objective and logical decisions based on contract requirements and Air Force and MAJCOM policies.

3.9.2 Initial Technical Order Guidance Conference. The IPT, with the contractor included, will hold an Initial TO Guidance Conference where program plans are reviewed and approved, and schedules are established. The timing is usually within 60 days after contract award to avoid delaying contractor tasks. The contractor can initiate TO preparation after the TO guidance conference. This conference is the most critical because it establishes a firm understanding between the AF and

the contractor of what the TO effort will involve and how the program will be executed. The AF contracting officer is an essential player in this conference in order to ensure that any changes to the requirements are captured, and the contract is modified before work can begin on the program. Most new technical order programs can avoid long term problems by successfully completing an Initial TO Guidance Conference and ensuring both the AF and the contractor fully understand the TO requirements and the expectations of each party. The results of the conference will be fully documented by contractor minutes, and coordinated with IPT members. The TOMA will approve and publish the minutes and summarize conference findings and action items.

3.9.2.1 The TO Guidance Conference is co-chaired by the TOMA and contractor to ensure understanding of the contract requirements. The TOMA briefs on the purpose, objectives, scope and functions of the conference and clarifies requirements, plans, and schedules. At this time the TOMA may provide the TOLCMP to the contractor. Specific agenda items should include a review of the contract to ensure mutual understanding of the requirements; a review of applicable specifications and established Air Force TO policy; a review of basic planning data to ensure mutual understanding of the program and intended users requirements; and establishment of contacts to provide subsequent guidance and information.

3.9.2.2 Requirements that were not fully defined or could not be defined until hardware selection and applicable operation and maintenance concepts had been analyzed will be finalized during the TO Guidance Conference. Any changes affecting contract performance or costs must be approved by the PCO.

3.9.2.3 Objectives. Guidance Conference objectives are to clarify TO tasks and planning data resulting from contract and program requirements. Participants will review the military system or commodity support plan, Air Force operation and maintenance concepts, Air Force TO policy and intended user capabilities, needs or environment. When required, the TOMA will provide specification interpretation and comments on contractor plans and schedules presented as part of the proposal. Specific agenda items should be coordinated well before the conference to ensure maximum utility and productivity.

3.9.3 Technical Order Numbering.

3.9.3.1 It is the responsibility of the TOMA to request and assign TO numbers early in the TO acquisition program. TOMAs are responsible for requesting numbers for assigned TOs, using the ETIMS Request TO Number screen and the guidance in TO 00-5-18. As Preliminary TOs are developed, the TOMA shall index them in ETIMS so prospective users can begin establishing subscriptions. This includes IETM/S1000D based TOs. For each new TO category, the TOMA will establish a TCTO Series Header and electronic TCTO (eTCTO) Series Header for the program's TOs. Whenever a paper TCTO series header is requested and created, a corresponding electronic TCTO (eTCTO) series header should be requested and created.

NOTE

- TO Numbering Functional Users Guides are located on the Air Force Technical Order Manager SharePoint site at https://cs2.eis.af.mil/sites/10531. Information required to establish new or update TO Numbers is contained in the Functional Users Guides.
- Refer to Figure 3-1 for TO Numbering and Indexing Flow Chart.
- EOD TOs are not numbered and indexed in ETIMS (Reference Chapter 7 and 00-5-18).
- Only select, Nuclear Weapon Center TOs are currently indexed in ETIMS.

3.9.3.2 TOMAs will develop TO titles IAW FUG https://cs2.eis.af.mil/sites/10531. An accurate title is an essential element in determining the correct TO number.

3.9.3.3 All media TO numbers being requested will be completed in ETIMS Request TO Number screen using the numbering criteria IAW TO 00-5-18 and approved by AFLCMC/LZPTP-TINKER. TO numbering requests have mandatory entries; Proponent; Publication Type; TO Number; Title; TO Manager; Prime System Application; Functional System; and FSC. All requests for publication of new TOs in Category 00 must be coordinated with HQ AFMC/A4F by AFLCMC/LZPTP-TINKER. See Paragraph 3.9.3.6, Paragraph 3.9.3.7 and Paragraph 3.9.3.8 for numbering procedures with AFMETCAL, NWC and EOD TOs.

3.9.3.4 Once the USAF TO Numbering Specialist reviews and approves the requested TO number, the TOMA shall enter additional information about the TO into the newly established ETIMS Catalog record for the TO.

3.9.3.5 Technical Manuals (TM) for joint-service programs will be prepared following the guidance of AFI 20-118, *Instructions for the Interservicing of Technical Manuals and Related Technology Program*. TMs for joint-service use will list the owning proponent service's TM/TO number on the title page first, followed by the participating service's TM/TO numbers. TMs/TOs which are not widely used by one service are managed in the owning service's TM system. See TO 00-5-1 for instructions on ordering TMs from other service TM systems.

3.9.3.6 AFMETCAL is responsible for numbering calibration TOs for Test, Measurement and Diagnostic Equipment (TMDE).

3.9.3.7 AFNWC/NCL Technical Support Flight (NCLS) is responsible for providing 11N TO numbers for new or renumbered nuclear TOs.

3.9.3.8 Naval Surface Warfare Center Indian Head EOD Technology Division (NSWC IHEODTD) is responsible for providing numbers for joint service nonnuclear EOD TOs.

3.9.3.9 TCTO Numbering. TOMAs responsible for a new aircraft, missile or engine category must create a new TCTO Series header. All others should create TCTO Series headers as necessary. TOMAs must use the ETIMS Request TO Number screen to request a new TCTO series header be established. (Refer to TO 00-5-1 and TO 00-5-18). An eTCTO series header must always be established and a corresponding physical TCTO series header should also be established if physical media TCTOs are to be distributed. If TOMAs are providing both physical and electronic TCTO/eTCTOs concurrently for the same TCTO Header, extra steps must be taken. Since the ETIMS system starts all TCTO numbers at 501, the first of a series will always start with that number and continue. If a TOMA has an established paper series header and establishes a new, matching electronic series header, when the next TCTO/eTCTO is added, the numbers will not match. The eTCTO will be added as 501, then be renumbered to match the corresponding paper TCTO number by submitting a Field Support Center ticket. All eTCTOs will be correct from that point forward.

3.9.3.10 AFNWC/NI is responsible for requesting TCTO numbering outside of ETIMS through AFLCMC/LZPTP-TINKER.

3.9.3.11 TO/TCTO Indexing. When a new TO number is approved or a TO update is generated, the TOMA will:

3.9.3.11.1 Complete ETIMS Index information on new TO number. Improper or incomplete index data will prevent viewing TO index data in the TO Catalog, subscribing to or requisitioning the TO using ETIMS. Ensure the TO Record is referenced to the weapon system Mission Design Series (MDS) (if applicable) and equipment part numbers. See ETIMS Indexing FUG on AF TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531. Additional policy-mandated entries include the document classification, assigned Distribution Statement codes and primary Reason codes.

3.9.3.11.2 If the weapon system is not listed, use the Open Weapon System Chooser in the Manage Tech Order Detail screen to add weapon system. If the weapon system does not already exist, a Field Support Center ticket must be submitted to add a new weapon system. AF TOFST shall provide the new weapon system name to AFLCMC/WFNB after adding. If the equipment and/or part number is not listed, use the Maintain Equipment List process to enter data about a new equipment item.

3.9.3.11.3 Anytime a TO is updated to cover additional equipment, the ITIES information must be updated with the complete new part number. See FUG https://cs2.eis.af.mil/sites/10531. The data is used to set up and change the TO number to equipment number cross-reference data in the ETIMS Catalog.

3.9.3.11.4 Do NOT enter JUST the weapons system MDS (e.g. F100 or B2) for TOs covering component assemblies or Support Equipment (SE) for the end item. Use the component/SE part numbers from the TO title.

3.9.3.11.5 For General and MPTOs which do not cover specific weapon systems or equipment, use N/A in both the Weapon System Chooser and Maintain Equipment List processes.

3.9.3.11.6 Issue unclassified updates to classified TOs whenever possible. When indexing unclassified updates to a classified TO, TOMA must first index the updates in ETIMS, which will assign the parent TO classification to the update. Then the TOMA must change the classification of the unclassified update only to unclassified.

3.9.4 Technical Order In-Process Reviews. During TO preparation, the IPT conducts In-Process Reviews (IPRs) to evaluate progress and compliance with contractual requirements. TO format and content requirements are imposed by the contract. Safety and health reviews will be included in IPRs. The contractor will apply quality management principles to ensure TO adequacy and accuracy during the development process. See Table 3-1.

3.9.4.1 Scheduling and Purpose. The contractor will recommend the frequency and percentage of IPRs needed for TO development insight. IPRs are an essential part of the TO QA process. IPRs are scheduled by the contractor in coordination with the TOMA and are conducted by the TO IPT. IPRs ensure compatibility with engineering source materials, accuracy of descriptive data, and that TO content, style and format are IAW applicable specifications and other contractual requirements. In addition, IPRs are an opportunity for the IPT to identify issues concerning depth of coverage, missing data, data that needs amplification, etc., and for coordination and approval procedures for updates.

3.9.4.2 As a general rule, IPRs should be accomplished when the TOs are 30-40 percent and 70-80 percent complete. See Table 3-1. Sample In-Process Review completion guides are provided to determine TO completion percentages. In some cases (e.g., nuclear weapons TOs, certain critical procedures, etc.), a 100 percent IPR may be required. If initial IPRs indicate that the contractor understands the requirements and is producing a quality product, the contract may be modified to reduce the numbers of additional IPRs. For IETM/S1000D based TOs the data will be reviewed online and shall be conducted through use of the viewing system selected to support the IETM/S1000D based TOs. Comments and corrections will be captured and recorded electronically. The specific IETM/S1000D IPR methods and procedures shall be documented in the TOLCMP.

3.9.4.3 Focus and Support. For earlier IPRs, the primary focus should be on style, format, and planned depth of coverage. Air Force attendees should be officers and/or E6-E9 enlisted personnel or civilian equivalent, with knowledge of TO style and format requirements, parent organization policies, and organization signature authority. For later IPRs, the focus shifts to the technical content and comprehensibility of the manual, and personnel should also include technicians of the lowest skill level (5-level minimum) expected to operate or maintain the commodity in the field.

3.9.4.4 If during the IPR the manual being reviewed does not meet the criteria for completion, the manual may be rejected. If the manual is rejected, the reasons for rejection must be documented in the meeting minutes along with the corrective actions required. Once the corrective actions have been completed, the contractor shall notify the TOMA that the corrections have been completed or adjudicated. The TOMA will determine if another full IPR is required with the IPT or may determine that the corrections are adequate to move the manual on to the next milestone. These procedures and processes shall be covered in the TOLCMP.

3.9.5 Contractor Certification Process. The contractor certification process will be detailed in the proposal submitted in response to the RFP. The proposed process may be modified if necessary during contract negotiations, and when approved, becomes part of the final contract. The decision to place the process on contract is made by the government IPT based on assessed risk, including contractor past performance and existing TO certification procedures. Approved certification requirements must also be applied to any products or processes supplied by vendors or subcontractors. The contractor certification process shall also be attached to the TOLCMP, if available.

NOTE

Procedures and source data developed organically by the Air Force do not require certification, but must be verified prior to incorporation into a TO.

3.9.5.1 Certification Requirements. The contractor is responsible for the end result of the TO development process; that is, for delivery of adequate, safe, current and accurate TOs which conform to government requirements. The data must be fully compatible in depth and scope with the established maintenance concept and the approved logistics support plan. The data must be checked for security classification, distribution restrictions, and Reading Grade Level (RGL). The contractor might use any or all of the previously mentioned procedures as part of their TO certification management process. These requirements also apply to sustainment contracts.

3.9.5.2 Performance Certification. When the proposed certification process includes task performance, the following guidance will be followed:

3.9.5.2.1 Nondestructive malfunctions may be introduced for the purpose of checking procedural and fault isolation tasks or systems tests. Procedures which could cause damage to the hardware or injury to personnel should be simulated.

3.9.5.2.2 Only support equipment listed in the TO should be used in testing procedures. The TOMA will be consulted if substitution of support equipment is required. The contractor must identify and request any Government Furnished Equipment (GFE) required to support the TO development effort. The TOMA will coordinate with applicable PMs, if necessary, to provide GFE and ensure the equipment will be available to support the weapon system or commodity in the operational environment.

3.9.5.2.3 Locally fabricated tools or test equipment listed in the TO should be used during testing. Procedures for fabricating these items shall be included in the TOs.

3.9.5.2.4 Tasks will normally be performed at the contractor facility during system or commodity development testing. If required GFE is not available, tasks may be performed at an operational or test site when approved by the procurement/sustainment managing activity. The contractor will coordinate requirements with any affected agencies.

3.9.5.2.5 When the contractor cannot perform some tasks due to non-availability of GFE resources, the TOMA shall be notified. The TOMA may provide the required resources (if available) to the contractor or suggest use of a field location. In some cases, combining contractor certification with AF verification may be authorized. As a last resort, the TOMA may authorize use of simulation or desktop analysis of the procedures.

3.9.5.2.6 Task performance or simulation may be unnecessary for existing manuals and source data that is applicable to the current configuration of the equipment, if a desktop analysis or publication review proves the manuals are current, adequate, accurate, and conform to contract requirements.

3.9.5.2.7 QA requirements for Category 11N nuclear weapons TOs are in TO 11N-1-1, *Joint Nuclear Weapons Publication System Operating Procedures, Specifications and Standards* . EOD source data procedures only require contractor desktop analysis; the government will perform any procedures requiring verification.

3.9.6 Verification. Verification is the formal process by which Air Force personnel evaluate and prove TOs and TO updates during acquisition and sustainment are accurate, adequate, safe, and usable in the operational environment to support the program. Current Air Force policy requires that all tasks in TOs and TO updates be 100 percent verified and that all new and updated technical data will be verified unless waived by the PM IAW AFI 63-101 and this TO. This includes data that has been formalized and is in the sustainment phase of the TO life cycle. Technical data for Contractor Logistics Support programs need not be verified unless the data will be used by government personnel.

3.9.6.1 Scheduling. The TOMA will work with the MAJCOM to develop a verification schedule that accounts for the overall availability of trained technicians and production configured assets to conduct verification. Furthermore, verifications should be completed in sufficient time to permit correction, publication, and distribution of formal TOs to field operations prior to or concurrent with delivery of the hardware and software to support Operational Test and Evaluation (OT&E). When this is not possible, with command approval, use Interim Contractor Support or authorize use of partially-verified PTOs until verification can be completed (Reference Paragraph 3.9.6.2). Additionally, the TOMA shall ensure the TOLCMP reflects the latest TO verification schedule.

3.9.6.2 Use of PTOs. The TOMA, with approval from the PM in coordination with the Lead Command or Depot, may issue a waiver to distribute PTOs to operational units or depot repair facilities for verification using production equipment. The use of preliminary data shall not exceed 180 days unless readdressed.

3.9.6.3 Partly-Verified TOs. The inability to verify certain specific maintenance procedures, such as aircraft wing or missile canister removal and replacement should not delay formalization and distribution of TOs. If a partly-verified TO is issued, the TO will include a Verification Status Page (VSP) or screen, and the first field unit or depot facility required to use an unverified procedure will perform using command verification IAW TO 00-5-1. Other reasons for issuing partly verified TOs include lack of equipment or other required support to perform verification. When the destructive nature of the procedures prevents verification by performance, use simulation or desktop analysis IAW Paragraph 3.9.7.2 or Paragraph 3.9.7.3.

3.9.6.4 TO Life Cycle Verification Plan (TOLCVP). Verification is accomplished IAW the TOLCVP using PTOs provided by the contractor. The TOMA is responsible for keeping the TOLCVP updated and coordinated throughout the program life cycle. Find the generic TOLCVP on the AF TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531.

3.9.6.5 Participation. Participation in verification efforts by MAJCOM and other affected agency personnel is critical to the development of TOs. Verification activities will not be halted due to lack of attendance by other support agency personnel.

3.9.6.6 Contractor Support. Contractor support for the verification effort should be part of every contract for the acquisition and/or sustainment of TOs. The support usually consists of a writer and/or engineer. This support is required to minimize delays caused by faulty procedures, lack of spare parts, etc.

3.9.6.7 Verification Waivers. The TOMA, with approval of the PM, may waive verification by performance/simulation when procedures are similar to other, previously-verified procedures on like equipment. The waiver will be documented on the AFTO Form 27, *Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval*, or on the form creating a TO update. Verification of minor updates to previously-verified procedures may be accomplished by simulation or Desk-Top Analysis, whichever the TOMA and TCM deem more appropriate, without a waiver.

3.9.6.8 Use of Substitute Items. The TOMA or Verification Team Manager (VTM) may authorize the use of substitute equipment, facilities, or draft procedures. This authorization may be given when the required items are not available and there will be no appreciable difference in procedures. Any such substitution must be coordinated and documented on the AFTO Form 27, the form creating a TO update or in the verification minutes.

3.9.6.9 MAJCOM Responsibilities. Both the technicians for the verification team and the site for verification are normally provided by the MAJCOM. The selection of qualified MAJCOM personnel to perform verification depends on the type and level of maintenance established for the military system or commodity being covered. Different teams and verification locations may be required to cover all maintenance types and levels (on- or off-equipment, field or depot) for TO verification. The verification team will normally consist of the VTM, technicians, QA and Safety personnel, other support agency personnel, and the contractor. The technicians should include the lowest grade and skill level (5-level minimum) projected for day-to-day use of the TO. The MAJCOM may use support contractors as part of the government team.

3.9.6.10 Prioritization. The verification schedule must be prioritized based on critical operational and maintenance tasks that affect safety, operational readiness and supportability of the system and commodity during initial deployment. Personnel, hardware, consumables and support equipment will be scheduled to ensure availability for each verification effort.

3.9.6.10.1 First priority for verification is organizational-level operation and maintenance procedures. Within this grouping, procedures are further prioritized as follows:

- Pilots and/or Operators Manuals
- All Safety of Flight and Operations procedures
- All Critical Safety precautions
- All TOs required for Nuclear and/or Flight Certification
- Day-to-day maintenance and operational tasks in O&M TOs and checklists
- All newly-developed Contractor Furnished Equipment (CFE) TOs used in support of the above TOs and procedures
- All remaining TOs and procedures

3.9.6.10.2 Second priority is intermediate and depot level maintenance procedures. Depot TO verification should be performed in conjunction with depot prototype overhaul certification to the maximum extent possible. This will ensure that test equipment, software and TOs are compatible, and will reduce the overall cost of the program.

3.9.6.10.3 New and updated non-procedural data verification will also be prioritized, as listed below. The PM, SCM or designee may waive verification of non-procedural data based on priority and risk - the waiver will be documented on an AFTO Form 27 or the document generating an update.

- Safety-related items (Warnings, Cautions, protective gear, etc.)

- Tool and equipment part numbers
- Consumable item part numbers
- Repair parts lists
- Work Unit Codes
- Theory of Operations
- Correction of typos, references, etc.

3.9.6.11 Combining Contractor Certification and Verification. Contractor certification and Air Force verification processes may be combined when the following conditions exist and the option is approved by the PM and MAJCOM:

3.9.6.11.1 Formally resolve the question of liability for damage to equipment or injury to personnel between the contractor and the government before joint performance of procedures. The contractor is responsible for any damages or injuries caused by following faulty procedures. Establish a negotiation process to resolve and document any disputes over liability during the combined effort (request assistance from the Contract Law Office if necessary).

3.9.6.11.2 Tasks should be reviewed for the complexity and hazardous nature of the procedures. Highly complex or hazardous procedures should be certified by the contractor prior to delivery for verification. Each case must be evaluated and agreed upon by the PM and MAJCOM.

3.9.6.11.3 MAJCOM personnel will perform the TO procedures with the guidance and assistance of contractor technicians.

3.9.6.11.4 The procedures must be in final deliverable format.

3.9.6.12 Explosive Ordnance Disposal Technical Orders. Category 60 Joint Service EOD publications for U.S. nonnuclear and foreign explosive ordnance are developed by the NSWC IHEODTD. EOD publications will be accepted as valid for Air Force use upon completion of verification and publishing on the Joint EOD Portal and in JEOD MFK software (indicating acceptance by the Military Technical Acceptance Board). AFCEC/CXE manages Air Force participation in the verification program for EOD publications.

3.9.6.13 Nuclear Weapons TOs. Any TO issued under JNWPS will be verified IAW TO 11N-1-1. The appropriate TCM from the AF Nuclear Weapons Center, (AFNWC Paragraph 2.5), must participate in the verification.

3.9.6.14 Nonnuclear Munitions and Explosives TOs. The USAF GACP (Paragraph 2.3.3) must participate in verification of procedures involving nonnuclear munitions and explosives components. The USAF GACP ASC must participate in verification of air superiority missile system TOs (except AGM-65 Maverick, which falls under the GACP).

3.9.6.15 Exemptions. COTS publications and those O&M TOs and source data specifically approved by the TOMA are exempt from verification by performance. TOs for Contractor Logistics Support (CLS) are exempt from AF verification.

3.9.6.16 Calibration Technical Orders. Verification of 33K TOs will be performed by assigned field-level Precision Measurement Equipment Laboratories (PMEL) within 45 days after receiving the commercial manual or PTO, as directed by AFMETCAL.

3.9.6.17 Minor Sustainment Updates. Verification of minor sustainment updates, including minor changes to procedural data, may use the simplified Using Command Verification procedures in TO 00-5-1. These procedures may be used for either field or depot level TOs.

3.9.6.18 Flight Manual Verification Policies. The TOMA and FMM must ensure new or modified flight manual data is verified as soon as possible to ensure flight crew members do not operate aircraft without proper flight manual data IAW AFI 11-215 and AFI 63-101. Preliminary Flight Manual data should only be used for the purpose of verification. If Preliminary

Technical Orders/Flight Manuals must be used operationally they shall be verified and must be in a format usable by air crews. Red-line or mark-up data shall not be used for operational purposes. Ensure draft/preliminary flight manual data is available a minimum of 30 days prior to delivery of new or modified equipment/aircraft to allow for verification and training.

3.9.7 Verification Methods. Verification can take any one or a combination of three acceptable methodologies for accomplishment, depending on the type of equipment or instructions being verified.

3.9.7.1 Performance. Actual performance on production-configured hardware or government-approved inert versions (for explosive items) is the only acceptable means to verify certain tasks. Tasks to be verified by performance include, but are not limited to, all operating and maintenance procedures.

3.9.7.2 Simulation. In some instances, actual hands on demonstration of procedures duplicates similar tasks already demonstrated, needlessly subjects equipment to damage, activates one-time items such as Electro-Explosive Devices (EED) or exposes the technician to personal injury. In these cases, the procedures may be simulated by observing the operational configuration of the equipment while studying the task to ensure that procedures are logical, effectively descriptive and can be accomplished.

3.9.7.3 Desktop Analysis. Desktop analysis involves side-by-side comparisons of source data with TO data (text, links, illustrations, etc.). Non-procedural data and any procedural data where verification by performance/simulation has been waived will be verified by desktop analysis. Desktop analysis is usually performed during IPRs or (especially during sustainment) pre-publication reviews. When an IPR is waived or new data is incorporated after the IPR, a separate desktop verification will be required.

3.9.8 Verification Procedures. Specific verification procedures for the system under development shall be documented in the TOLCVP.

3.9.8.1 Verification Site. The site selected for any particular verification effort will be jointly determined by the TOMA or TCM and MAJCOM/Depot Maintenance Activity, based on the availability of support functions, the type of procedure being verified, the level of maintenance, etc. The site should provide facilities as similar as possible to the operational locations where the TO procedures will be used.

3.9.8.2 Verification Team Manager (VTM). The TOMA or TCM will act as, or task the MAJCOM to appoint a VTM to control verification. Specific roles and responsibilities of the VTM shall be documented in the TOLCVP. The VTM will coordinate with all affected agencies to ensure the availability of facilities, equipment and personnel to conduct the verification. When the data or procedures are delivered and all required hardware, support equipment, personnel, supplies and data are available, the VTM will schedule and supervise the verification effort, including pre- and post-verification meetings.

3.9.8.3 Pre-Verification Meeting. The VTM will conduct a pre-verification meeting with the verification team to ensure team members are aware of responsibilities and duties. Subjects to be covered during the meeting include the maintenance concept, any reference documentation available, the specific TOs and procedures to be verified, safety precautions, documentation required and individual team member assignments. Team members will review the procedures prior to beginning any task verification.

3.9.8.4 Verification Tasks. The VTM will supervise the actual verification effort. The VTM will make every effort to resolve problems on-site to prevent delaying or canceling verification. Checklists will be verified simultaneously with the parent manual. A separate AFTO Form 27 will be completed on each TO or portion of a TO and checklist verified to document discrepancies and the overall results of the verification. The TO VSP will be updated to reflect the verified status. Verification of TO updates may be recorded on the document creating the update (AFTO Form 22, 252 or AF Form 847). Verification of ETMs and IETMs/S1000D based TOs must be performed on the electronic viewing devices (e-tools) designated for operational use. Specific verification tasks include:

3.9.8.4.1 Performing the procedures to verify usability by personnel with the planned skills and training, ensuring the arrangement of material and method of presentation support the operations or maintenance concept.

3.9.8.4.2 Observing and reporting any safety violations or hazardous conditions. STOP operations if necessary.

3.9.8.4.3 Performing TO RGL computations, if not documented by the contractor.

3.9.8.4.3.1 When a TO is developed organically or when updates meet the criteria specified herein, government personnel will document RGL checks using the AFTO Form 124, *Computation of Technical Order Reading Grade Level*. A copy of the AFTO Form 124 or contractor equivalent will be included in the TO documentation package for each TO maintained by the TOMA.

3.9.8.4.3.2 RGL computations may be computer-generated or performed manually using any accepted computation procedure. The actual RGL can be computed automatically by many word processing and publishing software packages. If online resources are used, the web address and method used should be included in the RGL documentation for review and filing. Computations will be reviewed during IPRs.

3.9.8.4.4 Ensuring all actions and suggested or required TO changes are fully documented.

3.9.8.5 Verification Updates. The TOMA must ensure updates due to verification are accomplished on an expedited basis. Expedited updates should be restricted to those of a technical nature affecting operation and maintenance procedures. Expedited editorial changes will be restricted to those affecting comprehensibility. Changes based on personal preference must be submitted through the normal TO change process.

3.9.8.6 Post-Verification Meeting. The VTM will conduct a post-verification meeting to resolve any problems, generate the minutes, and assign action items as required. VSPs will be updated as required. The Verification Record section of an AFTO Form 27 will be used to document any discrepancies found in the TO or procedures during verification, and recommend either further verification or formalization of the TO. The form will be submitted to the TOMA (or TO Review Board (TORB)/Flight TORB (FTORB)) for approval. When approved by the TOMA, the AFTO Form 27 recommending formalization will be used as authority to prepare the formal TO. Discrepancies found during verification of TO updates may be recorded on the document creating the update. The program CE or equivalent will approve verification results for TO updates.

3.9.8.7 Verification Review Boards. All comments and changes developed as a result of verification must be approved by a review panel, normally a TORB or FTORB, prior to incorporation in the TO. This review panel should consist of personnel from activities involved in the acquisition or modification program, as determined by the TOMA and documented in the TOLCVP, including verification team members and the contractor. The flight manual review panel must include at least three rated officers. After review, coordination and approval, the changes will be sent to the contractor for update of the TO involved, and if verification was completed successfully, preparation of the formal manual. Review boards are not required for TO updates provided the CE approves the changes.

3.9.8.8 Verification Documentation. Each verification effort requires complete documentation, including minutes and any forms generated. For concurrent contractor/government testing, contractor records will be included with verification documentation. Verification activities and results of TOs under development or being updated as part of a modification program will be documented using an AFTO Form 27. (See Chapter 4 for verification during sustainment). The TOMA will maintain a file of all verification documentation issued for the life of the TO covered.

3.9.9 Technical Order Pre-Publication Reviews. The TOMA and IPT will ensure that verification comments and corrections are incorporated and that manuals meet contractual requirements. A formal pre-publication (pre-pub) review may be required. Pre-pub reviews are scheduled and conducted by the TOMA, as called for in the IMP. Pre-pub reviews are an examination of the master TO or update reproducible file prior to delivery to ensure incorporation of changes resulting from verification, recommended changes, and as a final check on contract compliance. Pre-pubs are not required in every case, the TOMA decides if one is needed on a TO-by-TO basis, depending on number and complexity of changes from verification contractor performance on updating previous TOs, etc. Every effort should be made to include verification team members at pre-pub reviews to enhance continuity. If necessary, an AFTO Form 158, *Technical Order Review Comment Sheet*, may be utilized during the pre-publication review.

3.9.10 Hazardous Materials (HAZMAT) and Ozone Depleting Substances (ODS). TCMs/PMs must ensure the procedures in TOs minimize the generation, use and disposal of HAZMAT and ODS IAW AFPD 32-70 and associated instructions. Any use of HAZMAT and ODS must be justified by the contractor and approved by TCM/PM. Materials used and methods for use of material must comply with AF regulations especially as to effects on health and the environment (AFOSH STDs and AFI 32-70xx Series).

3.9.11 Contractor Furnished (Aeronautical) Equipment (CFAE/CFE) Notice Processing and Tracking Procedures. As system or commodity development proceeds, the prime contractor or subcontractors may identify additional hardware support requirements or components of the end item that require separate or additional TOs for operation and maintenance of the end item or commodity. CFAE/CFE Notices are normally submitted by contractors when required by a CDRL item, or by

other government agencies developing TOs for the Air Force to identify these new or additional TO requirements. The notices identify the purpose and use of specific technical manuals for the operation, maintenance and inspection of equipment used with the end-item system or commodity, and which are not already covered by the TO development contract. The manuals may be MILSPEC TOs, commercial manuals, or contractor data developed for the government.

3.9.11.1 CFAE/CFE Content. CFAE/CFE content is specified by DID DI-TMSS-80067, *Contractor Furnished Aeronautical Equipment/Contractor Furnished Equipment (CFAE/CFE) Notices* . Notices should be checked to be sure all blocks are filled in (i.e., contract number and date, submitting contractor name and vendor code, publisher name and vendor code, stock number, configured item number, etc.) Incomplete or inaccurate notices should be returned to the contractor for corrective action. CFAE/CFE notices should be revised and resubmitted or superseded whenever the item represented undergoes significant change or data requirements change.

3.9.11.2 Federal Stock Class (FSC). The FSC of the equipment covered is listed on the CFAE/CFE notice. The FSC is used with the D086, *Mission Workload Assignments System*, to determine the prime office responsible for management of the commodity and manual involved.

3.9.11.3 CFAE/CFE Procedures. The TOMA or TCM shall establish a procedure for reviewing and processing CFAE/CFE inputs. The procedures for processing CFAE/CFE notices shall be documented in the TOLCMP and updated throughout the program life cycle as needed. The procedure must stipulate who reviews CFAE/CFE notices for each type of document recommended and who has ultimate approval authority for acceptance and numbering of the recommended documents.

3.9.11.4 CFAE/CFE Approval. Upon approval of a CFAE/CFE notice, the TOMA forwards a letter through the appropriate contracting office notifying the contractor of the TO number assigned, title (if other than proposed), license rights and copyright release statements, quantities required, and shipping instructions (if not covered in the contract TMCR).

3.9.11.5 CFAE/CFE Disapproval. If the CFEN is disapproved, full justification must be provided. If the item has been classified as a non-reparable or throwaway item, the appropriate PM must be notified to ensure the equipment is covered in the supportability analysis database. If disapproval is due to errors in CFAE/CFE notice preparation rather than unnecessary or unsuitable data, the TOMA should immediately inform the contractor to allow timely revision and resubmittal of a corrected CFAE/CFE notice to avoid costly delay.

3.9.11.6 Military Specification TOs. As system or commodity development proceeds, contractors may identify additional hardware support requirements or components of the end item that require separate TOs for operation and maintenance of the item or commodity. For new SE, the contractor may submit a SERD, accompanied by any required CFENs (DI-TMSS-80067). Contractors may develop their own processes for notifying the government of new SE requirements, as long as all Logistics Management Information (LMI) required to make accept/reject decisions is provided. For new manuals to support end item components, only the CFEN is required. CFENs may not be required if all TO requirements can be completely defined in advance in the contract (usually on less complex projects).

3.9.11.7 CFAE/CFE/CFEN Notice Status. Depending on the number of contractors and volume of COTS data, a database for each contractor should be maintained with summary pages showing status of each notice, as well as individual work sheets on each notice providing more detailed information on actions taken.

3.9.11.8 New Support Equipment. For new SE, the contractor will submit a SERD accompanied by any required CFAE/CFE notice (DI-TMSS-80067). Contractors may develop their own processes for notifying the government of new SE requirements, as long as all data required to make accept/reject decisions is provided. For new manuals to support end item components, only the CFAE/CFE notice is required. CFAE/CFE notices may not be required if all TO requirements can be completely defined in advance in the contract (usually on less complex projects).

3.9.11.9 SERD Review. Each SERD submitted must be reviewed and approved as directed by the PM before the equipment can be used with the end item. Disapproval of the SERD usually disapproves any associated CFAE/CFE notices. For approved SERDs and end item components, associated CFAE/CFE notices must be reviewed for applicability, need for a stand-alone manual, depth of coverage recommended, etc. and approved separately.

3.9.11.10 Contractor Data. In lieu of developing MILSPEC TOs, the contractor may recommend use of in-house contractor format technical data. The CFAE/CFE notices and the data recommended must be reviewed and approved like commercial manuals.

3.9.11.11 Commercial Off-The-Shelf (COTS) Manual. When the contractor recommends use of commercially available SE or end item components, use of manufacturer manuals customarily provided with the commercial article may also be recommended. Copies of the COTS manuals are attached to the CFEN recommendations for government review and approval IAW MIL-PRF-32216. CFENs on COTS manuals must include the contractor evaluation of suitability based on MIL-PRF-32216. See Section V for additional information when working with COTS programs.

3.9.11.12 Developing Supplemental Data. When supplemental data is required to make the manual acceptable, the contractor should be contacted to determine if the additional data can be obtained from the vendor or if the contractor will have to develop such data. Depending on the reply, the additional data shall be obtained and the manual returned for reevaluation. If the required data cannot be obtained from the vendor, a cost estimate for the development of the additional required data must be provided.

3.9.11.13 COTS Manual Records. Each program must establish a list to track proposed COTS manuals. The list should include CFAE/CFE Notice numbers, date approved or disapproved (with disapproval reasons), contractor, prime responsible office, ship dates for the approved manuals, and whether or not the manuals were received at the appropriate destination. A follow-up letter should be sent to the ALC responsible for the commodity and the supporting manual to ensure receipt and authorize contractor payment.

3.9.12 Computer Program Identification Number (CPIN) Items. Software program tapes and control documentation will be referenced in TOs using only the basic CPIN. XXX may be used in the last three alpha-numeric position of a CPIN. Users MUST check the ACPINS compendium for the latest version and revision for their application. CPIN revision/version shall not be published in TOs without coordination and written approval of the CPIN PM. If revisions/versions are used, the TOs must be updated on a priority basis to reflect changes in the revision/version numbers and dates of programs authorized for use in the Automated CPIN System (ACPINS).

3.9.13 Other Program Reviews Affecting Technical Manuals.

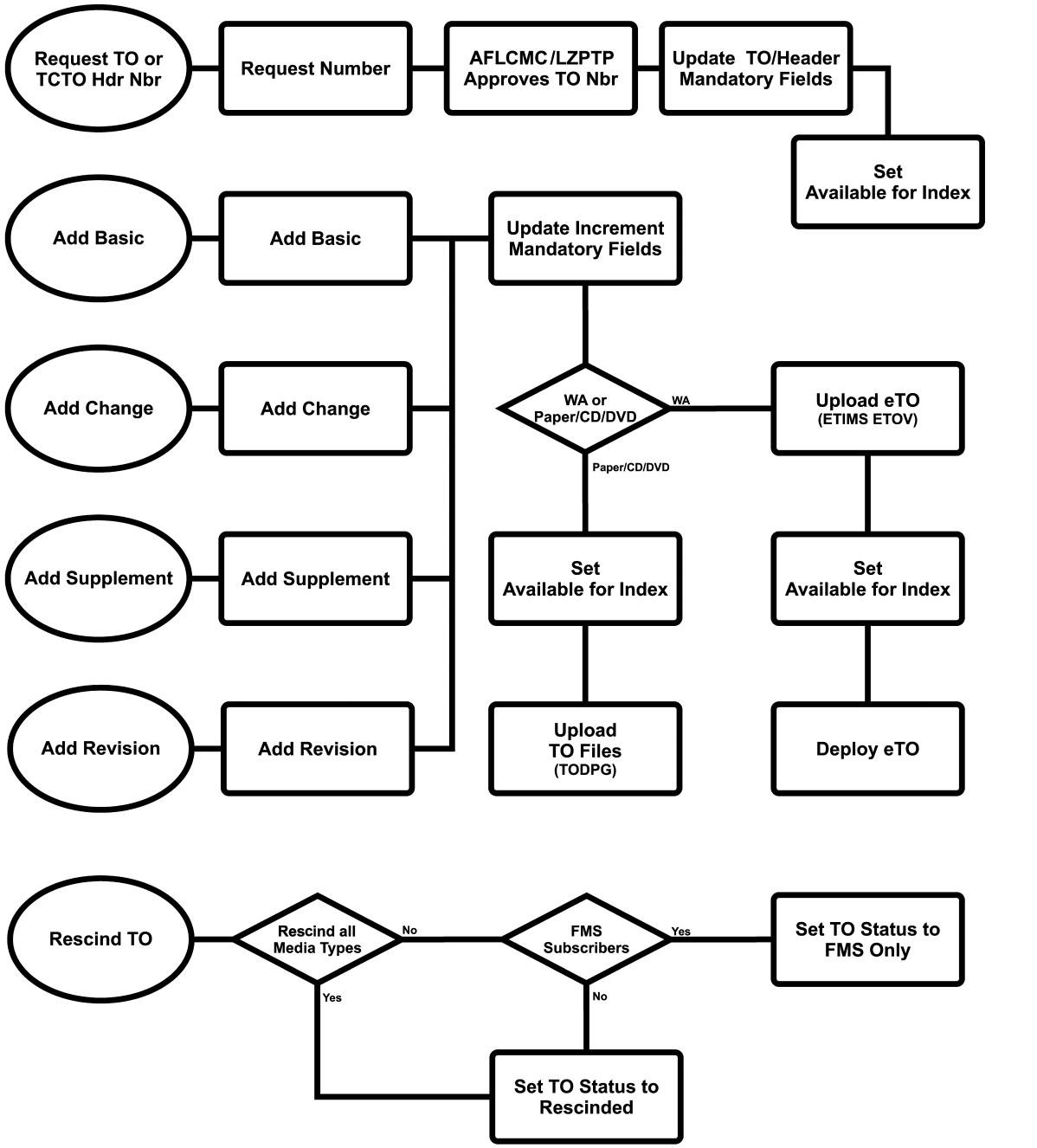
3.9.13.1 Preliminary and Critical Design Reviews (PDRs and CDRs). PDRs and CDRs address many issues which affect the TOs. Automatic versus manual testing, maintainability requirements, special tools, unique support equipment, and special skills are discussed. A common contractor practice is to propose changing TO procedures rather than hardware design to overcome deficiencies. TOs must NOT be used to compensate for design deficiencies.

3.9.13.2 Functional and Physical Configuration Audits (FCAs/PCAs). These events are critically important to the TOMA because they form the basis for establishing the production baseline configuration of the hardware/software items under development. All technical manuals are required to reflect the production baseline and therefore, any program which schedules TO delivery before these events have been accomplished, is not acceptable.

3.9.13.3 Provisioning Reviews. Provisioning is the process of cataloging all of the parts expected to be procured as replacement spares throughout the life of the program. This review is critical to the Illustrated Parts Breakdown manual because the output of the provisioning effort will determine the depth and level to which an item will be repaired or replaced. The purpose of provisioning activities is to ensure integration of support elements such as production, support equipment, technical manuals/orders, training, and facilities. The provisioning conference provides for the government to make item selection and assign technical and management codes. It is imperative that only personnel well qualified in their technical specialty attend provisioning conferences and that continuity of personnel be maintained throughout the item development. In all cases, representatives must be authorized to make commitments for their activity. The TOMA should be involved in the conference to ensure that official Source, Maintainability and Recoverability (SMR) codes are assigned and are given to the contractor, through the Contracting Officer, for publication in the IPB or the numerical index of the IPB IAW MIL-DTL-38807, *Technical Manuals, Illustrated Parts Breakdown*. See AFMCI 23-101 and the Product Support Tool Kit (PSTK), (formally known as the A&S Tool Kit) (Paragraph 1.3.3) for additional guidance on provisioning activities and conduct of the provisioning conference.

3.9.13.4 Supportability Analysis Reviews. The supportability analysis process is a review of tasks performed to examine all elements of a proposed system to determine the logistics support required for the system; and to influence the design so that both the system and support can be provided at an affordable cost. Supportability data is the foundation for identifying and managing support resources including: supplies, support equipment, technical orders, training resources and configuration management. Supportability data is acquired as part of the technical data package of the weapon system acquisition and contributes to the sustainment processes: data management and configuration management as well as forming the basis for maintenance and supply. Supportability data links the allocated baseline of the weapon system to the physical baseline and integrates technical and engineering data with maintenance and supply data and forms the basis for managing the sustainment of the weapon system. The TOMA should be involved in the supportability review conferences to

ensure that the technical reports developed and delivered as part of the supportability analysis reflect results of maintenance task analysis and Reliability Centered Maintenance provide information for selection and development of Source Maintenance and Recovery (SMR) codes, spares, support equipment, technical orders and other related logistics data. This includes identifying procedures for system disassembly, demilitarization and disposal. Where procedures already exist (e.g. 309th Aerospace Maintenance and Regeneration Group workbooks and procedures for existing aircraft), the TCM/CE shall review and verify those procedures. Demilitarization and disposal procedures should identify DEMIL-coded parts and HAZMAT locations, and include special tools and equipment, personnel qualifications, and Environmental, Safety and Occupational Health (ESOH) requirements.



Note: All steps are performed in ETIMS, unless otherwise stated.

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Figure 3-1. TO Numbering and Indexing Flow Chart

Table 3-1. IPR Completion Percentage Guide

In-Process Review Level:	35%	75%
TO Section	Percent Complete	
TO Title Page	100%	-
Front Matter	-	75%
Introduction	100%	-
General Information	50%	90%
Installation Instructions	25%	70%
Operation Instructions	25%	70%
Theory of Operation	50%	100%
Maintenance Instructions	25%	75%
Checkout and Troubleshooting	-	75%
Circuit Diagrams/Illustrations	25%	75%
Parts Lists	35%	80%

NOTE

Refer to MIL-STD-38784 unless otherwise noted.

Table 3-2. Technical Order Review Evaluation Guide

		Yes / No / NA / Comment
1	Official part number and nomenclature used on title page to identify the equipment covered in the TOs. (See FUG https://cs2.eis.af.mil/sites/10531)	
2	Distribution, Disclosure, Destruction, and Export Control Notices properly applied. (AFI 61-201, DoDI 5230.24)	
3	Security classification markings properly applied. (DoDM 5200.01, Vol 2/ AFI 16-1404)	
4	Proper inclusion of table of contents, list of tables, list of illustrations and indices, as required.	
5	TO arranged IAW specifications. (Performance/Detail Specification)	
6	Purpose of TO clearly stated.	
7	Use of TO identified.	
8	Scope of TO outlined.	
9	Inclusion of a listing of ECPs, TCTOs and configuration changes to properly update TO, if applicable. (Performance/Detail Specification)	
10	Applicable safety precautions included.	
11	Notes, cautions and warnings prepared and used properly and consistently.	
12	All abbreviations and technical terms fully explained and identified as required.	
13	Nomenclature consistent within and between related publications.	
14	Materials referred to using approved government or commercial specifications and standards where applicable.	
15	Materials used and methods for use of materials comply with AF regulations especially as to effects on health and the environment. (AFOSH STDs and AFI 32-70xx Series)	
16	Theory covered only to the extent necessary.	
17	Complete troubleshooting procedures and corrective procedures presented in a clearly understandable and usable form.	
18	Maintenance schedules (inspections) covered, if applicable. (Performance/Detail Specification)	

Table 3-2. Technical Order Review Evaluation Guide - Continued

		Yes / No / NA / Comment
19	Special Maintenance that may be required in unusual climatic conditions of cold, heat, wind, altitude and noise included, if applicable. (Performance/ Detail Specification)	
20	Maintenance concepts and using personnel skill levels align with maintenance procedures. (TO 00-5-1)	
21	Calibration instructions accurate and clearly defined. (Performance/Detail Specification)	
22	Dial, meter and switch setting is given at the beginning of each operation, if required.	
23	Data flow in a logical order IAW use or repair of the equipment.	
24	Standard test equipment and special tools to be used for job performance listed.	
25	Procedures for locally manufactured tools and support equipment identified and included.	
26	Text supported properly with necessary illustrations, charts and tables.	
27	Drawings properly prepared.	
28	Glossary, if required, is adequate in scope.	
29	Certification forms reviewed to ensure that verification was satisfactory and equipment can be operated, tested and maintained with the written procedures.	
30	Coverage compatible with other TOs, including Illustrated Parts Breakdown (IPB).	
31	Written not to exceed the 9th Reading Grade Level (RGL).	
32	Short sentences used in preference to long, complex sentences.	
33	Adequate use of necessary cross-references to other chapters, sections, volumes, etc.	
34	No unnecessary duplications of textual material, procedures, routines, diagrams, etc.	
35	Prescribed forms/formats have been discussed with forms management personnel. (AFI 33-360)	

SECTION II TECHNICAL ORDER UPDATES DURING ACQUISITION

3.10 GENERAL.

This section describes acquisition-phase procedures for updating TOs and PTOs during acquisition. Sustainment-phase TO updating procedures are in Chapter 4. The TOMA is responsible for ensuring that TOs remain current and accurate throughout the acquisition phase by contracting for TO updates.

3.10.1 RFPs and Contracts. The RFP Instruction to Offerors section must address TO maintenance as a requirement of the program. The contractor will propose coverage requirements and update cycles. Best practice is to contract for TO maintenance in renewable options once the initial TO development contract is completed, to allow the Air Force time to assume the TO maintenance role.

3.10.2 Engineering Change Proposals (ECP). Updates to TOs as a result of an ECP are normally considered to have the same contractual status as the ECP. In other words, if the ECP is in the scope of the contract, so is the TO update; if the ECP is out of scope, the cost for updates to the TOs must be included in the ECP costs.

3.10.3 Update Submittal. Updates are submitted on several different forms, known collectively as Recommended Changes (RC). RCs for PTOs are generally submitted on AFTO Form 27 (Figure 3-2) IAW procedures specified in the program TOLCMP. The AFTO Form 27 may also be used in lieu of the AF Form 847 for preliminary Flight Manuals. The TOMA or

FMM may specify use of the AFTO Form 22 or AF Form 847 for reporting deficiencies on formal TOs and PTOs used by operational units during program acquisition. The change process to be used during TO development along with the routing and approvals required shall be documented in the TOLCMP and updated as required throughout the program life cycle.

3.10.4 Update Approval and Incorporation. The TOMA must ensure that all involved agencies are made aware of the routing and approval requirements. Because the Air Force may not have the capability to perform an engineering evaluation of suggested changes during acquisition, the contractor is often tasked to provide this support. Normally, a TO Review Board (TORB) and Flight TO Review Board (FTORB) are established to review, approve and determine verification requirements for all proposed PTO updates. After updates are approved by the TORB/FTORB, the TOMA sends them to the contractor for incorporation in the affected TO.

3.10.5 Verification. All changes to technical data procedures, no matter how they are published shall be verified by performance or as otherwise specified by this TO.

3.11 TYPES OF PRELIMINARY TECHNICAL ORDER UPDATES.

The types of updates used with formal TOs (TO 00-5-1) will also be used with PTOs during acquisition. In addition, an approved AFTO Form 27 may be inserted into the PTO as an interim update. This would normally be done only in cases of work stoppage or to eliminate safety hazards. The TOMA must issue an index page with each RC/update to identify all current updates; the index page will be dated and identify the PTO, updates, and organizations affected.

3.11.1 Procedures for AFTO Form 27. The AFTO Form 27 is the primary vehicle for submitting updates and improvements to PTOs. The AFTO Form 27 will be used by the TO verification team, and, when authorized by the TOMA, other users of PTOs on all programs. The criteria for submitting and processing Emergency, Urgent and Routine AFTO Form 27 are specified below. Completion instructions are in Figure 3-2.

3.11.2 Use Period. The TOMA is responsible for determining when the AFTO Form 27 will no longer be used to recommend updates or improvements to PTOs. This is normally after verification has been completed. The period of use will be specified in the TOLCMP.

3.11.3 Processing AFTO Form 27. RCs and updates are categorized as Emergency, Urgent or Routine. The update category is based on its impact to the system, mission effectiveness, safety or maintainability. Emergency and Urgent submittals should be limited to technical and safety-related changes. Change processing and update time limits are specified in Table 4-1. Changes to report categories will not be made without the express concurrence of the TOMA and the submitting MAJCOM.

3.11.3.1 Emergency RCs. Emergency recommendations require immediate action on a TO deficiency which, if not corrected, WOULD result in a fatality or serious injury to personnel, extensive damage or destruction of equipment or property, or inability to achieve or maintain operational posture (MISSION ESSENTIAL), including field-level work stoppage. In addition, emergency includes discrepancies that directly affect the handling, maintenance, operations, transportation, testing, and testing or storage of nuclear weapons. The TOMA/TCM or designated representative must provide written corrective action or downgrade the RC within 48 hours (72 hours for work stoppage) of receipt.

3.11.3.2 Urgent RCs. Urgent recommendations require action on a TO deficiency which, if not corrected, COULD cause one or more of the following: personnel injury; damage to equipment or property; reduce operational efficiency, and/or jeopardize the safety or success of mission accomplishment. Submit RCs that could result in over $25,000 or 1000 man-hours annual savings to the Air Force as urgent. All technical TCTO deficiencies are submitted as urgent. Identification of or replacements for EPA Hazardous Materials (HAZMAT) and ODS are submitted as urgent. In addition, urgent includes all other discrepancies that indirectly affect a nuclear weapon and technical orders that indirectly affect the handling, maintenance, operations, transportation, training, and testing or storage of nuclear weapons.

3.11.3.3 Routine RC. Routine recommendations require action on TO deficiencies that do not fall into emergency or urgent categories.

3.11.4 Airman Powered by Innovation (API) Program. The IDEA program has been renamed to the Airmen Powered by Innovation (API) program. AFI 38-402, *Airman Powered by Innovation (API) Program* provides guidance for the API program. This guidance and procedures apply to ideas submitted as of 1 June 2013. Website reference at https://ipds.afpc-.randolph.af.mil. Approved reports which could be eligible for submission of an after-the-fact idea will have AFTO Form 22, Block 18 annotated with the expected tangible or intangible benefits and justification.

3.11.4.1 Restrictions. After-the-fact APIs may only be submitted on approved routine RCs to PTOs in acquisition if they provide an improved work procedure or method, such as welding in lieu of fasteners, or local repair instead of discard.

3.11.4.2 Ineligible Updates. RCs identifying errors in TOs or procedures prior to formalization, i.e., wrong screws, erroneous measurements, incorrect references, typographical errors, etc., are ineligible for the API program. Corrections of this type are an integral part of the TO development process.

3.11.4.3 Submission. Submit the improvement or enhancement from an approved RC through the Idea Program Data System (IPDS), attaching a copy of the approved RC to the idea. The API evaluator (normally the same individual who approved the RC) will determine job responsibility, validate savings/benefits, and recommend approval of the idea. API benefits must be documented in IPDS when the submittal is made. The IPDS will base the award on the validated RC data. If the RC is not eligible for an after-the-fact API award, the API evaluator will indicate the reason for disapproval in IPDS.

3.11.5 Disposition. The TOMA or designated representative will forward approved RCs to the contractor for incorporation in the next update to the PTO or TO.

3.11.6 Interim Update Procedures. If approved routine recommended changes cannot be published within the time frames of Table 4-1, an Interim Operational Supplement (IOS) will be generated by the TOMA, if requested by the users.

3.12 CONTROL AND TRACKING OF RECOMMENDED CHANGES.

The TOMA must develop a system to track and control RCs from the time requests are received or generated until incorporation into the TOs. The TOMA also should address how much outstanding content will be allowed and for how long before considering preparing a clean WA-1 revision. Specific items to be recorded include date received/initiated, action taken, date disapproved or forwarded to contractor, and date incorporated. The method for tracking will be specified in the TOLCMP. AFTO Form 27 must be maintained on file for at least two years, IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule, (https://www.my.af.mil/afrims/afrims/afrims/rims.cfm).

3.13 CLASSIFIED RECOMMENDED CHANGES.

RCs containing classified data will be marked with the proper classification and appropriate downgrading and declassification instructions IAW DoDM 5200.01, Vol 1/ AFI 16-1404. The program Security Classification Guide (SCG) will be referred to when determining if classified data is included. Unclassified RCs on classified TOs will be marked: This is an unclassified AFTO Form _____ on a classified manual. Security violations involving TOs will be reported IAW DoDM 5200.01, Vol 1/ AFI 16-1404, not by use of a RC.

3.14 TECHNICAL ORDER UPDATES DUE TO EQUIPMENT MODIFICATION OR REPLENISHMENT SPARES PROCUREMENT.

3.14.1 Requirements. New specification requirements, modifications and replenishment spares procurement can result in new inventory items for replacement or replenishment issue. New TOs may be required and/or existing TOs updated or rescinded.

3.14.2 Coordination and Advisement. The TCM will coordinate with the reparable assembly or system PM to determine if safety, life support or critical systems are involved. The TCM and TOMA will identify and advise affected TOMAs, PMs, SAP users and other DoD agencies (Army, Navy, etc.) of the proposed new or modified equipment/end item and recommend updating of affected TOs. Advisement must include known systems or commodities TOs, when stocks of the original equipment/end item TOs will be exhausted, and specific TO updates required (if known). Coordination and advisement requirements are not required for common National Stock Class items (e.g., nuts, bolts, resistors, etc.) unless safety, life support, or critical systems or material are involved. In conjunction with the TOMA, the TCM will initiate acquisition of new TOs or TO updates for commodities/equipment/end items under TCM control. Notify the TOMA in writing to rescind obsolete TOs as required. Keep MAJCOMs informed of the TO status and anticipated publication date(s). Follow up with the MAJCOM to ensure TO updates are distributed and support requirements of users have been satisfied.

3.15 UPDATE DISTRIBUTION AND FILING.

The provisions of TO 00-5-1 do not apply to the distribution of PTO updates or RCs approved for use with PTOs during acquisition. The TOMA must make arrangements to provide copies of approved updates to all affected users of the PTOs. RACs, ISSs and IOSs to PTOs will be posted the same as for formal TOs. RCs approved for operational use will be posted

like Interim TOs. Operational PTO files will contain only those RCs/updates which apply to that organization; reference files may contain all RCs/updates applicable to the command.

ATTACH

PRELIMINARY TECHNICAL ORDER (PTO) PUBLICATION CHANGE REQUEST (PCR)/TO VERIFICATION RECORD/APPROVAL

AUTHORIZED USE: THIS FORM WILL BE USED ONLY AS DIRECTED BY THE TECHNICAL ORDER MANAGER IAW TO 00-5-3

I. ROUTING AND IDENTIFICATION

1. TO *(TOMA/Designated Representative)*	2. FROM *(Organization reporting)*	3. CONTROL NUMBER

4. PUBLICATION NUMBER	5. DATE OF PUBLICATION	6. CHANGE NO./ DATE	7. PARAGRAPH/FUNCTION NO.(s)	8. FIGURE

9. PAGE(s)	10. NATURE OF FORM
	☐ PCR *(Section II)* ☐ VERIFICATION *(Section III)*

11. ORIGINATOR'S/SYSTEM VERIFICATION MANAGER'S (SVM)	12. ORIGINATOR'S SUPERVISOR/VERIFICATION TEAM MANAGER'S
NAME	NAME
GRADE DSN	GRADE DSN
SIGNATURE	SIGNATURE
DATE	DATE

II. PUBLICATION CHANGE REQUEST

13. NATURE OF PCR	14. DATE PCR RECEIVED	15. ACTION TAKEN	16. DATE PCR ACTION CLOSED
☐ EMERGENCY ☐ URGENT ☐ ROUTINE		☐ APPROVED AS WRITTEN ☐ APPROVED WITH MODIFICATION ☐ DISAPPROVED *(See Block 17)*	

17. STATEMENT OF DEFICIENCY *(Attach additional sheets if required)*

18. RECOMMENDED CHANGE *(Attach additional sheets or mark up copy if required)*

VERIFICATION REQUIRED ☐ YES ☐ NO

AFTO FORM 27, 20161222 **PREVIOUS EDITION IS OBSOLETE**

G1702164

Figure 3-2. AFTO Form 27, Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval (Sheet 1 of 3)

III.	VERIFICATION RECORD
19. CONTRACT NUMBER	20. VERIFICATION DATES A. START B. COMPLETE
21. VERIFICATION SITE	
22. TYPE VERIFICATION ☐ A. PERFORMANCE ☐ B. SIMULATION ☐ C. DESK-TOP ANALYSIS	
23. DEVIATIONS *(List any equipment or procedures not in accordance with the Technical Order)*	
24. PCR DISPOSITION/VERIFICATION RESULTS	
25. RECOMMEND FORMALIZATION ☐ YES ☐ NO	

IV.	DISPOSITION AND APPROVAL		
26. TECHNICAL ORDER REVIEW BOARD/FLIGHT TECHNICAL ORDER REVIEW BOARD (TORB/FTORB) AND TOMA USE ONLY			
REVIEW BOARD (a)	REVIEW BOARD DISPOSITION (b)	SIGNATURE AND DATE (c)	
(1) USING COMMAND			
(2) ILS MANAGER/EQUIPMENT SPECIALIST			
(3) CONTRACTOR			
(4) TOMA/DESIGNATED REPRESENTATIVE			
(5) OTHER			
(6) OTHER			
(7) OTHER			

AFTO FORM 27, 20161222

G1702165

Figure 3-2. AFTO Form 27, Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval (Sheet 2)

Add Page

PRELIMINARY TECHNICAL ORDER (PTO) PUBLICATION CHANGE REQUEST (PCR)/TO VERIFICATION RECORD/APPROVAL *(CONTINUED)*	4. PUBLICATION NUMBER	3. CONTROL NUMBER

AFTO FORM 27, 20161222 CONTINUATION PAGE

G1702166

Figure 3-2. AFTO Form 27, Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval (Sheet 3)

SECTION III MINOR ACQUISITION SUSTAINMENT PROGRAMS

3.16 OVERVIEW.

There are a lot of parallels between major acquisition programs and smaller acquisition programs; the main difference is the overall cost of these programs and the degree to which each type of program relates to the events or milestones. For example, both types of program will require some degree of acquisition strategy and some acquisition planning, the main difference is, there is far more planning required for a large aircraft development program, than for a small hydraulic jack program. Also, many of the smaller programs typically do not require all of the same number of personnel to administer the program. Major events which have a direct effect on smaller TO programs are included below.

3.16.1 Data Call. Used by Program Offices to solicit requirements for smaller programs. These events replaced the more structured Data Requirements Review Boards in many instances. The TOMA is a key player along with the IPT members in determining the scope and depth of each new program. Data calls are an integral part of the requirements development process.

3.16.2 Technical Manual Contract Requirements (TMCRs). Technical manuals requirements are similar in both Major and Minor acquisitions. Refer to Paragraph 3.6.1 for a further explanation.

3.16.3 DD Form 1423 - CDRL and CLIN for TOs. See Paragraph 3.6.4 for further explanation.

3.16.3.1 The TOMA may include draft CDRLs for known data requirements in the RFP. The CDRL for TO delivery (if included), with the TMCR attached, will be referenced in RFP section J. The Instruction to Offerors will require the offerors to develop SOW paragraphs, complete CDRL tailoring and submit any other suggested data requirement CDRLs with the proposals.

3.16.3.2 If CDRLs are not included in the RFP, the Instruction to Offerors will require offerors to propose all data requirements, including TOs. In this case, a partly-tailored TMCR may be placed in either the system specification or the Proposal Technical Library.

3.16.3.3 Justification. Offerors must justify each data requirement included in proposals. The TOMA or program data manager will complete DD Form 1423 (CDRLs) for approved requirements. See DoD 5010.12-M for DD Form 1423 instructions.

3.16.4 Initial TO Guidance Conference/Post Award Conference. Refer to Paragraph 3.9.2.

3.16.4.1 Negotiations. Negotiations can also occur during the performance of the contract for Engineering Change Proposals (ECP), Contract Change Proposals (CCP), or as a result of differences in contract interpretation. TOMA participation remains the same whatever the reason for negotiations, and must be performed through the PCO.

3.16.4.2 Additional Evaluations. Evaluate ECPs, associated TCTOs, and CCPs against the baseline contract to ensure costs correspond to the original proposal and were not included in the baseline costs. Some TO updates as a result of ECPs should be included in the routine periodic update program, and some proposed additions to the number of TOs developed or acquired may be included in contract baselines. Evaluate the ECPs/CCPs against similar items previously submitted by the contractor.

3.16.4.3 Contract Adjustments. If, for any reason, the contractor does not perform some functions as originally proposed (for example, when schedules are accelerated and revised need dates prevent some quality checks, or vital support equipment will not be available in time), an equitable adjustment to the contract/order price should be negotiated. The PCO will manage negotiations and may or may not require TOMA support.

3.16.4.4 Guidance Conference/Post Award Conference. The IPT, with the contractor included, holds a Guidance Conference or a Post Award Conference where program plans are reviewed and approved, and schedules are established. The timing is usually within 60 days after contract award to avoid delaying contractor tasks. The contractor can initiate TO preparation after the TO guidance conference. Refer to Paragraph 3.9.2 for additional information.

3.16.4.5 Management and Scheduling. Refer to Paragraph 3.9.2.

3.16.4.6 Requirements. Requirements that were not fully defined or could not be defined until hardware selection and applicable operation and maintenance concepts had been analyzed will be finalized during the TO Guidance Conference. Any changes affecting contract performance or costs must be approved by the PCO.

3.16.4.7 Objectives. Refer to Paragraph 3.9.2.3.

3.16.4.7.1 The TOMA briefs on the purpose, objectives, scope and functions of the conference. Specific agenda items should include a review of the contract to ensure mutual understanding of the requirements; a review of applicable specifications and established Air Force TO policy; a review of basic planning data to ensure mutual understanding of the program and intended users requirements; and establishment of contacts to provide subsequent guidance and information.

3.16.4.7.2 The results of the conference will be fully documented by contractor minutes, and coordinated with IPT members. The TOMA will approve the minutes and summarize conference findings and action items, prior to completion of the conference.

3.16.4.8 Participation. Refer to Paragraph 3.9.1.3.

SECTION IV SPECIAL PURPOSE TECHNICAL ORDER REQUIREMENTS PROGRAMS

3.17 SPECIAL PURPOSE TECHNICAL ORDER REQUIREMENTS.

NOTE

All manuals will be prepared IAW the specifications and standards stated on the TMCR.

Most weapon system acquisition programs will require procurement of special purpose TOs and source data, requiring different acquisition and management procedures. These TOs and data require coordination with or even management by agencies outside the standard process. The types of TOs or source data requiring special treatment include, but may not be limited to the following:

3.17.1 Aircraft Battle Damage (Assessment and) Repair (ABDR) (-39 Series) TOs. These manuals are developed IAW MIL-DTL-87158, *Manuals, Technical: Aircraft Battle Damage Assessment and Repair*, and managed IAW AFI 20-114, *Air and Space Equipment Structural Maintenance*. (Assessment is very seldom used in referring to these TOs.) HQ AFSC/LGPM, 2704 D St, Wright-Patterson AFB, OH 45433-7413, DSN 785-6179, is the Air Force OPR for ABDR, and must be notified of acquisition activities involving these procedures. Developers may request A4RC-TSO for assistance in developing procedures.

3.17.2 Nuclear Weapon TOs. The AF Nuclear Weapons Center (AFNWC) is responsible for ICBM, Cruise Missile, EOD (Category 60N) and specific aircraft nuclear weapon system TOs. AFNWC Logistics Support Division (NCL) Technical Support Branch (NCLS) is responsible for the 11N Indexes. The Indexes will identify the responsible TO Management Agency. All TOs and manuals in the 11N Indexes must be requisitioned through a nuclear TODO account. The TO Management Agency is responsible for approving release of the TOs under their agency. Applicable AFNWC TOMAs must be included in all activities related to the acquisition and maintenance of these TOs. (Reference TO 00 5-1, Chapter 10 for Nuclear TODO Accounts).

3.17.3 Ballistic Missile Codes (21M-XX-16 Series) TOs. The National Security Agency (NSA), Section V62, is the focal point for the acquisition agency TOMA for Inter-Continental Ballistic Missile (ICBM) launch and targeting codes and procedures. NSA retains this responsibility for the entire life cycle of the military system. The TOMA shall ensure developmental codes data and procedures are routed to this organization for coordination and approval.

3.17.4 Calibration and Metrology (Category 33K and System-Unique) TOs and Procedures. AFMETCAL, 813 Irving-Wick Drive W, Suite 4M, Heath OH 43056-6116, email: afmetcal.toqap@us.af.mil is the Air Force OPR for calibration and metrology procedures.

3.17.4.1 AFMETCAL will approve calibration requirements and intervals, and verify and approve calibration procedures in TOs. AFMETCAL will also determine if requirements are to be included in system O&M TOs or if a separate TO is required.

3.17.4.2 AFMETCAL usually prepares stand-alone TOs from source data acquired from the contractor by the TOMA. Procedures to be included in other TOs are usually contractor-developed and must be verified and approved by AFMETCAL.

3.17.4.3 AFMETCAL must review and approve or disapprove Contractor Furnished (Aeronautical) Equipment (CFAE/CFE) Notices which identify commercial or MIL-PRF calibration manuals. AFMETCAL provides TO numbers for both MIL-PRF TOs and approved commercial manuals.

3.17.4.4 When requested, AFMETCAL will assist the TOMA with calibration procedure development and acquisition. Developers may also request AFMETCAL assistance in developing calibration procedures.

3.17.5 Corrosion Control (1-XX-23, 10-XX-9, and 21-XX-22 Series) TOs and Procedures. These TOs and corrosion control procedures will be developed by the contractor IAW the technical requirements of MIL-DTL-87929, *Technical Manuals, Operation and Maintenance Instructions in Work Package Format (For USAF Equipment).* AFLCMC/EZPT-CPCO, 325 Richard Ray Blvd, Bldg 165, Robins AFB GA 31098-1639, email: afcorr@us.af.mil is the Air Force OPR for corrosion control. The TOMA must contact AFLCMC/EZPT-CPCO early in the planning stages to establish requirements and schedules for TO review and approval. The PM must establish a Corrosion Prevention Advisory Board (CPAB) to evaluate the adequacy of corrosion prevention measures included in the system and/or commodity design, review the contractor approach to prevention, and advise on corrosion prevention matters. Membership and responsibilities of the CPAB are contained in AFI 20-114. The contractor, through the TOMA, may request AFLCMC/EZPT-CPCO assistance to develop new procedures.

3.17.6 TO 00-105E-9/STANAG 3896, Aerospace Emergency Rescue and Mishap Response Information (Emergency Services). TO 00-105E-9 and STANAG 3896 describes aircraft emergency rescue and mishap response procedures that must be used by military and civilian fire departments that might have to respond to military aircraft accidents.

3.17.6.1 The source data for these procedures will be developed by the contractor IAW DID DI-TMSS-81532, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services) Source Data*, and provided to the AFCEC/CXF, with a copy to AFCEC/CXE (Paragraph 3.17.7). The DID is required for ALL aircraft programs to include modifications affecting the list in Paragraph 3.17.6.3.

3.17.6.2 The TO is only available electronically. Military or civilian users, whose duties are related directly or indirectly to the performance of aerospace emergency rescue and mishap response, may request access by completing the DoD Electronic Registration Form, including the Terms of Agreement, on the DoD Firefighter Certification site, http://legacy.dodffcert.com/00-105e-9/index.cfm (restricted access membership required). Users experiencing technical issues with this web site should contact the TO Administration Center at AFCEC/CXF, DSN 523-6150, email: AFCEC.CXF.Workflow@us.af.mil.

3.17.6.3 To help ensure safety and rapid response of crash/fire/rescue personnel responding to aircraft mishaps, TOMAs and TCMs will coordinate TO 00-105E-9 changes that affect the following aircraft subject areas with AFCEC/CXF:

- Fire hazards
- Personnel hazards (intakes, exhausts, radar emitting devices, hot brake areas, auxiliary power unit (APU) ports, etc.)
- Aircraft entry (normal and emergency)
- Engine or APU shutdown (normal and alternative methods)
- Oxygen and fuel shutoff valves
- Ejection or escape system changes in safing, releasing and extraction
- Stationary seat restraint systems

- Changes to flammable systems (oxygen, fuel, hydraulics, batteries and miscellaneous chemicals)
- Fuselage skin penetration points and cut-in areas
- Cabin arrangements and personnel locations, or number of personnel on board
- Alternative engine shutdown access areas
- Airframe materials (types of metals and advanced composites)
- Aircraft Dimensions and Specifications
- EPU

3.17.7 Explosive Ordnance Disposal/Render Safe Procedures (EOD/RSP) (Category 60) Manuals and Source Data. AFCEC/CXE, 2008 Stump Neck Road, Indian Head MD 20640-3681, e-mail: NIPR– afcec_cxe@navy.mil; SIPR – afcec_cxe@jeodnet.smil.mil, is the Air Force liaison to the Naval Surface Warfare Center Indian Head Explosive Ordnance Technology Division (NSWC IHEODTD), Indian Head MD. AFCEC/CXE is the single point of contact for the Navy-managed joint service nonnuclear EOD publications, responsible for technical acceptance of EOD source data for Air Force weapon systems and commodities, and development of Category 60 EOD TOs to support those systems and commodities. Additional responsibilities for AFCEC/CXE are specified in DoDD 5160.62, Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training, and AFI 32-3001, *Explosive Ordnance Disposal Program.*

3.17.7.1 The TOMA is responsible for acquisition of EOD/RSP source data for development of nonnuclear Category 60 TOs, using DID DI-SAFT-80931, Explosive Ordnance Disposal Data.

3.17.7.2 Nuclear warhead and reentry vehicle EOD procedures (Category 60N TOs) will be developed IAW the 1964 Joint Nuclear Weapons Publication System (JNWPS) Agreement between the Department of Energy (DOE) and DoD. In essence, that agreement provides that nuclear source data will be prepared by the Defense Threat Reduction Agency (DTRA) and submitted to the agency responsible for preparing EOD TOs for integration with the nonnuclear interface data. The TOMA is responsible for providing this interface data.

3.17.8 Make-Safe Procedures for Public Display (TO 00-80G-Series). HQ AFMC/SE is the Air Force OPR for Make Safe procedures. The contractor will develop the procedures IAW TO 00-80G-1, *Make Safe Procedures for Public Static Display*. The procedures must be reviewed and approved by HQ AFMC/SE.

3.17.9 Nonnuclear Munitions Loading (-33 Series), Weapon Delivery (-34 Series) and Positioning and Tiedown (-38 Series) TOs. The procedures for -33 and -34 TOs and source data are covered in Section VII of this Chapter - Source Data.

3.17.9.1 Positioning and Tiedown (-38) TOs. For -38 TOs, the munitions TOMA will acquire source data from the prime contractor for the munitions item, and provide the data to the USAF GACP, AFLCMC/EBHMA, Hill AFB UT, for development of the TOs.

3.17.9.2 Strategic Systems TOs. TOs for munitions used with strategic aircraft systems are acquired from the contractor like any other operation and maintenance TOs. HQ ACC/XRS and/or 98 Range Wing (RANW), 3770 Duffer Drive Bldg 200, Nellis AFB NV 89191, perform verification of these TOs.

3.17.9.3 Combat Sortie Generation (CSG) (-33-1 through -33-4) TOs. These munitions and stores loading TOs provide procedures for hot loading of aircraft in combat situations. (Hot loading includes simultaneous munitions loading, aircraft maintenance, and refueling with one or more engines running.) The procedures are based on a Systems Safety Engineering Analysis (SSEA) performed by HQ AFMC/SES IAW AFI 91-202, The US Air Force Mishap Prevention Program. CSG TOs will not be changed without prior approval from HQ AFMC/SES.

3.17.10 Other Nonnuclear Munitions TOs. TOs in Categories 11, 21, 31, 33 and 35 and source data for updating general Category 11 TOs relating to nonnuclear munitions and explosive components will be acquired by the TOMA and managed by the USAF GACP, or for air superiority missiles, the USAF GACP ASC. The TOs and data must be reviewed and approved by the USAF GACP or the USAF GACP ASC. These TOs and data cover such areas as commodity item maintenance (-7 series), 11A-1-10, *Munitions Serviceability*, 21M-1-101, *Reliability Asset Monitoring System*, 11A-1-61

series, *Storage Outloading Drawings*, and 11A-1-63, *Inspection Assembly of Nonnuclear Munitions*, for munitions and explosives. The TOs and data must be reviewed and approved by the USAF GACP or the USAF GACP ASC. Any tasking for EOD support in these TOs must have prior coordination with AFCEC/CXE.

3.17.11 Non-Destructive Inspection (NDI) (1-XX-36, 2-XX-9 or 21M-XX-26 Series) TOs and Procedures. These TOs and NDI procedures will be developed IAW the technical requirements as outlined in TO 33B-1-1 and EN-SB-15-002. The AF NDI Program Office (AFLCMC/EZPT-NDIO), 4750 Staff Drive, Tinker AFB OK 73145-3317, email: afrl.mls-ol3@us.af.mil, is the Air Force OPR for the NDI program. The TOMA must contact the Air Force NDI Program Office prior to initiating contracts for TO development for any military system or commodity, to establish requirements and schedules for TO development, reviews (including IPRs), and approval. The PM must coordinate an NDI Advisory Board to establish NDI requirements as specified by MIL-STD-1530, *Aircraft Structural Integrity Program (ASIP)* and AFI 20-114. The Technical Order developer may contact the Air Force NDI Program Office through the TOMA for assistance.

3.17.12 Work Unit Code (WUC) (-06 Series) Manuals and REMIS Push-Down Tables. System-specific coding in these manuals and tables is the responsibility of the prime TCM. HQ AFMC is OPR for the other data elements listed in TO 00-20-2, *Maintenance Data Documentation* (Support General WUCs, How Malfunctioned Codes, etc.) For a specific system, the PM procures the equipment listing from the contractor, and ensures the codes are assigned.

3.17.13 Critical Alloy and Precious Metals Conservation Procedures and Requirements. The TOMA will acquire source data for these procedures from the contractor and provide the data to the prime office responsible to develop, prepare, and publish the 00-25-113-series TOs and changes or supplements required for assigned systems and commodities IAW TO 00-25-113, *Critical Alloys and Precious Metal Parts Lists — Gas Turbine Engines*. The source data shall conform to TO 00-25-113 requirements.

3.17.14 SEEK EAGLE Certification. SEEK EAGLE (AFI 63-104,) is the Air Force program to certify all aircraft and store configurations (including weapons, fuel tanks, dispensers, pods, etc.) for loading, safe carriage and employment, and ballistics accuracy. The Air Force SEEK EAGLE Office (AFSEO), 46 SK/SKA, 205 West D Avenue, Suite 348, Eglin AFB FL 32542-6865, monitors this certification process. SEEK EAGLE products are source data for inclusion in the aircraft operational flight program and in Category 1 aircraft and stores TOs. The affected munitions, stores, and aircraft TOMAs must coordinate with the AFSEO to determine user priorities and which TOs will be specifically monitored for the SEEK EAGLE certification process. The TOMAs must provide copies of status reports on the selected TOs to the AFSEO, and ensure that the TOs and/or updates are published in time to meet MAJCOM need dates.

3.17.15 Organic Coatings. When applicable, the TOMA must ensure that source data on new systems is acquired to update TO 1-1-8, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*. The OPR is AFLCMC/EZPT-CPCO, Robins AFB, GA.

3.17.16 TO 1-1A-14-2 and 1-1A-14-3 Installation and Repair Practices - A/C Circular Electrical Connectors and Accessories, Vols II & III. NAVAIR is the OPR for these general reference TOs. This series of TOs provides data for military and commercial electronic cable components for aircraft and test equipment. The source data for new connectors, cables and wiring in any Air Force system or commodity will be identified by the contractor and provided to NAVAIR.

3.17.17 Powered Aerospace Ground Equipment (AGE) Generic Servicing Inspection Workcards. There is a set of generic powered and non-powered AGE servicing inspection workcards (TO 35-1-256WC-1, *Service Inspection – Powered / Non-Powered Aerospace Ground Equipment).* Inspection/testing requirements of general and other applicable technical orders have been considered in the preparation of these workcards. If an inspection requirement exists, it has been included in these cards. The 406 SCMS/GUEE manages these workcards. The SPO or IPT acquiring new AGE must ensure that source data to update these workcards is provided to the 406 SCMS/GUEE.

3.17.18 Inspection and Maintenance Manual. There shall be one inspection and maintenance (-6) TO prepared for applicable weapons (i.e., aircraft, air/ground launched missiles, rocket, drone, Communications-Electronics (C-E), and support systems). The need for additional manual(s) shall be as determined by the acquiring activity. When depot maintenance schedules or workload are affected, see Paragraph 3.5.3.3.

3.17.19 Aircraft Cross-Servicing Guide. Aircraft cross-servicing guides are additional manuals that accompany aircraft tasked to deploy in support of North Atlantic Treaty Organization (NATO) and Air Standardization Coordinating Committee (ASCC) activities. The manuals are numbered by AFLCMC/LZPTP-TINKER. Cross-servicing guides are not part of the organizational maintenance manual set. However, the guides provide cross-references for various types of servicing and loading equipment used by ground personnel and is used in conjunction with aircraft servicing and loading TOs.

3.17.20 List of Applicable Publications (LOAPs). This-01 TO type is required for all new and existing weapon and military systems. It shall be maintained current throughout the system's life cycle by the TOMA.

3.17.21 Commercial Vehicle Fleet Maintenance Manuals. Whenever the Air Force procures new fleet vehicles, maintenance manuals are typically delivered with the new vehicle. Concurrent with the procurement, the manuals will be entered into the TO system to support TODO subscriptions and one-time requisition requests. Such requests require sponsor approval justification in ETIMS, including:

- Make
- Model
- Air Force Vehicle Registration Number (Tag Number)
- Vehicle Identification Number (VIN)

3.17.22 Alternate Mission Equipment (-21) TOs. The -21 TO lists all items authorized for each aerospace vehicle or missile mission, design, and series (MDS). The TOMA is responsible to ensure that the -21 TO be prepared and updated as equipment is modified. The -21 TO is divided into three sections covering three categories of equipment: Section I, Maintenance Safety and Protection Equipment (MSPE) used to protect the aerospace vehicle or missile from damage and/or to make it safe for maintenance. Section II, Alternate Mission Equipment (AME), used to configure an aerospace vehicle or missile for one of its optional missions. It can be installed and removed quickly. Section III, Crew and Passenger Support Equipment (CPSE), used for life support and comfort of crew and passengers.

3.17.23 Aircraft Crew Breathing Systems Using On-Board Oxygen Generating System (OBOGS). Aircraft equipped with On-Board Oxygen Generating System shall develop operating and maintenance procedures for incorporation into system level TOs IAW MIL-STD-3050, Appendix C *Aircraft Crew Breathing Systems Using On-Board Oxygen Generating System (OBOGS)*. These maintenance and operating procedure requirements shall be included as part of the tailored TMCR when applicable.

SECTION V COMMERCIAL OFF THE SHELF (COTS) PROGRAMS

3.18 COTS PROGRAMS.

COTS programs bring a whole new set of challenges to the TO Management system. COTS manuals are generally developed at contractor expense and are sellable as a commodity item, the USAF must deal with issues, i.e., proprietary data rights, copyright restrictions, and a myriad of different formats for this type of data. TOMAs cannot assume that just because the USAF purchased a COTS item, that the government owns the rights to the technical data. Each contractor can set their own restrictions on the sale, printing, distribution, and storage of COTS technical data. The below paragraphs explain the unique requirements for review and approval of COTS data.

3.18.1 COTS Manuals and Other Commercial/Contractor Data. COTS Manuals are acquired using the USAF TMCR (TM 86-01) for centrally procured and managed (NSN's assigned) equipment, no matter the format, and will be evaluated for effectiveness and content IAW MIL-PRF-32216, *Evaluation of Commercial Off-The-Shelf (COTS) Manuals and Preparation of Supplemental Data*. If acceptable, or if they can be supplemented to be acceptable, they will be adopted as TOs (given a TO number) and indexed in ETIMS. This will NOT include COTS manuals for locally purchased equipment. Local purchase manuals and software must be controlled and managed by the procurement activity.

3.18.2 COTS versus New Development. Existing commercial operating instructions, parts breakdown handbooks, and repair manuals will be acquired instead of developing new TOs if no degradation in system operation, safety, support or reliability will result IAW AFI 63-101/20-101. Using existing data will save money and time for the TO program. COTS manuals will be reviewed and evaluated by the TOMA, MAJCOM and assigned Equipment Specialist (ES) IAW MIL-PRF-32216.

3.18.2.1 Commercial aircraft maintenance and operations (flight) manuals (FMP) proposed for use by Air Force personnel must be reviewed by the TCM and FMM compared against both MIL-PRF-32216 and MIL-DTL-7700, *Flight Manual, Performance Data Appendix, Mission Crew Manual, Supplemental Manual, and Abbreviated Flight Crew Checklist* and other requirements. Air Force and commercial roles and responsibilities for flight crews and ground crews are different.

Reviewers must consider the possibility that commercial manuals may allocate maintenance and operations tasks differently than military manuals, and if there are differences, take action to include changes in both the appropriate flight crew and maintenance manuals. Failure to consider this possibility could result in aircraft accidents or incidents.

3.18.2.2 Approved manuals will be adopted for Air Force use, assigned a TO number and managed in the TO system unless a waiver is approved. Approved manuals will be developed to identify pertinent information associated with COTS Manuals. An Identifying Technical Publication Sheet (ITPS) shall be posted as a cover page immediately on top of the COTS manual title page or safety summary and shall provide all necessary information about the manual to include definition of the AF limits of releasability and/or data rights. The ITPS shall list the appropriate distribution statement, export control and destruction statements, and the authority notice IAW MIL-PRF-32216 (See Figure 3-3). Manuals which are initially disapproved will be supplemented, if possible, to make them acceptable. With the exception of safety summaries, ITPS supplemental data is numbered as routine formal supplements and filed behind the COTS manual IAW TO 00-5-1. Safety summaries should be posted directly behind the ITPS cover page, in front of the COTS manual. When supplementing is not adequate, new TOs will be developed to military TMSS or approved commercial specifications. Careful consideration of future support costs, incorporation of commercial updates, and ease of use will determine whether military or commercial specifications should be used.

3.18.2.3 When military systems or end items use mixed maintenance support (organic and CLS), any COTS manuals and manuals developed from contractor data may be accepted and then evaluated for adoption as technical orders per Paragraph 3.18.2.1. The decision to number, manage, and use commercial manuals in or outside the TO system will be made jointly by the TOMA, user and appropriate TCM. Manuals used for organic (Air Force) operations or maintenance will be included in the TO System unless a waiver is approved by HQ AFMC/A4F. When different user organizations have different operation or maintenance support concepts, manuals will be managed in the TO System unless a waiver is approved by HQ AFMC/A4F.

3.18.2.4 PMs must ensure, through the TOMA, that all contracts issued for procurement or sustainment of commercial or militarized commercial systems and commodities require delivery of applicable FAA, manufacturer or vendor technical data updates (service bulletins, operations manual bulletins, FAA airworthiness directives, temporary revisions, etc.). Use a DID (when available), or ensure the CDRL for TO delivery requires delivery of these updating publications.

3.18.2.5 The TCM, TOMA, depot engineering or technical support activity and/or FMM will determine if any updates received apply to TO-numbered flight and/or maintenance manuals, and if the updates will be referenced by the commercial number or will have the information extracted for inclusion in supplements or other TO updates. When a COTS TO user becomes aware of a later version of the COTS manual that applies to their equipment (and not just to a later model/version of the equipment), they should notify the ES/TCM so that he/she can evaluate the later manual version for adoption by the Air Force. If adopted, the TO will be indexed in ETIMS.

3.18.2.6 For programs using temporary or Interim Contractor Support (ICS) contracts (support required until organic capability is attained), data used by the contractor to fulfill the terms of the contract is excluded from numbering and management in the TO System. However, if this data will transition to the Air Force, it is subject to review and verification by Air Force personnel. COTS and contractor manuals transferring to the Air Force will comply with this TO and MIL-PRF-32216. Data developed for system or equipment contractor internal use, if later purchased by the government, will be treated the same as COTS data.

3.18.2.7 When operation and/or maintenance are planned to be Contractor Logistics Support (CLS), whether the military system or end item is commercially available or is developed specifically for the Air Force, the PM or SCM acquires, numbers, and manages the Operations and Maintenance (O&M) data outside the TO system (no TO numbers are assigned). However:

3.18.2.7.1 The data is subject to Air Force technical content, reproducibility and rights reviews to ensure it is adequate for competition of follow-on contractor support ('Adequate' means usable by another contractor with comparable skills and experience to fulfill the terms of the contract).

3.18.2.7.2 Data developed or modified specifically for the CLS contract shall be certified by the contractor; Air Force verification is not required.

3.18.2.7.3 Pre-existing, unmodified commercial data shall be certified for adequacy and accuracy by the contractor acquiring the data for the CLS contract.

3.18.2.7.4 When existing military systems or end items are transitioned from organic support to CLS, TOs which will continue to be used primarily by Air Force personnel will remain in the TO system. TOs which are peculiar to the system or end item to be used totally (or with Air Force assistance) by the contractor, will normally be rescinded from the TO system and managed as directed by the CLS contract. However, CLS contracts will require the contractor to use and maintain any MIL-SPEC manuals in the MIL-SPEC format.

3.18.2.7.5 When CLS programs are transitioned to organic support, the policy in this TO will be used to evaluate, approve, number and manage CLS manuals.

3.18.2.8 Factory Test Equipment (FTE) and Special Test Equipment (STE) and its support data are designed by a contractor for internal use and are not commercially available. However, if the government decides to acquire the FTE and/or STE for organic use, the policy in this TO will be used to accept the support data and to determine if it is included in or excluded from the TO system.

3.18.3 Exclusions.

3.18.3.1 Per TO 00-5-1, the TO system includes all TOs developed or acquired for organic operation, maintenance, inspection, modification, or management of centrally acquired and managed Air Force systems and end items. The TO system excludes:

3.18.3.1.1 Data used in programs or program segments (such as depot or intermediate-level maintenance) operated solely (or with Air Force assistance) by CLS personnel are exempt from management within the TO system.

3.18.3.1.2 Manuals to support local purchase items (NOT centrally-procured, stock-numbered COTS equipment) are also exempt (TO 00-5-1). The activity purchasing the item is responsible for acquiring, accepting, maintaining, controlling and distributing these publications.

TO 5XX-X-XX-XU
15 OCTOBER 2011

IDENTIFYING TECHNICAL PUBLICATION SHEET FOR COMMERCIAL MANUAL

THIS PUBLICATION SUPERSEDES T.O. 5XX-X-XX-XT, DATED 15 AUGUST 2011 IN ITS ENTIRETY.

PURPOSE: This technical publication is issued for the purpose of identifying and authorizing the following commercial manual for Air Force use.

MANUFACTURER: ELDEC P.O. Box 100
16700 - 13th Avenue West
Lynnwood, WA, 98036
CONTRACT NO: F19628-70-C-0218
REQUISITION NO: NA
EQUIPMENT: N1 Rotor Percent of RPM Indicator
9-191-01
TITLE: Overhaul Instructions with Illustrated Parts Breakdown - N1 Rotor Percent of RPM Indicator - Part Number 9-191-01
ADDITIONAL IDENTIFICATION: ELDEC Document 761202
DATE: 1979-11-15

ADDITIONAL COPIES: Additional copies are available from _____
(Contracting activity will furnish information, but if no information is furnished, this paragraph will be omitted and the following paragraph moved up into its place.).

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G1500004

Figure 3-3. Format for an Identifying Technical Publication Sheet (ITPS) for Commercial Manual/Supplemental Data (Sheet 1 of 2)

TO 5XX-X-XX-XU
15 OCTOBER 2011

IDENTIFYING TECHNICAL PUBLICATION SHEET
FOR
COMMERCIAL MANUAL

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PURPOSE: This technical publication is issued for the purpose of identifying and authorizing the following commercial manual for Air Force use.

MANUFACTURER: ELDEC P.O. Box 100
16700 - 13th Avenue West
Lynnwood, WA, 98036
CONTRACT NO: F19628-70-C-0218
REQUISITION NO: NA
EQUIPMENT: N1 Rotor Percent of RPM Indicator
9-191-01
TITLE: Overhaul Instructions with Illustrated Parts Breakdown - N1 Rotor Percent of RPM Indicator - Part Number 9-191-01
ADDITIONAL IDENTIFICATION: ELDEC Document 761202
DATE: 1979-11-15

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Published under authority of the Secretary of the Air Force

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SUPPLEMENTAL DATA

LIST OF AFFECTED PAGES IN BASIC MANUAL.

TOC	6-1	7-14	8-5	8-11	8-19
3-1	6-4	7-16	8-6	8-12	8-43
4-1	7-3	7-17	8-7	8-13	
5-1	7-7	7-21	8-8	8-14	
5-2	7-10	7-27	8-9	8-15	
5-3	7-11	8-4	8-10	8-16	

SUPPLEMENTARY INFORMATION. The information contained in the above identified commercial manual is supplemented as follows:

a. Chapter 3
b. Chapter 4
c. Chapter 5
d. Chapter 6
e. Chapter 7
f. Chapter 8

G1500064

Figure 3-3. Format for an Identifying Technical Publication Sheet (ITPS) for Commercial Manual/Supplemental Data (Sheet 2)

SECTION VI TECHNICAL ORDER SECURITY AND TECHNICAL DATA RIGHTS

3.19 TECHNICAL ORDER SECURITY REQUIREMENTS.

3.19.1 General. TOs can contain classified data up to and including Secret Restricted Data. The following procedures apply to classified and unclassified TOs containing data whose distribution must be controlled. TOMAs and TCMs/FMMs will:

3.19.1.1 Verify TO data classification using the applicable Security Classification Guide (SCG). For contractors, the applicable SCG may be listed in the DD Form 254,*Contract Security Classification Specification, Department of Defense*. Ensure the TO title page and each page and paragraph in a classified TO is marked IAW DoDM 5200.01, Vol 1 and AFI 16-1404.

3.19.1.2 Issue classified technical data in supplemental TOs to the maximum extent possible to keep the majority of TOs unclassified (TO 00-5-1). TO titles will be unclassified to the maximum extent possible.

3.19.1.3 Use the applicable SCG as authority to classify TO data needing security protection. Review contractor-prepared classified Preliminary Technical Orders (PTOs) to ensure they have the proper security markings annotated IAW DoDM 5200.01, Vol 1 and AFI 16-1404. Advise the contractor of any required revisions to the PTOs or DD Form 254.

3.19.1.4 Review classified technical data during every TO update action or at least annually for possible classification downgrading according to the applicable SCG or DoDM 5200.01, Vol 1. TCMs must ensure their TOs are reviewed in a timely manner. The task schedule should be set for less than one year to allow time to complete the review within the required one-year period. Initial data for overdue currency review tracking may be obtained from HQ AFMC/A4F.

3.19.1.5 TO classification changes are disseminated via a TO change or revision and listed in the Search New, Updated and Inactive TOs function of the AF TO Catalog.

3.19.1.6 Issue unclassified updates to Classified TOs whenever possible.

3.19.1.7 Do not use the Not for Foreign Release (NOFORN) marking on TOs. In accordance with DoDM 5200.01, Vol 1, *Information Security Program*, this code is only authorized for U.S. intelligence information.

3.19.1.8 Unclassified Controlled Nuclear Information (UCNI) is a special category of information. To be considered for protection as DoD UCNI, the information must be unclassified, pertain to security measures, including plans, procedures, and equipment, for the physical protection of DoD Special Nuclear Material (SNM), equipment, or facilities, meet the adverse effects test; i.e., that the unauthorized dissemination of such information could reasonably be expected to have an adverse effect on the health and safety of the public or the common defense and security by increasing significantly the likelihood of the illegal production of nuclear weapons or the theft, diversion, or sabotage of DoD SNM, equipment, or facilities. (Ref DoDD 5210.83).

3.19.2 Classification Upgrades. HQ AFMC must concur in the interpretation of the cited classification authority for upgrading the classification of an already-distributed TO (if the TO was too widely distributed, reclassification may not be possible.) Notify HQ AFMC/A4F and the local Information Security Program Manager (ISPM) (Security Forces) of the circumstances requiring an upgrade by classified message. Include the new level of security classification, the classification authority, the number of copies issued, the length of time the information has existed at a lower classification and if the information is available from unclassified sources.

3.19.2.1 A4F shall consult with HQ AFMC to determine whether the security classification action is Original Classification Authority directed. If so, a classified message furnishes authority to begin the upgrade action.

3.19.2.2 The TCM prepares an Emergency Interim Operational Supplement (IOS) or RAC IAW Chapter 4, to upgrade the affected TO, and notifies the responsible TOMA to update the TO index entry.

3.19.3 Classification Downgrade/Declassification. The TOMA will issue an update directing the appropriate downgrade or declassification actions IAW DoDM 5200.01, Vol 1/ AFI 16-1404. TOMA shall send updated metadata to TODPG, Reference Chapter 5.

NOTE

Downgrade of a small amount of material that does not change the overall classification of the TO should not be the sole justification for issuing a TO update. However, notification of the downgrading action and the data involved must be provided to users of the TO.

3.19.4 Scientific and Technical Information (STINFO) Distribution Limitations. Distribution Statements specified in DoDI 5230.24, shall be used IAW AFI 61-201 to mark all TOs and other technical data to specify availability for secondary distribution, release and disclosure without additional approval or authorization from the Controlling DoD Office (See DoDI 5230.24). (Primary distribution is made by the Controlling DoD Office.) A distribution statement marking is distinct from and in addition to a security classification marking assigned IAW DoDM 5200.01, Vol 1/ AFI 16-1404. Air Force personnel who originate or are responsible for technical documents must follow guidance contained in AFI 61-201, summarized below:

NOTE

Do not confuse the distribution statements formerly used for standard, nontechnical publications (AFI 33-360, *Publications and Forms Management*) with those used for TOs and technical data AFI 61-201). The latest revision to AFI 33-360 has replaced these distribution codes (F and L) with a releasability statement. However, the old codes will continue to appear on older AF publications for some time. The code F meant Public Release for standard publications, but no release without Controlling DoD Office permission for technical data. AFI 33-360 used Limited (L) Distribution.

3.19.4.1 Distribution Statements. Controlling DoD Offices (CDO) i.e., FMMs and TCMs, shall mark interim and formal TOs, TCTOs, PTOs, TO updates, source data, and other technical data (see definitions) with appropriate distribution statements before dissemination IAW DoDI 5230.24 and AFI 61-201. Include the word 'Statement' in your title 'Distribution Statement D'. Apply the single most appropriate distribution statement A, B, C, D, E, or F (for secondary distribution) IAW DoDI 5230.24 enclosure 5. Apply the distribution code/letter designator and verbiage IAW DoDI 5230.24. You may use as many reasons that apply to the code/letter and content of the technical data. Include the Date of Determination and the Controlling DoD Office (PM's organizational symbol and program name). Verbiage for distribution statements and reasons may NOT be modified IAW DoDI 5230.24. In addition, for B, C, D, and E distribution statements, you may include 'Secondary' and the following text that precedes the distribution statement: 'The (Controlling DoD Office) authorizes secondary distribution, release, and dissemination to the extent permitted by this distribution statement without additional approvals or authorizations.' TOMAs shall ensure the distribution code and reasons are reflected in the index record for individual TOs. New DoDI 5230.24 guidance states Distribution Statement F is to be used under rare and exceptional circumstances and only when a specific authority exists or when need-to-know must be verified. See DoDI 5230.24 for options, (i.e., Executive Orders, statues such as Atomic Energy Federal regulation, etc.)

NOTE

Subsequent dissemination of formerly Distribution Statement X documents shall display Distribution Statement C, with export control as the reason, and shall be marked as directed by DoDI 5230.24, unless changed by the controlling DoD office.

3.19.4.1.1 Significant Military Equipment (SME). For purposes of determining the appropriate distribution markings for Air Force TOs, and other technical documents, controlling offices shall refer to the United States Munitions List (USML), the Commerce Control List (CCL), and the Militarily Critical Technologies List (MCTL) IAW AFI 61-201. The USML designates some technical data items as Significant Military Equipment. Technical data supporting items with this designation contain information that justifies higher levels of protection. This technical information shall be restricted solely to U.S. DoD activities or U.S. DoD contractors who hold contracts to specifically support such military equipment or have a legitimate business relationship with the DoD. The DoD has the sole responsibility for determining that a legitimate business relationship exists since the only purpose is to provide access to information created by or under the control of the DoD. Acceptable distribution statements are D, E or F. Lower levels of protection may be justified for technical data in the USML that is not designated SME. Acceptable distribution statements are B or C. Higher levels of protection may be applicable based on the specific content of the documents. Technical data not specifically related to items on the USML, CCL, or MCTL will be assigned a distribution statement justified by the content of the document.

3.19.4.1.2 Distribution Statement A (Public Release). TOs for public release must be reviewed and assigned a case number by the local Public Affairs (PA) office prior to release. (AFI 35-102, *Air Force Security and Policy Review Process*). Ensure other required title page statements and warnings are applied IAW AFI 16-201, *International Affairs and Security Assistance Management*, and MIL-STD-38784, *Manuals, Technical: General Style and Format Requirements*. Add the following statement immediately below the distribution statement wording: Public Affairs (PA) Case (or *Certificate*) Number. Submit recommended changes (or problems) with this TO to the TOMAs office listed in the AF TO Catalog. The exact wording is not critical.

3.19.4.1.3 Proprietary Data. If the distribution statement reason is Proprietary Data (distribution statements B and E only) add a TO title page statement of government rights to disseminate, use, copy, etc., the data. When creating a technical document containing company proprietary data, in addition to the distribution statement on the title page, the data owner shall mark each page that contains proprietary information with the word proprietary and the name of the company (e.g. Boeing Proprietary).

3.19.4.1.4 Supplements and Derived Data. Publish supplements using the distribution statement applicable to supplement contents, not necessarily the parent TOs distribution statement. If derived documents are generated from the parent technical data, apply the parent document distribution control markings to the derived documents, unless the purpose was to publish unrestricted data in an unrestricted document.

3.19.4.1.5 COTS Manuals. Distribution Statements must be assigned to COTS manuals when they are adopted as TOs. In cases where the Air Force has unlimited rights, this may be Distribution A, because these manuals are publicly available (a PA release certificate is still required). In some cases, the vendor may have copyrighted the manuals, and if the Air Force does not have a copyright release (usually marked on the title page), the distribution statement should be C or D. In rare cases, non-commercial contractor manuals may contain proprietary data in order to be considered proprietary; they must be marked by the vendor/contractor as shown in Paragraph 3.19.4.1.3, and will carry distribution statements B or E. Distribution statements and other title page notices and warnings listed below shall be placed on an Identifying Technical Publication Sheet (ITPS) cover page, filed in front of the COTS manual title page.

3.19.4.2 Export Control Statement. Mark documents that contain export-controlled technical data IAW the Arms Export Control Act or the Export Administration Act of 1979, as amended, with one of the following export control statements. Use the abbreviated statement only on documents without sufficient title page/label space to include the full statement, e.g. CD-ROM/DVD labels, reduced size TOs, etc.:

WARNING – This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C. 2751, et seq.) or the Export Administration Act of 1979, as amended Title 50, U.S.C., App. 2401, et seq. Violations of these export-control laws is subject to severe criminal penalties. Dissemination of this document is controlled under DoDD 5230.25.

OR

WARNING– Export Controlled.

3.19.4.3 Disclosure Notice. If a disclosure notice is required (reference MIL-STD-38784), apply the disclosure notice to all classified and unclassified TOs approved for release to a foreign government, except those assigned Distribution Statement A. The disclosure notice shall be on all classified and unclassified nuclear TOs. On CD/ROMs/DVDs, the Disclosure Notice will go in the content.txt file, as well as on the opening screen of each TO on the disk.

3.19.4.4 Disposition and Destruction Notices. Assign a Disposition Notice (for public release documents) or Handling and Destruction notice (for all other technical documents) IAW MIL-STD-38784. See TO 00-5-1 for specific disposition/destruction procedures for unclassified paper TOs and digital media.

3.19.4.5 Dissemination Notice. Notice to Accompany the Dissemination of Export-Controlled Technical Data. A copy of the Notice (DoDD 5230.25 Enclosure 5) must accompany every shipment of Export Controlled TOs. The Notice must be included with all E* accounts and U.S./Canadian DoD contractors. Do NOT include the Notice with F* accounts. The Notice must be included with all types of media, paper, digital, electronic, etc. Digital files (.pdf,.tiff,.jpeg,.wav,.avi,, etc.) Distribution via digital storage media (CDs, DVDs, etc.), must include a digital read-me-file of the Notice. Electronic/WA files housed in ETIMS or other electronic repository must include a digital copy of the Notice (.pdf) attached to beginning of the digital TO file or as an additional digital file. Distribution via electronic/digital means (emails, etc.), must be encrypted through all email transmissions and must include a digital (.pdf) copy of the Notice.

3.19.4.6 If necessary, the TCM shall request assistance with determining STINFO markings from the local STINFO Officer. For additional training on the STINFO program, see the courses at https://af-aqweb.deps.mil/pages/default.aspx or contact your local STINFO Officer.

3.19.5 Digital TO Security. Security issues and procedures are covered in DoDM 5200.01, Vol 1, AFI 16-1404, AFI 17–100, *Air Force Information Technology (IT) Service Management*, AFI 17–130, *Cybersecurity Program Management*, Air Force Systems Security Instruction (AFSSI) 8520, *Identification and Authentication*, and AFI 61-201 among others. User access to and distribution methods for digital TO files must provide adequate security for classified and limited-distribution TO data files (Paragraph 5.5). Classified TO files must be encrypted using a National Security Agency (NSA)-approved encryption algorithm, while limited-distribution files require a National Institute of Standards and Technology (NIST)-approved encryption system prior to being hosted on servers. Except for distribution statement A documents, TO files must be encrypted and hosted on a secure Internet https server with Public Key Infrastructure (PKI) certificate or user name and password access control.

3.19.5.1 Encryption. NIST has approved use of strong encryption technology (128-bit capable/export controlled) provided by the Secure Socket Layer (SSL) protocol for use with unclassified, limited distribution technical data. Each organization planning to provide access to TO/TO updates via the Internet must establish a secure server with the SSL protocol installed. Access to the server must be controlled by the use of PKI certificates or user names and passwords. In some cases, domain restrictions (.mil, .gov) might be used for DoD and/or government agency access, combined with user name and password access for authorized contractors. Additional information and assistance should be obtained from the local Communications (Comm) Squadron.

3.19.5.2 Password Protection.

CAUTION

Exercise extreme care when manipulating digital TO files as technical content must not be altered unless authorized in writing by the CE (Paragraph 2.1.3).

All secure servers must be protected by PKI certificates or user name/password access controls. The System Administrator (SA) is responsible for assigning user names and passwords for protection of a secure server. When necessary, the user name and password will be provided in a secure email message to TODOs requiring access to RACs and new baseline TO files. The SA is also responsible for periodically changing passwords to help prevent unauthorized access and protect the information on the site. TOMAs who previously chose to password protect digital TO files may be required to provide the password to select subscribers using an authorized, secure method. This will enable subscribers to manipulate digital TO files in support of their unique requirements, such as custom printing.

3.19.6 Controlling Distribution of Technical Orders. TOMAs must control the distribution of TOs to eligible recipients IAW DoDM 5200.01, Vol 1/ AFI 16-1404, AFI 61-201, and for reasons specified in this TO. For Air Force TO System implementation of the STINFO Process, TO Distribution Offices (TODOs) complete the primary distribution process on behalf of the Controlling DoD Offices (CDO), to any accounts and may make primary distribution to any accounts and sub-accounts based on mission requirements. If proprietary TOs must be distributed to Government-Owned, Contractor-Operated (GOCO) Accounts, the contractor personnel must have signed non-disclosure agreements on file with their company.

3.19.6.1 Export Controlled TOs. The TOMA, in conjunction with the TCM, will determine if any TOs containing export controlled data (DoDI 5230.24 and AFI 61-201) require sponsor approval to satisfy the distribution control requirements of AFI 61-201. In general, export controlled TOs may be released to all F*xxxx and E*xxxx accounts. FMS (D*xxxx) accounts must request TOs through the Security Assistance Technical Order Data System (SATODS) and have Foreign Disclosure Office (FDO) (IAW AFI 16-201) approval prior to release for initial subscription or requisition. AFMC Centers will document local procedures for controlling the distribution of export controlled data in a supplement to this TO. Exception: Nuclear Weapons TOs are managed at the AF Nuclear Weapons Center (AFNWC) and are not to be placed in SATODS.

3.19.6.2 Proprietary and Copyrighted Data. When a program acquires copyrighted data, the Air Force must receive at least limited rights allowing reproduction and distribution of the data for government purposes, IAW Defense Federal Acquisition Regulations Supplement (DFARS) clauses. Unlimited rights are recommended whenever possible. Proprietary data must be marked IAW Paragraph 3.19.4.1.3, and distribution limited to government personnel, unless specifically released by the owner of the data.

3.19.6.3 Linking to Other TOs or Web Sites. When a TO references other TOs or documents, hot links may only be used when the referenced TO or other data is of the same or lower restriction/classification. References may be made to other TOs or other data which have a higher restriction/classification, but not linked. The same rule applies to unclassified/unrestricted Internet sites: these can only hot link to other unclassified/unrestricted sites, although it can list the URLs of restricted sites.

3.19.7 Electronic Distribution. The methods specified in Paragraph 5.5 shall be used for secure electronic distribution of digital Controlled Unclassified Information (CUI). CUI includes technical data and TOs, engineering data, and other information listed in DoDI 5230.24 and AFI 61-201, and assigned distribution codes B through F.

3.19.8 Release of Restricted TOs and Data. TOMAs and FMMs are responsible for distributing TOs to authorized users. In some cases, this could include determining (in conjunction with the TCM) whether to release or withhold TOs requested by individuals or companies through the Freedom of Information Act (FOIA) process. FOIA requests for TOs marked D, E or F for Administrative or Operational Use, Proprietary Data or Direct Military Support shall be refused using Exemption Number 3 (DoDM 5400.07, *DoD Freedom of Information Act Program*). For determining whether it is appropriate to release a TO, it is USAF interpretation of DoD policy that Air Force Technical Orders are solely intended for direct support of military and weapon systems. As such, release shall only be authorized to U.S. DoD contractors as defined in DoDI 3200.14, *DoD Scientific and Technical Information (STI) Program (STIP)*, and DoDI 5230.24, *Distribution Statements on Technical Documents*. Other requests for Air Force TOs shall be referred to the Controlling DoD Office (CDO, generally the TCM or FMM). Example: although the CDO may make exceptions, others cannot; and may share Distribution Statement D TOs only with DoD units or with DoD contractors with active contracts for the weapon system covered by the TOs in question. The FMM is the responsible release authority for Accident Investigation Boards (AIB) requests; with regard to any possible public domain release of flight manual data. Contractors responding to Requests for Proposal (RFP), when qualified, may access relevant weapon system TOs in a Bidders Library or electronic file maintained by the RFP-issuing program office or contracting office IAW TO 00-5-1.

3.20 RIGHTS IN TECHNICAL DATA.

3.20.1 Definitions.

3.20.1.1 Technical Data. Recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation).

3.20.1.2 Non-Technical Data. 1) Data describing the contractor itself, or information incident to performance of contract (corporate information such as G&A, overheads, salaries, etc.) 2) Oral communications or information never recorded. 3) Physical manifestations of technical data, such as the very product whose design is described in the data (i.e., hardware).

3.20.2 Rights in Technical Data - Non-Commercial Items (DFARS 252.227.7013). TOs, commercial manuals, and contractor data may be copyrighted and/or contain proprietary data. TOs and non-commercial contractor data are procured with Unlimited Rights, Government Purpose Rights, or Limited Rights (see below) using Defense Federal Acquisition Regulation Supplement (DFARS) clauses at 252.227-7013. Commercial manuals are procured with the same types of rights using DFARS clauses at 252.227-7015. Unless otherwise agreed between the parties, if the manuals were prepared for or acquired by the government pursuant to the contract, the contractor should grant the government a license allowing reproduction, distribution, use and development of derivative works, or to have others do so for the government. (Derivative works are publications such as checklists and workcards developed from one or more basic manuals.) The distribution of the manuals outside the government shall be done strictly IAW the contract and applicable regulations (DFARS part 227.7103-5, etc.). For example, when the government has only limited rights in the data, the license is limited by the definition of limited rights in the DFARS. In unusual situations, the standard rights may not satisfy the government's needs or the government may be willing to accept lesser rights in data in return for other consideration. However, the licensor is not obligated to provide the government greater rights and the contracting officer is not required to accept lesser rights than the rights provided in the standard grant of license.

3.20.2.1 License Rights. The government obtains rights in technical data, including a copyright license, under an irrevocable license granted or obtained for the government by the contractor. The contractor or licensor retains all rights in the data not granted to the government. For technical data that pertain to items, components, or processes, the scope of the license is generally determined by the source of funds used to develop the item, component, or process. When the technical data do not pertain to items, components, or processes, the scope of the license is determined by the source of funds used to create the data.

3.20.2.2 Unlimited Rights. Unlimited rights means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so (DFARS 252.227-7013(a)(15)). Unless other rights as described in Paragraph 3.20.2.3 or Paragraph 3.20.2.4 have been agreed to in writing IAW DFARS 227.7103-5, the government shall have a non-exclusive, irrevocable, and worldwide unlimited right to technical data purchased under the terms of the contract. The government may use the work within the government without restriction, and may release or disclose the work outside the government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose the work on behalf of the government. The government's license includes the right to distribute copies of the work to the public for government purposes.

3.20.2.3 Government Purpose Rights. Government purpose means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so (DFARS 252.227-7013(a)(11)). Government purpose rights means the rights to use, modify, reproduce, release, perform, display or disclose technical data within the government without restriction; and release or disclose technical data outside the government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform display, or disclose that data for U.S. government purposes (DFARS 252.227-7013(a) (12)).

3.20.2.4 Limited Rights (DFARS 252.227-7013)(a)(13). Limited rights permit the government to use, modify, reproduce, release, perform, display or disclose technical data, in whole or in part, within the government. The government may not, without the permission of the party asserting the limited rights, release or disclose the technical data outside the government; use the technical data for manufacture; or authorize the technical data to be used by another party, except:

3.20.2.4.1 The government may reproduce, release or disclose such data or authorize the use or reproduction of the data by persons outside the government if reproduction, release, disclosure or use is necessary for emergency repair or overhaul; or

3.20.2.4.2 A release or disclosure of technical data (other than detailed manufacturing or process data) to, or use of such data by, a foreign government that is in the interest of the (U.S.) government and is required for evaluation or informational purposes;

3.20.2.4.3 Subject to a prohibition on the further reproduction, release, disclosure or use; and

3.20.2.4.4 The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure or use.

3.20.2.5 Copyrights. Rights clauses cover the release of data. Copyrights govern the reproduction and modification of data. According to DFARS clause 252.227-7013(f), any commercial or non-commercial publication TO which carries a copyright shall also contain a notice of copyright as prescribed under 17 U.S.C. 401 or 402. This notice shall be placed thereon by the contractor prior to delivery. If no copyright notice is placed on the work, the government obtains unlimited rights in the work. Otherwise, when claim to copyright is made the Contractor grants the government, and others acting on its behalf, a license to the work.

3.20.2.6 Proprietary Rights. Proprietary information is confidential information that constitutes a trade secret and/or information that is commercial or financial and confidential and privileged. Proprietary data is submitted to the government under a contract and is subject to protection by the contractor and the government. According to AFI 61-201 , when creating a technical document containing company proprietary data, in addition to distribution statement (B or E), mark each page that contains proprietary information with the word proprietary and the name of the company.

3.20.2.7 Digitization of Limited Rights Data. Documents, including commercial manuals, which are authorized for government reproduction, may be digitized for reproduction and/or distribution without affecting the authorization. Any supplemental data required to make the manual acceptable for use as a TO may be merged with the basic manual during the digitization process, unless specifically prohibited in a limited rights agreement.

3.20.3 Contracting for Greater Data Rights. If the government needs technical data pertaining to items developed at private expense to establish alternative sources it may, under certain circumstances, acquire greater rights in data. DFARS Subpart 227.7103-5, which sets forth the procedures to acquire greater rights, requires the acquisition of greater rights be stated as a separate CLIN.

3.20.4 Rights in Technical Data - Commercial Items (DFARS 252.227.7015). This DFARS clause provides the government specific license rights in technical data pertaining to commercial items or processes. DoD may use, modify, reproduce, release, perform, display, or disclose data only within the government. The data may not be used to manufacture additional quantities of the commercial items and, except for emergency repair or overhaul, may not be released or disclosed to, or used by, third parties without the contractor's written permission.

SECTION VII SOURCE DATA

3.21 GENERAL.

Source data, as used in this TO, is information of any sort used to develop or update TOs. The contractor uses source data from program development and test for program TOs. The TOMA must acquire any source data required to develop or update non-program TOs (e.g., weapon data to update aircraft loading TOs) or to assist associated contractors with TO development or update (e.g., a support equipment vendor). The TOMA must follow up on source data delivery to ensure that TOs to be developed or updated will be published in time to meet program milestones.

NOTE

Source data developed organically by the Air Force does not require certification, but must be verified prior to delivery or incorporation into a TO.

3.21.1 Types of TOs Requiring Source Data. Types of TOs where source data would be required include, but are not limited to, Aircraft Emergency Rescue, EOD/RSP, Munitions Loading, Munitions Positioning and Tiedown, Weapons Delivery, and Explosive Storage and Maintenance manuals. Source data on support equipment provided by other contractors is required for prime contractor developed TOs.

3.21.2 Procedural Source Data. Procedural data is a special category of source data required during most TO development and acquisition programs. This data is a similar and organized grouping of the data required to perform operations and maintenance tasks on a military system or commodity item. The data is acquired when development of a stand-alone TO is inappropriate, or when TOs managed by other agencies must be updated. The content of procedural data is determined by the appropriate contract requirements, and includes text, diagrams, illustrations, charts, schematics and other data required to describe the procedures and support equipment.

3.21.3 Source Data OPRs. OPRs requiring source data must be included in program TO Planning/Requirements Conferences (Paragraph 3.4.1) to ensure data requirements are specified accurately in RFPs and contracts. OPRs munitions-unique OPRs and requirements are covered in this chapter.

3.21.4 Delivery. The contractor provides certified, adequate, safe and accurate source data as required by the contract. The TOMA must work with the source data recipient to ensure that data provided is adequate. Delivery requirements may differ between OPRs and users as well. In some cases a single delivery may be sufficient, while other cases require deliveries or updates throughout the period of the contract.

3.22 ACQUISITION OF SOURCE DATA.

3.22.1 Development. Many different MIL-SPECs and DIDs may be used to procure source and procedural data, including those for Standard Data Packages (SDPs), engineering drawings, test and inspection reports, interface control documentation, and supportability analysis tasks. EOD source data is acquired using DI-SAFT-80931, *Explosive Ordnance Disposal Data*. Aircraft Emergency Rescue Information (Fire Protection) source data is acquired using DI-TMSS-81532, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services) Source Data*. Existing contractor data may be acquired through the contract Data Accession List. If existing TOs managed by the TOMA or temporarily placed under TOMA control require updating, Table 2 of the TMCR, TM 86-01 may be used to obtain updates, supplements or source data.

3.22.2 Acquisition Procedures. Procedures for source data acquisition are the same as for TOs. Source data requirements are determined during the TO Guidance Conference. In-Process Reviews are held as required. The contractor applies internal certification management processes and delivers an adequate, accurate data package for Air Force verification. After verification is complete, the contractor makes corrections as required; the package receives a final review if necessary and is delivered to the appropriate agency.

3.23 NONNUCLEAR WEAPONS DELIVERY SOURCE DATA - WEAPONS SOURCE DATA PACKAGE (AIRCRAFT -34 SERIES TECHNICAL ORDERS AND TO 1-1M-34).

The Weapons Source Data Package (WSDP) provides aircrew weapons delivery information for newly developed or modified nonnuclear munitions.

3.23.1 Requirements. The WSDP is developed to support four main requirements: (1) AFMC Development Test and Evaluation (DT&E); (2) Initial Operational Test and Evaluation (IOT&E); (3) revisions to both aircraft-specific weapons delivery manuals (-34 series) and the TO 1-1M-34 series Standard Volumes; and (4) user-unique Flight and/or Weapons Delivery Planning Programs. (Planning Programs provide the user with automated ballistic solutions for mission planning.)

NOTE

For weapon systems with authorized release to FMS countries, a separate WSDP is developed for each country with approved FDO release IAW AFI 16-201.

3.23.2 Contents. WSDP data consists of a section for generic munitions data and sections of aircraft-specific data for each aircraft which will employ the munitions item. WSDP content is described in MIL-DTL-38384, *Manuals, Technical – Aircraft Nonnuclear / Nuclear Weapon Delivery Procedures*.

3.23.3 Development. Delivery envelopes for unguided and laser guided GBU-10/12/16/27/28/54 series munitions are normally developed by the Air Force SEEK EAGLE Office (AFSEO), 46 SK/SKA, from computer simulation programs. Envelopes for precision guided munitions (six degree of freedom or 6DOF weapons) are normally provided by the weapon contractor as a part of the WSDP.

3.23.4 Procedures and Responsibilities.

3.23.4.1 WSDP acquisition participants are the munitions TOMA, MAJCOM(s), aircraft PMs, AFLCMC/LZSA-Eglin (for TO 1-1M-34), the Responsible Test Organization (RTO) and AFSEO.

3.23.4.2 The contractor develops the WSDP to meet established program schedules; the package should be delivered at least 30 calendar days prior to the start of DT&E. During IPRs, the WSDP is reviewed for use of common and standard terms for munitions items. Contractor QA is limited to Desk-Top Analysis.

3.23.4.3 RTOs and AFSEO use the WSDP during aircraft/munitions testing to verify procedures. AFSEO initiates action, if required, to incorporate the weapons data into the Combat Weapon Delivery Software (CWDS) mission planning program. The testing agencies document any discrepancies and forward them to the munitions TOMA for action. An updated WSDP must be available 30 days prior to the start of IOT&E.

3.23.4.4 MAJCOMs and support agencies use the WSDP during IOT&E and forward any additional discrepancies to the munitions TOMA.

3.23.4.5 The munitions TOMA distributes the final WSDP to the appropriate aircraft PMs, AFLCMC/LZSA-Eglin, 102 West D Ave, Suite 160, Eglin AFB FL 32542-5415, DSN 875-7990 (for TO 1-1M-34), and AFSEO, 46 SK/SKA, 205 West D Ave, Suite 348, Eglin AFB FL 32542-6865, DSN 872-0450. The TOMA will also provide initial hardware delivery and user need dates (SEEK EAGLE PMD 5077) for informational and work effort planning purposes.

3.23.4.6 AFSEO issues the Certification Recommendation (CR) upon completion of SEEK EAGLE testing. The CR is required by the aircraft PMs prior to formalization of the weapons delivery TOs.

3.23.4.7 The aircraft PMs update each applicable aircraft weapons delivery TO, make formal distribution, and issue the Certification Completion Notification.

3.23.4.8 AFSEO develops and maintains CWDS through a Mission Planning Enterprise Contract (MPEC) at Hanscom AFB, MA. At the completion of Functional Qualification Test (FQT) by the developer, a copy of the CWDS is sent to 84 SCSG/GBSVM either by AFSEO (Joint Mission Planning System versions) or the developer (Portable Flight Planning Software versions) for distribution to the Developmental Test/Operational Test (DT/OT) organizations. When OT certifies the CWDS version, 84 SCSG/GBSVM makes formal distribution to the field. Weapon source data packages are used to correctly add new weapons to CWDS.

3.23.4.9 AFLCMC/LZSA-Eglin completes the update of TO 1-1M-34.

3.24 NONNUCLEAR MUNITIONS AND AIRCRAFT LOADING SOURCE DATA - STANDARD DATA PACKAGE (AIRCRAFT -33 SERIES TECHNICAL ORDERS AND TO 1-1M-33).

3.24.1 Requirements. A Standard or Source Data Package (SDP) containing nonnuclear munitions loading source data is required during the development and testing of new munitions items or systems, for integration of existing munitions with new aircraft, for integration of new munitions with new aircraft, and for major modifications to existing aircraft/munitions configurations.

3.24.2 Contents. SDP contents are specified in MIL-DTL-9977. *Manuals, Technical - Nonnuclear Munitions and Nuclear Weapons Basic Information, Loading Procedures Manuals, and Standard Data Packages and Loading Procedures, NATO Stage B Cross-Servicing, Functional Check Procedures, and End of Runway Procedures Checklists,*. The SDP contains munitions descriptive data, munitions preparation data, and loading procedures, but NO aircraft-specific procedures or data. The SDP must be verified and approved before use.

3.24.3 Development. The SDP is maintained by the munitions acquisition TOMA.

3.24.4 Nonnuclear Munitions Loading TOs. The -33 series TOs and checklists contain descriptive data and procedures for loading nonnuclear munitions on or into Air Force aircraft. TO 1-1M-33 contains descriptive data for munitions, suspension equipment, guns and gun pods, support equipment, and supplementary information.

3.24.5 Participants. SDP acquisition participants include the TOMA, MAJCOM(s), aircraft PMs, AFLCMC/EBHMA (for the SDP), AFLCMC/LZSA-Eglin (for TO 1-1M-33), the RTO and AFSEO.

3.24.6 Procedures for New Munitions. The following steps outline the sequence of events for incorporation of new munitions items on new or existing aircraft. Paragraph 3.24.7 provides abbreviated procedures for incorporating existing munitions into additional military systems.

3.24.6.1 The contractor develops the SDP to meet established program schedules; delivery should be at least 30 calendar days prior to the start of DT&E. During IPRs, the SDP is reviewed for use of common and standard terms for munitions items. Contractor certification is limited to Desk-Top Analysis.

3.24.6.2 AFSEO or equivalent reviews and coordinates the Source Data for RTO use during DT&E.

3.24.6.3 The test activity or designated office prepares local guidance i.e. -33 checklist, munitions procedures etc., from the source data. Non-procedural munitions technical documentation/data packages (identification, inspection, storage and handling to include an IHC for hazardous items) will be coordinated through the local RTO/DTO wing's SES/SEW, QA and Munitions Flight; approval level is the RTO/DTO wing's SES/SEW office. All other checklists/procedures will comply with MILSPEC format and verified for use IAW local RTO directives to support DT&E and SEEK EAGLE certification. In addition, procedures and checklists used by RTO require MXG/CC (or equivalent) approval.

3.24.6.4 After completion of DT&E and SEEK EAGLE testing, comments or corrections to the SDP are coordinated with AFSEO and sent to the TOMA.

3.24.6.5 The TOMA will initiate verification scheduling in coordination with the munitions OT&E manager and the lead MAJCOM. Verification should be scheduled within 120 days after the estimated receipt of the revised SDP. The lead MAJCOM will develop and publish a coordinated verification schedule based on the availability of aircraft, personnel and equipment required for verification.

3.24.6.6 The AFSEO reviews and approves the revised SDP, and forwards the package through the TOMA to affected agencies (including AFLCMC/LZSA-Eglin) at least 90 days prior to the scheduled start of verification. The affected aircraft PMs develop (or contract for development of) preliminary -33 loading procedures for each aircraft involved, and provide them to the affected MAJCOMs, AFLCMC/EBHMA, and the OT&E manager at least 30 days prior to verification.

3.24.6.7 Verification participants will include representatives from each aircraft PM involved, affected MAJCOMs, the OT&E manager, AFLCMC/EBHMA SDP Office, the munitions TOMA, and the AFSEO, if required. The lead MAJCOM will provide the Verification Team Manager (VTM) for multi-aircraft verifications, while the aircraft PM provides the VTM for single aircraft verifications. The load crew is provided by the MAJCOM. Both the SDP and the preliminary -33 procedures are verified.

3.24.6.8 After completion of verification, AFLCMC/EBHMA converts to an approved SDP. Required verification changes to the SDP are sent through the munitions TOMA to the contractor for update. Changes to preliminary -33 procedures are routed to the aircraft TOMAs for similar update.

3.24.6.9 The verified SDP and preliminary -33 procedures, marked: For OT&E Use Only, are used for the duration of OT&E. The test team continues to evaluate the SDP, and preliminary aircraft -33 procedures during OT&E and submits comments and recommended corrections to the respective OPRs.

3.24.6.10 Proposed updates and corrections are approved by a TORB consisting of the TOMA(s), AFSEO, the MAJCOMs and AFLCMC/EBHMA. AFLCMC/EBHMA updates and distributes the approved SDP to aircraft PMs and AFLCMC/LZSA-Eglin. The PM TOMAs will use the SDP and -33 procedures to develop formal aircraft -33 TOs. The munitions TOMA will maintain the currency of the SDP.

3.24.6.11 Aircraft PMs are responsible for providing AFLCMC/EBHMA and AFLCMC/LZSA-Eglin with updated descriptive data (including illustrations) for new or modified aircraft-peculiar test equipment, Munitions Material Handling Equipment, special tools, etc., required for inclusion in TO 1-1M-33 and 11A-1-63, *Munitions Assembly Procedures*. AFLCMC/EBH and AFLCMC/LZSA-Eglin will use the SDP and PM inputs to update the TOs.

3.24.6.12 AFSEO flight certification is dependent upon publication of formal -1,-33, and -34 TOs and update of TOs 11M-33, 1-1M-34 and 11A-1-63. This must be accomplished in time to meet the need date specified in the SEEK EAGLE PMD.

3.24.7 Procedures for Existing Munitions. The following abbreviated steps are for incorporation of existing munitions on additional or new aircraft.

3.24.7.1 The MAJCOM requests AFSEO certification for additional aircraft which require certification with an existing munitions or stores item.

3.24.7.2 The aircraft TOMA (or munitions TOMA during munitions acquisition) will request the MAJCOM to coordinate with the affected agencies and schedule verification of the loading procedures.

3.24.7.3 The aircraft TOMA requests the applicable SDP(s) from AFLCMC/EBHMA SDP and develops (or contracts for the development of) preliminary -33 loading procedures. The procedures must be available for review at least 30 days prior to the start of verification. Verification and update of procedures are the same as for new munitions.

3.24.7.4 Upon completion of AFSEO testing and receipt of the CR, the aircraft PM will provide any changed or modified data to AFLCMC/LZSA-Eglin for inclusion in TO 1-1M-33 and to AFLCMC/EBHMA for inclusion in TO 11A-1-63, incorporate necessary changes into the aircraft -33 TO and issue the certification completion notice.

3.25 NONNUCLEAR EXPLOSIVE ORDNANCE DISPOSAL (EOD)/RENDER SAFE PROCEDURES (RSP) SOURCE DATA.

EOD/RSP source data, developed IAW DID DI-SAFT-80931, provides information and procedures for the development and/or update of joint service Category 60 TOs on newly developed or modified bombs and warheads; fuses and fusing systems; guided and ballistic missiles, grenades, artillery, mortar, rocket, and small arms ammunition; mines and torpedoes; depth charges, demolition charges, and pyrotechnics; clusters and dispensers; cartridge- and propellant-actuated devices (such as aircraft egress systems); and all similar or related items or components which may cause injury to personnel or damage to material. This includes ALL new or modified aircraft, munitions, delivery systems such as Unmanned Aerial Vehicles and Unmanned Ground Vehicles and ordnance items that contain explosives, propellants, and/or hazardous chemicals.

3.25.1 EOD TOs. Category 60 TOs (and source data) differ from maintenance TOs in that EOD TOs provide information and guidance rather than detailed step-by-step procedures. These TOs are typically used in accident, incident, mishap, dud-dropped and dud-fired situations where the systems or items have been damaged or failed to function as designed and standard TO maintenance procedures cannot be used.

3.25.2 Air Force Liaison. AFCEC/CXE is the Air Force centralized agency for EOD data acquisition and liaison with the NSWC IHEODTD.

3.25.3 Requirements. The EOD source data package is developed to support three main requirements: (1) RTO need for emergency EOD, RSP and (if required) recovery procedures during DT&E operations, product improvement testing, failure analysis, and initial space vehicle deployment; (2) MAJCOM need for emergency EOD and RSP during OT&E operations; and (3) Development of the Joint Service Category 60 TOs by NSWC IHEODTD.

3.25.4 Participants. The TOMA will invite EOD representatives from AFCEC/CXE, the RTO, and MAJCOMs to the TO Planning/Requirements Conference. AFCEC/CXE will normally be delegated as the representative for other EOD activities. At the conference, the representatives will identify and justify requirements for data for EOD operations, and commodities and recovery equipment to support EOD TO certification and verification, and determine delivery schedules. EOD SDP is developed IAW DID DI-SAFT-80931.

3.25.5 Delivery. Critical delivery dates are initial delivery for DT&E, delivery for OT&E, and delivery for TO development. TO development may take up to 12 months, depending on availability of hardware for verification. DoD requires delivery of verified TOs 30 days prior to fielding/stockpile (DoDD 5160.62 and AFI 32 -3001).

3.25.6 EOD SDP Procedures.

3.25.6.1 The contractor develops the SDP IAW DI-SAFT-80931. The package should be delivered at least 60 calendar days prior to the scheduled delivery of assets for Air Force testing. During IPRs, the SDP is reviewed for conformance to item and system configuration and identification of Hazardous Item Recovery Candidates required for recovery and test failure analysis. AFCEC/CXE or a designated representative will participate in the Contractor certification process.

3.25.6.2 The AFMC EOD RTO supporting system or commodity testing will integrate the SDP data into the Test Support Project for the system or commodity and submit the project to a Safety/Hazard Review Board for approval before use. During DT&E, the RTO will document any comments or discrepancies with the SDP on an AFTO Form 27, and forward the form to the TOMA and AFCEC/CXE. If at any time the data is determined to be no longer safe for use (due to errors in the data, modifications to the hardware, or other reasons), the RTO will stop testing, notify the TOMA of actions required to resolve the problem(s), and obtain corrections prior to continuing testing. AFCEC/CXE and the MAJCOM EOD representative must review and approve the DT&E-revised SDP prior to further use.

3.25.6.3 Procedures for OT&E are the same as for DT&E, except that the EOD RTO is usually a MAJCOM agency and must ensure the MAJCOM has approved the data for use. The OT&E-revised SDP is used to support development of the joint service Category 60 TO. The TOMA will re-verify the user TO need date and ensure the AFCEC/CXE schedules have incorporated the date.

NOTE

NSWC IHEODTD is a working capital fund organization and charges a fee based on EOD TO SOW complexity.

3.25.6.4 Once the source data package is received by AFCEC/CXE, the SDP is forwarded to NSWC IHEODTD. NSWC IHEODTD formulates a SOW and cost estimate to create or revise an EOD TO. NSWC IHEODTD provides a copy of the SOW to the responsible program office for funding. Once the final SDP (i.e., configuration lock) and funding is received, the TO should be completed in 180 days. AFCEC/CXE initiates the joint service development project with NSWC IHEODTD and establishes a distribution need date, based on the Required Assets Available (RAA) and/or the Initial Operational Capability (IOC) date of the weapon system. The NSWC IHEODTD in concert with the four service detachments will develop, validate, verify and publish the TO for DoD EOD use. Distribution and publishing will be via the Joint EOD Portal and JEOD MFK software. JEOD MFK software is distributed quarterly (Mar, Jun, Sep, and Dec). Some foreign customers may receive EOD TOs in Adobe.PDF format when the NSWC IHEODTD International Programs Office (IPO) determines them releasable.

3.25.6.5 The TOMA monitors the development process to ensure required support equipment is available, any hardware configuration changes are forwarded, and delivery schedules will be met. If verified TOs will not be available in time to meet DoD and user requirements, the TOMA must work with AFCEC/CXE to develop interim support procedures.

SECTION VIII DIGITAL TECHNICAL ORDER AND TECHNICAL MANUALS SPECIFICATIONS AND STANDARDS (TMSS) REQUIREMENTS

3.26 DIGITAL TECHNICAL ORDER DATA.

3.26.1 Policy. All major TO modification programs must perform a Cost Benefit Analysis (CBA) to acquire, convert legacy and sustain TOs IAW ASD-S1000D and MIL-STD-3048. If the CBA does not support or justify development or conversion to S1000D, TOs shall be developed in accordance with current TMSS. Program-specific TO requirements must be identified using the S1000D Decision Point Tool located at https://techdata.wpafb.af.mil/tmss/index.html to identify Program-specific functionality requirements and business rules, included in the program TMCR and documented in the TOLCMP. The AFLCMC/LG TO Home Office must be consulted by the Program Office TOMA for advice, assistance, and approval in developing, publishing and using these documents. In all cases of S1000D development, programs shall adhere to MIL-STD-3048. Refer to https://cs2.eis.af.mil/sites/12316.

3.26.1.1 The authoritative version of ASD-S1000D and MIL-STD-3048 are identified in the TMCR (Paragraph 3.6.1) document. The CBA tools, TMCR template, USAF S1000D Decision Point Tool located at https://techdata.wpafb.af.mil/tmss/index.html and TOLCMP template, are available on the TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531.

3.26.1.2 For modification programs, if the CBA does not support or justify development or conversion to S1000D, TOs shall be sustained in existing digital formats in compliance with current TMSS. Before converting legacy (existing) TO data to a new authoring format, use and changeability must be considered. In many cases, converting hard-copy TOs to word-searchable PDF files is sufficient for user needs, and is compatible with ETIMS distribution and viewing.

3.26.1.3 Type 2 Interactive Electronic Technical Manuals (IETMs) and Interactive Electronic Technical Publications (IETPs) are currently exempt from distribution in ETIMS until such time as ETIMS becomes capable of handling these eTOs. (See waiver procedures and format at https://cs2.eis.af.mil/sites/12837/default.aspx). As part of the Type 2 IETM/S1000D based TO development process, the program office shall be responsible to establish and maintain a distribution system capable of distributing the TOs. However, as the Type 2 IETM/S1000D TOs are developed, the TOMA shall index them in ETIMS (-WA-2) so prospective users can begin establishing subscriptions. The ETIMS Catalog shall be maintained by the TOMA for IETM/S1000D based TOs.

3.26.1.4 AF TO Programs desiring to implement S1000D/IETM initiatives shall utilize all available/applicable AF (APL) tools and resources for the implementation and organic sustainment of IETM/S1000D tech data, i.e., Content Management System (CMS), distribution and COTS/GOTS viewing software, etc. Systems and/or tools provided by the contractor shall be made interoperable with AF infrastructure/technology.

3.26.1.5 S1000D/IETM programs currently utilizing contractor provided technology such as viewer software, distribution systems and or content management solutions shall make every effort to migrate tech data into available/approved Air Force solutions if technically interoperable and economically practical.

3.26.1.6 To deviate from AF TMSS or S1000D standards when acquiring, converting, or sustaining TOs, TOMAs must request a program waiver through their PM, Lead Command/A4 and Center Home Office to HQ AFMC/A4. The request must include a CBA showing authoritative savings over the life-cycle of the program and proof of compatibility with ETIMS and all other AF information systems and product life cycle support databases.

3.26.1.7 Legacy programs shall use AF TMSS SGML-tagging DTDs, without modification, for sustainment of legacy TMSS developed TOs. TO Revision updates to GML and TMSS SGML TOs shall be prepared to the most recently approved standard, non-legacy version of TMSS DSS and corresponding output specification. A waiver prepared according to Paragraph 3.26.1.6 must be approved to deviate from this policy unless BCA (Paragraph 3.26.1) determines migration to S1000D is more cost effective. AFLCMC/HIAM maintains a web site (https://cs2.eis.af.mil/sites/12316/default.aspx) where all of the standard DSS are maintained and made available to acquisition.

3.26.1.8 The following guidelines apply to DSS decisions:

3.26.1.8.1 When cost effective, always choose the new acquisition DSSs. This ensures TO data is delivered in the most current AF format for immediate digital uses and allows efficient reformatting and reuse of the data.

3.26.1.8.2 Make full use of the hyper-linking capabilities that are provided in AF DSSs. These capabilities include full and complete use of SGML constructs IDREF, XREF, EXTREF, EXREFID, HYTIME linking, and calls to external processes wherever applicable in the data.

3.26.1.8.3 When a hyper-linking, Web browser-type application is required and the contractor is converting legacy TO data that does not comply with the new acquisition TMSS, re-authoring may be required to apply appropriate structure (primary paragraphs, subparagraphs, steps, etc.) and titles must be applied (created) where missing in the legacy TO, using the new acquisition TMSS as a guide.

3.26.1.8.4 Ensure that page-oriented output produced for distribution from SGML (or other structured source formats) is generated through use of the same publishing system that will be utilized for sustainment of the technical order data. Failure to do so can result in increased printing and distribution costs since the output produced by different publishing systems differs even when the same structured source data is utilized for publishing.

3.26.2 Development of Digital Support Suites. Contractors proposing use of commercial TM specifications or other NGS, obsolete TMSS or TMSS with no Air Force DTD/schema and/or stylesheets available from AFLCMC/HIAM, may develop DSS components needed for use as a final resort. The contractor will be responsible to support the associated costs of DTD and update for the usable lifetime of the DSS. The only exception is when AFLCMC/HIAM adopts the DSS for Air Force use. If the acquiring organization authorizes the contractor to construct their own DTDs/schemas or DSS (including stylesheets, such as XSLT, XSL-FO, CSS, and RSS), the contractor must contact AFLCMC/HIAM for guidance prior to initiating the development process. The following procedures shall be followed:

3.26.2.1 Legacy programs shall use AF TMSS SGML-tagged DTDs, without modification, for sustainment of legacy TMSS developed TOs. AFLCMC/HIAM maintains a Web site where all of the standard DSS are maintained and made available to acquisition (https://cs2.eis.af.mil/sites/12316/default.aspx). These DSS provide the SGML templates to be used, and are part of the governing specification or standard. The DSS categorized as new acquisition are the most current versions of AF TMSS standards. Those DSS categorized as legacy are not as compliant to the current TMSS, but have options built in to allow existing (legacy) TOs to be captured in a more standardized format using SGML. If the program requires hyper-linked, interactive TOs, legacy DSS will not provide the desired outcome.

3.26.2.2 For TOs that will be delivered to the AF and organically maintained, the contractor must submit a proposed complete DSS through the PCO and TOMA to AFLCMC/HIAM for approval to ensure complete compatibility with ETIMS and the AF Viewer.

3.26.2.3 AFLCMC/HIAM is the AF approval agency for all non-AF DTDs/schemas and stylesheets to be used for AF organic TO maintenance. Approved offeror-proposed specifications will be added to the program TMCR, by contract modification if necessary. DSS submitted and approved in execution of a contract become the property of the government. **EXCEPTIONS**: DSS for Space and Missile TOs are managed and approved by AFSPC. If TOs are to be maintained by the contractor for the life of the system, SGML and XML based tools developed for electronic TOs are not restrained to ETIMS compatibility.

3.27 USE OF TECHNICAL MANUAL (TM) SPECIFICATIONS AND STANDARDS (TMSS).

3.27.1 TMSS Selection. Preference shall be given to specifications and standards developed under DoDM 4120.24, *Defense Standardization Program (DSP) Procedures*. Air Force TM Standards, MIL-DTL specifications (AF-TMSS) with attached DTDs/schemas and stylesheets are required for TO acquisitions.

3.27.1.1 When these are not available for a specific type of TO or a program decision has been made to use non-government standards (except as noted in Paragraph 3.27.1.2), approval to use other government performance or non-government (commercial) specifications and standards may be requested from HQ AFMC/A4F. The contractor may also suggest or develop commercial substitutes for the approved government TMSS, but use is subject to Air Force approval. RFPs and contracts must reflect this policy.

3.27.1.2 The TOMA must refer to the ASSIST database (http://quicksearch.dla.mil/) to ensure only the latest version TMSS are placed on contract.

NOTE

Specifications/Standard Interface Records (SIRs) apply to programs in sustainment for new and changed TOs.

3.27.1.3 TMSS Approval. Only AF-approved MIL-STDs and MIL-SPECs listed in the TMCR should be used for Air Force programs. Other military services' TMSS which have NOT been adopted for Air Force use, but which otherwise meet Acquisition Reform guidelines, may be used on joint-service programs when the TMSS will promote commonality and reduce costs. Approval from the Air Force TMSS preparing activity (AFLCMC/HIAM) and a program-specific waiver from HQ AFMC/A4F are required.

3.27.1.4 New TO Types. Submit proposals for new types of TOs (not identified in TO 00-5-1) to HQ AFMC/A4F, for review and disposition. This does not apply to COTS manuals purchased under acquisition reform guidelines and included in the TO system.

3.27.1.5 Upgrading TMSS. When revised specifications applicable to a program are published, the TOMA must review them for impact to the program and, in conjunction with the contractor, using command and support agencies, determine if a contract change should be initiated to incorporate the changes. Consider factors such as safety, usability, life-cycle cost and schedule.

3.28 SPECIFICATION/STANDARD TAILORING, INTERPRETATION, DEVIATIONS AND WAIVERS.

3.28.1 Tailoring Guidance. Approved MILSPECs and MIL-STDs (TMSS) will be tailored by selecting from the approved options, but **no other additions or deletions** are authorized without written approval from the preparing activity, provided IAW DoDM 4120.24. For AF TMSS, the preparing activity is AFLCMC/HIAM (or for space and missile TMSS, AFSPC). Only formal DID revisions can add requirements to DIDs. DIDs may be tailored down by removing excess requirements.

3.28.2 Tailoring Documentation. All TMSS tailoring will be documented in the Specification/Standard Interface Record (SIR) for that specification or standard and included in the TMCR, by contract modification, if necessary. Programs should utilize the TMSS Tailoring Tool located at https://techdata.wpafb.af.mil/tmss/index.html to capture all tailoring requirements, and attach the file output to the SIR section within their TMCR. The basic TMCR already contains SIRs specifying the AF-only options for joint-service TMSS, but even these TMSS may be further tailored for a specific program. The Instruction to Offerors will direct the offeror to complete tailoring the joint-service TMSS, and add SIRs for other TMSS recommended for the program. If revised TMSSs replace those on contract, new SIRs are also required.

3.28.3 TMSS Clarification. Contractors may request clarification of specification requirements or government intent through submission of Specification Interpretation Documents (SID) responses which affect the scope of the contract will be documented in the SIR.

3.28.4 Deviations and Waivers. Contractors may request the TOMA to apply to TO policy office (AFMC/A4F) for deviations from or waivers to provisions in TMSS. These requests must include an objective justification and evaluation of the impact on: (1) time and material for the users (operating command and support agencies; (2) life-cycle cost of the publication and equipment covered by the publication; (3) acquisition cost; and (4) preparation and/or delivery in digital format. The TOMA will submit deviation and waiver requests IAW Paragraph 1.2.1. Approved requests will be documented in the applicable SIR.

3.28.5 Copies. Copies of SIRs, SIDs and other program documents which could affect TMSS content will be provided to AFLCMC/HIAM for information. (Appendix B.)

CHAPTER 4
TECHNICAL ORDER MANAGEMENT DURING SUSTAINMENT

4.1 TECHNICAL ORDER SUSTAINMENT.

At the completion of the technical order development and formalization process, the TO enters the sustainment phase of the TO lifecycle. It is the responsibility of the Technical Order Manager/Agent (TOMA) to ensure the sustainment process is implemented to ensure currency, completeness and accuracy for support of affected equipment until equipment disposal. Sustainment includes: updating, numbering, indexing, publication (editing& printing), archiving and delivery to the user. The TO content is managed by the Technical Content Manager (TCM) responsible for the equipment covered by the TO, as identified in the ETIMS Catalog record. Printing, distribution, and overall sustainment management is controlled by the assigned TOMA. The Technical Order Life Cycle Management Plan (TOLCMP) describes the TO sustainment activities. See Paragraph 3.3.2.1 for TOLCMP requirements.

4.1.1 Functions and Corresponding Forms. All TO change recommendations and submittal methods are known collectively as Recommended Changes (RCs).

4.1.1.1 Prepare TM Change Package Function. Approved RCs from all sources are aggregated by TOMA and once approved by the TCM as source data, used by the TCM/TOMA to develop a TO update package that will document the exact wording of approved changes for publication in the TO update. The following forms can be used to initiate a recommended change:

4.1.1.2 AFTO Form 22, *Technical Manual (TM) Change Recommendation and Reply*. TO 00-5-1 contains practices and detailed instructions for initiating, reviewing and evaluating AFTO Form 22. Completed forms are submitted via email IAW Paragraph 5.5.4 and, if approved, an AFTO Form 252 is prepared by the TCM.

4.1.1.3 AF Form 847, *Recommendation for Change of Publication*. AFI 11-215 contains policy and procedures for use of AF Form 847 for submitting changes to Flight Manual Program (FMP) TOs.

4.1.1.4 AFTO Form 27, *Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval*. Chapter 3 contains policy and procedures for use of AFTO Form 27 to report discrepancies or recommend improvements to Preliminary TOs. AFTO Form 27 shall also be used for the approval of verification completion for revisions, if necessary. The AFTO Form 252 process should not be used to submit proposed changes for preliminary TOs or record verification of preliminary TOs.

4.1.1.5 Source, Maintenance and Recoverability (SMR) Code Change Request. Submit an AFTO Form 22 IAW TO 00-5-1 and TO 00-20-3, *Maintenance Processing of Reparable Property and The Repair Cycle Asset Control System*. Once a recommendation for SMR code change is approved, the TCM will submit an AFTO Form 252 for updating the TO.

4.1.1.6 AFMC Form 202, *Nonconforming Technical Assistance Request and Reply*. Depot maintenance activities will use the AFMC Form 202 to request and receive technical data for procedures and repairs beyond existing TO authority, IAW AFMCMAN 21-1, *Air Force Materiel Command Technical Order system Procedures.*

4.1.1.7 AFTO Form 252, *Technical Order Publication Change Request*. The AFTO Form 252 is the official form to direct changes to AF TOs. An AFTO Form 252 can include content from one or more approved RCs or can be internally generated by the TCM/FMM. The AFTO Form 252 provides word-for-word instructions on how the TO will be updated. See Figure 4-1 for completion instructions. Each internally generated AFTO Form 252 will have a unique Local Control Number (LCN). An RC-generated AFTO Form 252 will inherit the Control Number of original RC.

NOTE

For Technical Management Information System (TMIS) users, use of TMIS system generated LCNs are authorized.

4.1.1.7.1 Create an LCN for internally-generated RCs as follows (without the spaces):

LOCAL CONTROL NUMBER	5	1M	OOLZPTP	8	001	AA
Position 1 - Identifies the RC as FMM or TCM generated	5					
Position 2-3 - Command Designator Code for AFMC		1M				
Position 4-10 - Preparing activity organization and office symbol (Must total 7 characters; use preceding zeros if needed)			OOLZPTP			
Position 11 - Last digit of current calendar year				8		
Position 12-14 - Control number; start with 001 each calendar year. If more than 999 internal RCs are generated by any one preparing activity in any calendar year, continue with A01, A02…B01, B02….etc.					001	
Position 15-16 - The Project Code will be capital letters, 2 characters, i.e., AA, AB, AC, etc., that can be used by programs to track special projects. This 2-letter Project Code will immediately follow the LCN, if needed.						AA

4.1.1.7.2 When discrepancies are detected during the Data Vault construction effort (mining existing IPBs to build the Bill of Materials (BOM) for weapon systems, components and equipment), they will be documented on AFTO Form 252 with LCNs beginning with four (4). This will allow tracking these discrepancies apart from other TO issues.

4.1.1.7.3 When implementing Item Unique Identification (IUID) instructions, the LCN will begin with three (3) on any associated AFTO 22 or AFTO 252. This will allow tracking IUID-related updates apart from other TO issues.

4.1.1.8 AFTO Form Special Handling (SH) 252. Special Handling (SH) AFTO Form 252 may be issued to expedite a permanent change or RAC to a TO as a result of an AFMC Form 202 that was used to prevent a work stoppage at a depot repair facility. A formal TO change must be distributed within 120 days of an approved AFMC Form 202. If the 120 day formal TO change time limit cannot be met, an IOS coversheet (Figure 4-2) will be created by the TOMA concurrent with the SH252. The SH252 will be attached, the IOS will be published within the 120 day period and will remain active until the formal change can be accomplished.

4.1.1.9 IETM/S1000D Change Process. In some cases, IETM/S1000D RCs may be a built-in function of the IETM/S1000D database, which will identify where the deficiency is in the database. Non-database RCs must identify the location of the data to be updated within the database. In most cases, this will be a step within a task, or an illustration/table. If necessary for clarity, a screen print or digital annotation of the deficient data will be submitted with the RC.

4.1.1.10 Item Unique Identification (IUID)-Related TO Updates.

4.1.1.10.1 Engineering Changes. If an IUID-related, engineering change is processed on a component, subcomponent, assembly, or sub-assembly (generically a part) and a published TO specifies the overhaul, remanufacture, repair (or assembly) of that part, that TO shall be updated to specify the processes and location for marking the item by IUID.

- The IUID marking method shall (in detail or by reference to other TOs) include all inspection procedures, part surface preparation procedures, all marked application procedures, and (unless marked with direct part marking) the data label, data plate, or IUID label part number (e.g. 200945085-XX).

- The marking location specified in the TO shall be specific to the part and shall include sufficient detail to reflect the location and tolerances specified in the Engineering Order (EO). In the case of multiple parts with the same configuration (e.g. multiple avionics boxes with the same top level assembly), a common figure with multiple references may be used.

- Program offices may delay IUID-related updates to TOs which are not intended for AFMC depot use.

4.1.1.10.2 Illustrated Parts Breakdown (IPB). If the IPB is contained in a separate -4 (i.e., not in the repair manual), then the IPB is not to be used to specify the location or the method for marking a part with IUID. If applying IUID to a part changes a part number in the IPB (e.g., if a new data plate is specified which differs from the existing data plate called out in the IPB), then the IPB shall be updated to show IUID; otherwise, the IPB need not be updated to show IUID label location or part number.

4.1.1.10.3 Implementation. TO updates associated with IUID instructions shall be implemented IAW standard procedures, except as noted below:

- For those IUID instructions which are required against TOs which are only distributed in paper distribution media format, the TO update shall be implemented as a Special Handling 252 (SH252). These IUID SH252s shall contain all of the TO-required information, and may be allowed to remain separate from the TO (i.e. not drive a TO change) for up to 26 months.

- For those IUID instructions which are required against TOs which are distributed in any other distribution media format or combination, the TO update shall be made via standard methods except that implementation may be delayed by up to six months. This additional delay will allow the grouping of IUID-driven instructions and will minimize TO change costs.

4.1.1.11 Special Packaging Instruction (SPI) Related TO Updates. TO updates which may require changes in SPI must be coordinated with the center packaging specialists IAW AFI 24-203, *Preparation and Movement of Air Force Cargo*.

4.1.1.12 Verification of TOs During Sustainment. All TO updates during sustainment shall be verified unless waived by the Program Manager (PM) IAW AFI 63-101/20-101. Verification procedures to be used during the TO sustainment phase of the program life cycle will be documented in the TOLCVP by the TOMA. The TOLCVP is mandatory for all programs. See Paragraph 3.3.2.2 for TOLCVP requirements.

4.1.1.12.1 Reverification after Digital Format Conversion. Reverify previously verified source data or TOs converted into a digital format, to ensure that the data has been captured or converted accurately by the capture or conversion process (i.e., there was no distortion of graphics or alteration of the text; changes to the flow of the data between steps or tasks; or mismatching of the relationships or references within the data). Verify that the mark-ups applied to add intelligence (if any) were applied correctly to the converted data IAW the Air Force TMSS or the adopted/approved commercial standard(s). Most importantly, verify the data to ensure accuracy of applied effectivities (e.g., equipment configuration, users skill levels, etc.)

4.1.1.12.2 Some converted data may require hands-on verification. Hands-on verification will be determined by the acquiring activity. Instances where hands-on verification may be required are:

- When a task required significant change in logical flow;

- When a sampling of tasks has been agreed to by the acquiring activity and the users; or

- When a task is identified by the acquiring activity, user or contractor as questionable after conversion.

4.1.1.12.3 Post-Digital Conversion Verification Procedures. Verification of TOs and data converted to a digital format will be accomplished by desktop comparison of the conversion instance to the source data to determine the accuracy of the conversion and data capture processes:

- Verify logical flow of procedures within the digital conversion file to ensure accuracy of the flow of text, steps and procedures, effectivity, and to ensure Warnings, Cautions, and Notes are displayed where required.

  - In some instances, logical flow may be enhanced to provide additional detail or direction to the user; therefore, logical flow must be 100% reverified.
  - Verify all conditional branches when variable user inputs branch the logical flow.
  - Verify dialog box text and response display.
  - Verify correct graphics and hot spots are displayed for individual steps.
  - Verify correct application of novice and expert delineations if applicable.
  - For Illustrated Parts Breakdown conversion, in addition to verifying clarity and correctness of graphics, ensure correct application of effectivities and accuracy of converted parts information to include Notes, Alternate Part Numbers, SMR Codes, Cage Codes, and Units per Assembly. Ensure accurate conversion of non-displayed parts.
  - For digital Wiring Diagrams (WDs), ensure complete/accurate/undistorted conversion of all wiring lines, symbols and reference designators. If the wiring information is interactive, ensure accuracy of interactivity to include signal flow, correct depiction of component operation (i.e. switches, fuses, relays) and correct wiring information display based on effectivity.
  - When verifying -6 Inspection TOs and checklists, ensure similarly-worded steps are all present and correctly sequenced.
  - Ensure all links added to enhance the relationships between items in the source data reference the correct data, and no broken links exist in the converted data instance.
  - Verify functionality of software/data interaction IAW contract requirements (TMCR, SOW, etc.).
  - Parse the instance against the target specification Document Type Definitions (DTDs) to ensure markup tags added to the data are accurate and comply with the DTD.
  - Perform analysis of the composed document from the marked-up instance using the designated composition engine, to determine the compliance of the printed or viewed output (only required if paper pages or digital views will also be produced from the instance).

4.1.1.12.4 Use the certification process and tools of the conversion contractor to reduce reverification requirements if appropriate. Contractor certification processes and tools must first be analyzed for accuracy and completeness before adoption in the government reverification process.

4.1.1.12.5 MAJCOMs will support reverification efforts by providing subject matter experts when requested, to assist/perform desktop analysis.

4.1.2 Processing Technical Order Recommended Changes (RCs). (Figure 4-3) RCs and updates are categorized as Emergency, Urgent or Routine (TO 00-5-1). Base the update category on its impact to the system or commodity mission effectiveness, safety or maintainability. Limit Emergency and Urgent submittals to technical and safety-related changes. Hold nontechnical changes to paper TOs for implementation with routine technical updates on the affected or backing pages. All updates to TOs distributed and used only in digital format should be incorporated into the master TO file prior to distribution. Updates must be published within the time limits specified in Table 4-1. Changes to report categories will not be made without the express concurrence of the TOMA and the submitting MAJCOM.

4.1.2.1 General. The following provides the requirements for the processing of RCs received on any of the above forms.

4.1.2.2 Emergency RCs. Emergency recommendations require immediate action on a TO deficiency which, if not corrected, WOULD result in a fatality or serious injury to personnel, extensive damage or destruction of equipment or property, or inability to achieve or maintain operational posture (MISSION ESSENTIAL), including field-level work stoppage. In addition, emergency includes discrepancies that directly affect the handling, maintenance, operations, transportation, and testing or storage of nuclear weapons. The TOMA/TCM or designated representative must provide written corrective action or downgrade the RC within 48 hours (72 hours for work stoppage) of receipt.

4.1.2.3 Urgent RCs. Urgent recommendations require action on a TO deficiency which, if not corrected, COULD cause one or more of the following: personnel injury; damage to equipment or property; reduce operational efficiency, and/or jeopardize the safety or success of mission accomplishment. Submit RCs that could result in over $25,000 or 1000 man-hours annual savings to the Air Force as urgent. All technical TCTO deficiencies are submitted as urgent. Identification of or replacements for EPA Hazardous Materials (HAZMAT) and ODS are submitted as urgent. In addition, urgent includes all other discrepancies that indirectly affect a nuclear weapon and technical orders that indirectly affect the handling, maintenance, operations, transportation, training, and testing or storage of nuclear weapons. The TOMA/TCM or designated representative must provide written corrective action or downgrade the RC within 40 days of receipt.

4.1.2.4 Routine RCs. All other recommendations for update/improvement not requiring emergency or urgent action will be submitted electronically as routine RCs. The TOMA/TCM or designated representative must reply to routine reports within 45 calendar days of receipt, advising or action taken and the reason when disapproved.

4.1.2.5 TO Updates for Obsolete Systems and Commodities.

NOTE

Technical Order Page Supplements (TOPS) shall not be used to update TOs for any reason.

Obsolete systems and commodities include those still in limited use or scheduled to leave the inventory within two years. Users will continue to submit routine recommended changes for TOs on obsolete systems and commodities. However, the TOMA/TCM will hold recommended changes in abeyance pending the decision to rescind or update the TO. The TOMA will provide an adequate schedule for updating the affected TOs when no review is scheduled. In these cases, the updates will normally be published as ITOs. The TOMA will make Emergency and Urgent updates as usual.

4.1.2.6 TOMA Procedures. Upon receipt, managers will process RCs within the time limits specified in Table 4-1. Managers will establish routine update schedules for all assigned TOs, depending upon data criticality and volatility, and which meet the Table 4-1 time limits. Aggregate all routine RCs received after the cutoff date (publication freeze date) of the previous update and prior to the cutoff for the next update into a single update package for each TO. The action or response time periods for each RC begin with receipt of the RC by the responsible TOMA. The periods end when an update is distributed or the RC is disapproved or determined to be a duplicate submission.

4.1.2.6.1 Exceptions to Evaluation Time. Recommended Changes (RCs) placed in Abeyance, Advisement or Deferred status (TO 00-5-1) are exempt from evaluation time limits specified in Table 4-1

4.1.2.6.2 SAP/FMS Procedures. The above policy does not apply to AFTO Form 22 that are submitted against CSTOs and received from foreign countries. Under the Security Assistance Program (including FMS), there are contractual arrangements to maintain the currency of the respective CSTOs. Refer to TO 00-5-19 for more information.

4.1.2.6.3 RC Receipt. Enter the Receipt Date from the AFTO Form 22 and digitally sign Block 4. Ensure the form was routed IAW the standard AF and MAJCOM routing procedures posted on the Tech Order Recommended Change Processing SharePoint site at https://cs2.eis.af.mil/sites/10903/default.aspx. Return incomplete RCs to the PIM (or equivalent) in Block 1. Organizational email accounts at MAJCOM and Lead Command CCPs should follow the procedures at Paragraph 5.5.4.5 to exchange AFTO Form 22 transmitted via signed and encrypted email.

4.1.2.6.4 Evaluation. Evaluate RCs recommending publication style and format changes, minor typographical errors or new types of TOs, and forward RCs recommending TO technical content changes to the TCM for further evaluation IAW TO 00-5-1. Return an updated copy of all RCs to the PIM (or equivalent) in Block 1 and reviewing agencies to provide status.

4.1.2.6.5 Non-TO Deficiencies. Disapprove RCs submitted on computer program or equipment deficiencies and refer the initiator to TO 00-35D-54, *USAF Deficiency Reporting and Investigating System*, for reporting non-TO deficiencies. Also, disapprove RCs determined to be ineligible IAW TO 00-5-1, Chapter 9, Technical Order Change Process, including multiple RCs submitted to correct a single deficiency.

4.1.2.7 Recommended Changes Applicable to Multiple TOs. The TCM responsible for preparing a change package to any TO shall make every effort to identify all affected TOs, and coordinate with and submit corresponding changes to the other responsible TCMs.

4.1.3 TO Change Package Requirements.

4.1.3.1 TOMA Procedures. Users shall refer to the AF TOMA SharePoint site for a link (https://cs2.eis.af.mil/sites/10531) to specific TO Site Functional Office Change Package processes and workflows, or contact the applicable TO Site Functional Office. TOMAs shall follow the approved local procedures approved by their TO Site Functional Office for processing all recommendations for change. These procedures must also address all RACs, Interim Safety and Operational Supplements and the process to formalize these interims.

NOTE

RCs (and ITOs) to be included in a TO update must be entered on the AFTO Form 252 to prepare a TO change package.

4.1.3.2 TCM Procedures. The TCM identified in the ETIMS Catalog record will consolidate approved TO change packages from all sources affecting the same TO. Include all approved technical RCs prior to the time limit specified in Table 4-1. Routine editorial RCs (typos, nontechnical changes, etc.) to paper TOs, not affecting TO understanding and compliance, may be held until the affected page or backing page is updated for technical changes. RCs include both TCM-generated changes and user-submitted changes.

4.1.3.2.1 In conjunction with the TOMA, review and update the TO Classification and distribution limitation statements as required.

NOTE

The actual Reading Grade Level (RGL) can be computed automatically by many word processing and publishing software packages.

4.1.3.2.2 The TCM will prepare an AFTO Form 124, *Computation of Technical Order RGL* (AFTO Form 252, Block 15), based on criteria specified below:

- Compute RGL on the entire text when more than 25% of the original text is changed. Exclude original text if the change adds new sections and/or chapters. Example: TO 2J-F100-6, Chapters 1 through 9 (original text) – The addition of Chapter 10 would not require recheck of Chapters 1 through 9.

- Compute RGL on only the changed text when changing two or more consecutive pages of text.

- Do not compute RGL if changing two or less consecutive pages of text.

- Review existing commercial manuals for RGL. Do not reject or re-write the manuals solely for RGL.

- MIL-STD-38784 specifies an RGL of 9 for Air Force TOs.

NOTE

The MIL-STD-38784 required grade level can be tailored during the contracting process.

4.1.3.2.3 The TCM will obtain an Environmental Assessment if there are any environmental impacts (see AFI 32-7061, *The Environmental Impact Analysis Process*) (AFTO Form 252, Block 16).

4.1.3.3 Routing and Coordination. Route the AFTO Form 252 change package as follows:

4.1.3.3.1 If the change contents have changed the releasability of the TO, the TCM must coordinate the changes with applicable STINFO, Security, Legal, FDO and PA offices, as required, to validate or change distribution limitations for both the change or revision and the basic TO (Block 11). Ensure Interim TOs (IOS or ISS) carry only the restrictions required by the contents (may not be the same as the basic TO).

4.1.3.3.2 The applicable Chief Engineer (CE) or PM will ensure coordination on all change packages affecting personnel or equipment safety. Bioenvironmental Engineering will coordinate on procedures affecting personnel health (involving noise, heat, air contaminants, chemicals, radiation, lasers, thermal stresses, biological and ergonomic hazards, etc.) (Block 12).

4.1.3.3.3 Obtain a Nuclear Surety Technical Evaluation on change packages affecting Nuclear Surety Procedures (NSP) or Hardness Critical Items (HCI) (Block 13).

4.1.3.3.4 Indicate whether the proposed updates will require verification, and the type of verification required (Block 17). The verification results may be recorded in either Block 18 or Block 21C (after the last data change entry).

4.1.3.3.5 The specialized functions listed in TO 00-5-1, Table 9-1 (e.g., Non-Destructive Inspection (NDI), Corrosion Control, Life Support, Civil Engineer Readiness, etc.), will coordinate on change packages affecting the assigned areas of responsibility (Block 18).

NOTE

AFMC organizations designated to provide Level 3 NDI services may provide NDI coordination, but an electronic copy of the submission SHALL be provided to the AF NDI Program Office (AFLCMC/EZPT-NDIO) at the organizational email address afrl.mls-ol3@us.af.mil.

4.1.3.3.6 Coordinate change package which may be applicable to military systems or commodities operated by foreign governments (e.g., FMS and European Participating Air Force (EPAF)). For those countries that are participants of a Foreign Military Sales Technical Coordination Group (TCG) the change packages shall be submitted to the applicable TCG for review for determination of applicability to the Country Standard Technical Orders (CSTOs). For those countries that are not participants of a TCG, the change packages shall be routed through the Air Force Security Assistance and Cooperation Directorate (Block 18). AFSAC-D Country Managers initiate development of related updates to CSTOs.

4.1.3.3.7 Coordinate change packages impacting commodity items managed by other Product Groups with the responsible group (Block 18).

4.1.3.3.8 Coordinate RCs against end-item TOs managed by an SPD, which affect commodities assigned to a Product Group Manager (PGM), with the affected PGM (Block 18).

4.1.3.3.9 Coordinate changes to MPTOs affecting policy and procedures with the AF OPR for that policy or procedure (Block 18).

4.1.3.4 Originator's Data. The initiator (TCM or other function) will enter their data (Block 19), and sign the AFTO Form 252 using their Computer Access Card (CAC) certificate or, in the case of system generated forms, the system will maintain a record of evidence of signature.

4.1.3.5 Approval Signature. The PM or designee (typically the CE) will check technical and procedural changes to ensure the accuracy and adequacy of the TO update. (This step is required even if individual RCs had already been reviewed, because of possible interactions between different proposed changes.) The CE or designee will sign Block 20 of the AFTO Form 252 using his/her CAC certificate or, in the case of system generated forms, the system will maintain a record of evidence of signature. For non-system and non-equipment TOs, the TCM's supervisor will sign (Block 20) or delegate the responsibility to the TCM.

4.1.3.6 Early Implementation. TO users shall not implement approved RCs until the interim supplement or formal TO update is available, except as follows:

4.1.3.6.1 AFTO Form 252 generated from AFTO Form 22 initiated by the AF Primary Standards Laboratory (AFPSL), or issued against TMDE TOs or ICBM Depot Control Manuals, may be implemented upon approval, when early implementation is requested and justified by the initiator. If early implementation is approved, the TCM will enter Approved for Implementation in the disposition block of the RC.

4.1.3.6.2 Updates approved for early implementation in Interactive Electronic Technical Manuals (IETM/S1000D based TOs) will be merged with the IETM/S1000D database and published electronically by the TOMA IAW procedures in Paragraph 5.4.

4.1.4 Technical Order Update Practices. In keeping with the Air Force digital TO vision, and the Technical Order Concept of Operation (TO CONOPS) providing technically accurate and up-to-date digital technical data at the point of use that is acquired, sustained, distributed and available in digital format digital (WA-1), TO subscriptions will be established for ETIMS eTOs instead of physical distribution TO (i.e., paper or CD/DVDs). Revisions will exclusively be used to update TOs which are only distributed in WA-1 digital format.

EXCEPTIONS:

- An emergency recommended change to a .pdf only TO may be implemented as a merged supplement instead of a revision.
- An emergency recommended change to html TOs with no paper versions may be implemented as a RAC instead of a revision.
- Where an IOS is being published in support of the depot SH252 process (Paragraph 4.1.1.8) for a pdf only TO, the IOS will be implemented as a merged supplement.
- Where an IOS is being published in support of the depot SH252 process (Paragraph 4.1.1.8) for a database-structured IETM, the IOS will be implemented as a non-merged supplement. Upon receipt, the TODO files the IOS as a private increment on the local device.

4.1.4.1 Routine Changes and Supplements. Routine changes and supplements must be authored and published using the same software application as the basic TO.

4.1.4.2 Revisions. For TOs distributed in paper or in both paper and digital format, TOMAs will determine whether to update as a change or revision (Paragraph 4.1.4.2.2 and Paragraph 4.1.4.2.3).

4.1.4.2.1 Revisions to GML and TMSS SGML TOs shall be prepared to the most recently approved standard, non-legacy version of TMSS DSS and corresponding output specification.

4.1.4.2.2 Paper TO Updates. When TO changes have paper distribution, the change must be merged with the baseline TO file, uploaded and indexed as a revision (WA-1) in ETIMS. TOs on CDs and DVDs will normally require update by a

replacement medium containing either merged TO/change files or revised TOs (no supplements). Transition to digital only distribution will be pursued when paper distribution waiver criteria is not met per Paragraph 5.4.3.

NOTE

If a distributed CD contains multiple TOs, the CD will be redistributed in its entirety when any of the TOs are updated.

4.1.4.2.3 Consider a revision to TOs distributed in paper or in both paper and digital formats when the following conditions are met:

- When 70 percent or more of the basic paper TO (including the current update) has been changed.
- When there is a change to equipment configuration, compliance with new military specifications, etc.
- When updating brief TOs (20 or fewer pages), unless the change will be issued as difference data sheets.
- When a TO publication is being declassified by removing classified data, to prevent issuing warehouse stocks marked as classified. Exceptions are authorized. TOs may be declassified by issuing a TO change if cost effective.
- When the TO is a combined manual (e.g., Maintenance with Illustrated Parts Breakdown (IPB), etc.) and has an abbreviated title page and no A page.

4.1.4.2.3.1 TOs which have transitioned, or are planned for transition to WA only distribution, should undergo revision when the following conditions are met:

- When the system or commodity will remain in service for 2 years or more.
- When the TO has supplements which have not been incorporated for 1 year or more.
- When the TO has greater than 6 outstanding changes.
- When the format of the publication does not promote clarity and usability when viewed on an eTool.

4.1.4.2.3.2 Updates to brief TOs (20 or fewer pages) shall be accomplished by revision only.

4.1.4.2.4 Do not revise TOs distributed in paper or in both paper and digital format when the following conditions are met:

- The system or commodity will be removed from the inventory within two years (Paragraph 4.1.2.5).
- The paper TO is usable as is (even if 100% of the pages have changed over a period of time).

4.1.4.3 New or Revised Technical Manual Specifications and Standards (TMSS). The TOMA determines whether or not to issue a TO revision when the governing MILSPEC or MIL-STD used to prepare the TO is revised. The TOMA may direct contractors who will revise the TO to use a later version of the governing specifications when there will be no change in contract costs. Any such direction affecting contract cost must be coordinated with the PCO before going to the contractor.

4.1.4.4 Numbering Changes and Revisions. The TOMA assigns an identifying number to each TO change and revision being published, using the ETIMS Manage TO Detail screen. The TO change number will appear on the title page and each page containing changed data. The revision number identifies the version or edition of the TO and will not be printed on the TO Title page except when indicated in the Supersedure Notice. The TOMA should initially check the Available for Index in the ETIMS TO record.

4.1.4.5 Technical Order Sustainment Pre-Publication Reviews. The final draft (reproduction copy or digital file) of TO updates developed as part of sustainment must receive a pre-publication review for technical accuracy, currency and adequacy (depth of coverage); by the TCM and TOMA; as well as conformance to MILSPEC requirements prior to

distribution. The review shall be jointly conducted by the TOMA and the TCM, with the assistance of other Subject Matter Experts (SME) as required. This pre-pub review may replace verification by Desk-Top Analysis. During Technical Order Sustainment Pre-Publication Reviews, the following items, as a minimum, should be checked:

- Accuracy of Title Page information - dates, supersedure notice, distribution limitations, etc., against information about the TO Update in the TO Index record.
- Accuracy of the List of Effective Pages (LEP).
- Procedures and illustrations for technical accuracy, completeness and readability.
- Compliance to MILSPEC format.
- Changed page numbering and markings.
- Publication date should be within 30 days of distribution date. Publication Date shall be adjusted due to publication delays, issuance of supplements or receipt of urgent changes. In all cases, the publication date shall be later than all previously released increments (basic, revisions, changes, and supplements).
- Coordination with affected functional areas - Engineering, Safety, Nuclear Surety, Bio-Environmental Engineering.

4.1.4.5.1 TO development or support contracts should allow for TOMA review and approval of draft TOs before delivery of final copy to the government. If the information in the draft must be published immediately, any serious technical errors in the review copy may be corrected with a RAC or an interim safety or operational supplement that is distributed concurrently with the TO. Concurrently released RACs or supplements must be dated at least one day apart. Correct less critical errors through the routine update process.

4.1.4.5.2 For updates published in-house (organically), errors shall be corrected prior to submitting the reproduction copy in TODPG.

4.1.4.6 Technical Order Post-Publication Reviews. Perform post-publication reviews to evaluate and improve formal TOs after delivery to the MAJCOM. There are two types of post-publication reviews: TOMA or TCM post-publication reviews and currency reviews. During each review, manuals which are published in paper format should be evaluated for conversion to solely digital distribution.

4.1.4.6.1 TOMA or TCM Post-Publication Reviews. These reviews are conducted after TOs have been delivered to the MAJCOM to evaluate and correct the instructions contained in the TOs. The need to conduct a PPR will be determined by the TOMA or TCM based upon equipment modifications, AFTO Form 22 or AF Form 847 received, or MAJCOM or PM recommendations. Participants may include the TOMA, TCM, and MAJCOM representatives.

4.1.4.6.2 Distribution Statements and other STINFO markings will be evaluated to ensure the appropriate distribution audience. Action should be taken to correct deficiencies in Distribution Statements (Paragraph 2.1.4.17) or other STINFO related Title Page Information.

4.1.4.6.3 Currency Reviews. Currency reviews are performed to ensure that the TO enables the safe, appropriate and effective maintenance and operation of equipment. TOs that are complete and document best practices will increase the operational readiness of systems. The responsible TCM will:

4.1.4.6.3.1 Review unclassified TOs that have not been updated for five years for currency, distribution limitation changes, etc.

4.1.4.6.3.2 Review classified TOs at every update, but no less than annually, for currency and possible reclassification.

4.1.4.6.3.3 In addition to the TO content, ETIMS Catalog data and cross-reference data, including work cards, must also be verified for accuracy.

4.1.4.6.3.4 Table 4–4 may be used as a reference to ensure the TO is complete, accurate and up to date with current practices.

4.1.4.7 Periodic Deferral Review. If publication of routine changes or revisions must be deferred for any reason, the TCM, in coordination with the TOMA, must review the publication package every 90 days from the date of the deferral decision for possible priority upgrading.

4.1.4.7.1 Base the upgrade decision on the potential to negatively affect OSS&E of the military system or commodity resulting from continued publication delays. The TCM/TOMA should consider such things as negative maintenance trends, increased occurrence of safety incidents and the cumulative effects of aggregated changes which, if not addressed, are made worse by unpublished TO updates.

4.1.4.7.2 Only those portions of the change package actually requiring upgrade will be extracted from the package and published as an IOS or ISS, pending routine publication of the formal change or revision. If the entire package must be upgraded, publish the formal update within the upgraded priority category timelines. The TOMA shall coordinate Interim TOs with the TCM and Lead Command prior to issue.

4.1.4.8 Formal Supplements. Develop formal Safety and Operational Supplements (SS&OS) IAW MIL-STD-38784. **EXCEPTION** : The text of formal Safety Supplements shall be black, NOT red, for readability reasons. Before issuing formal Emergency or Urgent TO supplements which will restrict any Air Force system from full capability or operational readiness, the Interim TO Advance Notification requirements of Paragraph 4.2.1.7 must be implemented.

4.1.4.9 TO Updates Related to TCTOs. The TCM/FMM will update TOs and FMP publications affected by TCTOs, and the TOMA will release the updates concurrently with the driving TCTO (IAW TO 00-5-15). TCTO-related TO updates containing both‘before’ and ‘after’ data may be published up to 180 days prior to the TCTO itself. See Paragraph 5.1.8 for TODPG processes related to managing the concurrent release and delivery of paper media.

4.1.4.10 Joint Service TMs. The Air Force OPR of a Joint Service TM managed by another service (Army, Navy, etc.) will issue an Air Force-only supplement to change Air Force compliance with procedures in a TM managed by another service. Coordination with the other service is not required when the changes affect only the Air Force, but a copy of the supplement will be provided to the lead service TM Manager for information. If the change is subsequently incorporated into the TM, the AF supplement will be rescinded. When the Air Force is the lead service, the TOMA must fully coordinate proposed updates with all affected services prior to publication.

4.1.4.11 Country Standard TO (CSTO) Updates. The equipment contractor normally produces CSTO updates under an FMS contract. See TO 00-5-19 for further details.

4.1.4.12 Federal Aviation Agency (FAA) Manuals. When AF personnel are authorized to access and use manuals from FAA online, the AF TCM will author an Identifying Technical Publication Sheet (ITPS) to 1) authorize the use of the specific FAA manual 2) provide FAA online accessing instructions for the specific manual 3) direct AF personnel to monitor FAA online for currency as the ETIMS subscription to the ITPS will only alert them to changes in the ITPS. The TOMA will number and index the ITPS in ETIMS as a Sponsor Approval, WA-1 eTO, upload the optimized PDF file into ETIMS and manage subscription requests.

4.1.5 Digital Technical Order Supplement Procedures. TOMAs will merge all supplements to include making all required annotations to the TO and supplement. TOMAs shall also link items in supplement, and may bookmark. For guidance with these processes, use the Functional Users Guide (FUG) provided on the TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531.

4.1.5.1 Development. Develop the supplement using a word-processing or publishing software program (formatted and numbered IAW TO 00-5-1). Convert it to PDF using Acrobat Distiller™ or PDF Writer™ (part of Adobe® Acrobat).

4.1.5.2 Posting Supplements to Basic TO File. The TOMA will download the TO file from its distribution medium (Internet or CD-ROM/DVD), open the file using Adobe® Acrobat™ and attach the supplement file as described in the FUG on the Air Force Technical Order Managers SharePoint site at https://cs2.eis.af.mil/sites/10531.

4.1.5.3 Indexing and Distribution. Index the supplement as a printed copy in ETIMS, and index the merged digital TO as a revision with the same publish date as the supplement. Upload the TO file with notes and attached supplement to the distribution medium. Interim changes to a TO distributed on CD-ROM might be uploaded on a web site for immediate access, with notification provided to users IAW Chapter 5. Refer to TO 00-5-15 for a listing of special distribution addresses for ITO messages.

4.1.5.4 Supplementing IETM/S1000D Based TOs. IETM/S1000D based TOs and SGML-tagged files shall not be supplemented. (See EXCEPTIONS Paragraph 4.1.4).

4.1.5.5 Digital Flight Manual Supplement Procedures. TOMAs will merge all FM supplements to include linking and making all required annotations to the TO and supplement. For guidance with these processes, use the FUG provided on the TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531.

4.1.5.5.1 Digital Flight Manual Supplements Applied to Checklist Pages. Per AFI 11-215, USAF Flight Manuals Program, flight crew checklists can only be supplemented by a supplement to the parent TO. Interim supplements to the parent TO affecting flight crew checklists will authorize write-in changes to the affected checklist. Formal supplements to the parent TO will provide checklist insert pages. In either case, to complete the update process for digital eTOs, the FMM will provide the TOMA PDF insert pages formatted IAW MIL-DTL-7700. The title page will be annotated to show the supplement and date information from the parent TO. The TOMA will merge the pages into the checklist. No linking will be required since the title page will be the original page as no supplement was released against the checklist, and there will not be separate steps to link.

4.1.5.5.2 The checklist not containing the insert pages will be removed from the ETIMS repository, the checklist containing the insert pages will be uploaded and validated, and will be manually deployed using normal processes.

4.1.6 CD-ROM/DVD Procedures.

4.1.6.1 Responsibilities. The TOMA for a CD-ROM/DVD, with coordination from the PM and Lead Command, is responsible for CD-ROM/DVD content, numbering, indexing, updating, publication, packaging, labeling, and distribution. Classified and unclassified TOs will not be mixed on a single disk. The TOMA will determine routine CD/DVD update intervals, in conjunction with the Lead Command and the TOMA of the individual TOs included on the disk. If a separate content manager is assigned for the disc, some of these duties may be delegated to that function.

NOTE

- The use of CD-ROMs/DVDs for unclassified digital TO distribution and use is being phased out as ETIMS distribution and use is implemented. Classified digital TOs may continue to use CDs/DVDs.
- The same general rules that apply to CD-ROMs used to publish and distribute TO files will apply to DVDs, pending development of a DVD specific publication.
- AFCEC/CXE is authorized to develop and implement separate procedures for joint service management and use of EOD TOs on CD-ROM/DVDs.

4.1.6.2 Content and Labeling. The CD/DVD must contain a content.txt file and may contain a readme.txt file (how to use the CD/DVD), an Index file (to automatically direct users to the correct TO files), and if necessary, a copy of the viewing software.

4.1.6.2.1 Content.txt File. The following information will be included in the required content.txt file:

- DOCUMENT IDENTIFICATION: (TO Number)
- TITLE: TECHNICAL MANUAL SET: (Name)
- EDITION: (First, Second, etc.)
- VOLUME IDENTIFIER: (DoD Activity Address Code (DODAAC) [6 characters] + TO Category [2 characters] + Index Number [3 characters] (11 digits total)
- MAINTENANCE AND UPDATE FREQUENCY: (Update Period)
- ORIGINATOR COMMENTS: (Information on Formats, etc.)
- DOCUMENT ABSTRACT: (Purpose of CD/DVD)
- POINT OF CONTACT: (CD/DVD TOMA, Address, Email, and Phone Number)

- ORIGINATOR: (CD/DVD TCM, Address, Email, and Phone)

- TO POCs: (For each TO file included on the CD/DVD, list the TOMA and TCM Names, Organizations, Email Addresses, and DSN Phone Numbers)

4.1.6.2.2 Readme.txt File (Optional). Use the same format for the content.txt file (above). The file may be included if required to describe access to and use of viewer software, access to and use of any other programs on the disk (such as ETIMS), and/or other helpful information not included in the content.txt file. If used, the readme.txt file should have a table of contents to help the user identify and navigate to needed information.

4.1.6.2.3 CD-ROM/DVD and Case Labels. Labels (Figure 4-4) are formatted IAW MIL-STD-38784.

4.1.6.3 Digitally-Distributed TO File Sustainment. Only revisions will be used to update digitally distributed baseline TO files. (See EXCEPTIONS Paragraph 4.1.4). Baseline TO files are the official, published (accessible to users) TO files consisting of the basic digital TO file with any published change files merged (posted) into the baseline TO file. The use of formal supplements for updating digital baseline TOs is discouraged and will be severely limited (see TO 00-5-1). TOPS shall not be used.

4.1.6.3.1 Changes will only be produced when paper distribution is supported. The TO change will be merged with the baseline TO file for digital distribution. The standalone TO change or revised TO file will be used to produce a master for printing and distribution of paper.

4.1.6.3.2 For emergency and urgent updates, the TOMA or TCM will develop digital RACs whenever possible, instead of an IOS or ISS (see TO 00-5-1). The digital RAC file will normally be merged with the baseline TO file, and the merged TO and standalone RAC files will be accessed from ETIMS or program web site for distribution. ETIMS users will receive automatic distribution of the merged file. The standalone RAC is distributed to allow local printing of the change for updating paper copies of the TO.

4.1.7 Technical Order Update Package Processing. The responsible TOMA will:

4.1.7.1 Screen and Submit Update Packages. Screen all TO update packages to ensure required data is current and complete, properly coordinated and includes all RCs specified for the next TO update. Submit approved packages to the editorial function for publication of the TO update (specifying the update type), and distribute in the next routine update cycle.

4.1.7.2 Record Copy. Ensure a copy of the published update is saved to the repository identified in the TOLCMP.

4.1.8 Technical Order Update Publication. Updates to individual TOs from all sources (AFTO Form 22, AF Form 847, Mishap Investigations, Materiel Improvement Projects, etc.) will be consolidated for publication in periodic TO updates (revisions, changes, or supplements). Periodic updates will not include modification-related changes if this would delay concurrent release with the prescribing TCTO. When faced with this situation, out of cycle updates may be necessary to support the TCTO. Periodic intervals will be determined by the lead command, in conjunction with the PM, but should not exceed 365 days. Periodic updates may be delayed beyond the normal update interval if no significant inputs are received. When TOs are grouped for publication, for example, a set of TO files published on a CD-ROM, it may be necessary to publish updates to the distribution media as frequently as monthly to accommodate varying TO publication release dates and cycles. Thought should be given to synchronizing the publication cycle of the TOs included in the set and the distribution media as much as possible to limit the number of media releases due to out-of-sync TO updates.

NOTE

Perform periodic reviews of change packages IAW Paragraph 4.1.4.7 if publication must be deferred.

4.1.8.1 General. The TOMA or TCM will aggregate all approved RCs submitted since the last TO update. The TOMA determines if the updates will be developed organically or through contractor support.

4.1.8.2 Contractor Preparation. If a production contract is available for contractor preparation of TO updates, the TOMA forwards a copy of AFTO Form 252 with all included documentation.

4.1.8.3 Organic Preparation. For organic update preparation, the TOMA forwards a copy of the AFTO Form 252 to the editorial function for formatting as a change or revision.

4.1.8.4 Distribution Controls. See Paragraph 3.19

4.1.9 Evaluating Recommended Changes on Joint Service Technical Manuals.

4.1.9.1 Air Force-Managed Technical Manuals. Handle proposed changes to Joint Service TMs managed by the Air Force (cognizant activity code F) IAW Paragraph 4.1.4.10.

4.1.9.2 TOMA Procedures for TMs Managed by Other DoD Components. The assigned Air Force TOMA handles receipt and proposed changes to Joint Service managed by another DoD component the same as for an RC against an Air Force TO. After evaluation for possible AF adoption, the RC is forwarded to the primary TM Manager for evaluation and possible adoption for all TM users. Supersede any AF-only supplement if the managing component incorporates the change in the TM.

4.1.9.3 TCM Procedures for TMs Managed by Other DoD Components. The Air Force TCM evaluates the recommended TM improvement and determines required actions. If there is no assigned AF TCM, the TOMA will forward RCs to the managing component for evaluation.

NOTE

Downgrading RC priority is not appropriate when the TM is the responsibility of another DoD component.

4.1.9.3.1 For AF-approved RCs, the TOMA or TCM issues an Air Force-only routine supplement IAW TO 00-5-1. The TCM then routes an informational copy of the approved AFTO Form 22/AFTO Form 252 to the responsible DoD component IAW AFI 20-118.

4.1.9.3.2 The TCM furnishes an information copy of disapproved AFTO Form 22 to OPR in the responsible DoD component for possible implementation.

4.1.9.3.3 When an RC is placed in Abeyance or Advisement status, notification of the responsible DoD component is not required. Process the RCs IAW Paragraph 4.1.9.3.1 or Paragraph 4.1.9.3.2 after approval or disapproval. Do not refer duplicate RCs to the other service. Do not use Deferred status for RCs against other service TMs.

4.1.10 Processing API Program Packages. An API program package is submitted and processed IAW AFI 38-402, *Airman Powered by Innovation (API) Program*, and TO 00-5-1. The approved improvement-type AFTO 22 and resultant TO change are included in the submittal in pursuit of the API cash award.

4.1.10.1 Stand-Alone Ideas. Stand-alone ideas which recommend a TO change will be disapproved for resubmittal on an AFTO Form 22 (or AF Form 847). A stand-alone idea which does not recommend a TO change will be evaluated using the Idea Program Data System (IPDS - https://ipds.randolph.af.mil), even if implementation causes a TO change. Retain all documentation implementing approved changes, including any documentation used to calculate tangible or intangible savings, for two years IAW Air Force Records Disposition Schedule.

4.1.10.2 Confirmatory Ideas. The Idea Analyst will automatically approve a Confirmatory Idea based on an approved Improvement-type RC, and base the award on AFI 38-402 and the information provided in the RC. Correction-type RCs are not eligible to participate in the AF API Program.

4.1.10.3 Disputing Findings. If the initiator disputes the API program benefits approved by the TCM, the RC must be returned to the TCM with additional information justifying any requested increase in benefit levels, IAW TO 00-5-1.

4.2 INTERIM TECHNICAL ORDERS (ITOS) AND RAPID ACTION CHANGE (RAC) PROCEDURES.

4.2.1 General.

NOTE

Programs issuing interim or formal Emergency and Urgent Operational and Safety Supplements or RACs which could restrict any Air Force combat weapon system from full capability or operational readiness will provide advance notifications IAW Paragraph 4.2.1.7.

4.2.1.1 Description. Interim Technical Orders (ITOs) are priority, electronically-distributed changes to TOs. Rapid Action Changes (RAC) are priority, electronically-distributed changes used in place of ITOs to update TOs. When an interim TO/TCTO update is indexed and distributed, TODOs with paper subscriptions will print the supplement portion of the WA-1 file and post to the front of their paper TOs as traditional pen and ink changes. ITOs and RACs are issued to resolve deficiencies of an Emergency or Urgent nature (see TO 00-5-1). They may revise procedures, deactivate defective subsystems or components, replace hazardous materials, restrict item use to known-safe areas of operation/flight envelopes, or remove systems/end items from service, depending on the nature and severity of the hazard.

4.2.1.2 Interim Safety Supplement (ISS). Issue ISSs when circumstances preclude timely publication of a formal TO update. Issue Emergency ISSs and Urgent ISSs when safety conditions would result in a fatality or serious injury to personnel, or when extensive damage or destruction of equipment or property is involved.

4.2.1.3 Interim Operational Supplement (IOS). Issue IOSs when circumstances preclude timely publication of a formal TO update. Emergency IOSs are issued when the MAJCOM is unable to achieve or maintain operational posture (MISSION ESSENTIAL) or there is a field-level work stoppage. Urgent IOSs are issued for situations that reduce operational efficiency or probability of mission accomplishment, provide replacements for Environmental Protection Agency (EPA) Hazardous Materials (HAZMAT) and Ozone Depleting Substances (ODS), or could result in over $25,000 or 1,000 man-hours annual savings to the Air Force.

4.2.1.4 Rapid Action Change (RAC). RACs are fully-formatted TO changes distributed electronically, used instead of interim supplements as priority TO updates. RACs require the same coordination, advance notification and approval as the equivalent interim supplement.

4.2.1.5 Timelines. An IOS, ISS, or RAC must be issued within 48 hours after receipt of an emergency report (within 72 hours if report concerns work stoppage), or within 40 calendar days after receipt of an urgent report.

4.2.1.5.1 Emergency IOSs, ISSs and RAC notifications shall be sent to TODOs via an authorized, electronic dissemination method (Paragraph 5.5) and receipt acknowledged within two hours. If notification is required on a weekend or holiday, notify the affected units via the appropriate command post and record receipt acknowledgement. If the emergency supplement or RAC will restrict any Air Force combat weapon system from full capability or operational readiness, provide advance notification per Paragraph 4.2.1.7. Emergency RACs are made available through an authorized, electronic dissemination method (Paragraph 5.5), and must be delivered to sub accounts and libraries within five hours of receipt by the TODO.

4.2.1.5.2 Urgent IOS/ISS and RAC notifications shall be sent to TODOs via an authorized, electronic dissemination method (Paragraph 5.5) and receipt acknowledged as soon as possible during duty hours. Urgent RACs are made available through an authorized, electronic dissemination method (Paragraph 5.5), and must be delivered to subaccounts and libraries within one duty day of receipt by the TODO.

4.2.1.6 Security Assistance Program (SAP)/Foreign Military Sales (FMS) Support. IOSs, ISSs, and ITCTOs are issued to all FMS customer accounts on ID for the basic TO by the Security Assistance TO Program (SATOP). If CSTOs have been developed; a separate IOS/ISS/ITCTO must be developed for each and issued to the FMS customer by the SATOP. TO Manager shall ensure all ITOs with subscription for parent TO in Security Assistance Technical Order Data System (SATODS) are sent by encrypted email to SATODS workflow address (TinkerSatopInterim@us.af.mil) so the ITO can be reviewed for release by the FDO prior to issue to the FMS customers.

4.2.1.7 Advance Notification. The program office issuing formal or interim operational or safety supplements or RACs shall provide advance notification when the supplement or RAC would restrict any Air Force combat weapon system from full capability or operational readiness (Reference TO 00-5-15).

- Notify senior AFMC and USAF leaders via the Advance Notice of Emergency/Urgent ISS, IOS or RAC Release Form at the ITCTO Advance Notification System SharePoint Site (https://cs3.eis.af.mil/sites/ANS/Pages/ANSHome.aspx).

- See TO 00-5-15 for complete advance notification requirements and additional ITO/RAC distribution addresses.

4.2.2 Procedures. Refer to the Flowchart, Figure 4-5. ITOs and RACs are usually prepared by the TCM for the basic TO. ITO preparation may be delegated to an overflow contractor or the Original Equipment Manufacturer (OEM). Once an emergency or urgent situation is identified, the responsible activity evaluates it for alternative courses of action. If hazards or mission limitations cannot be resolved by a TO change, issue an IOS, ISS, or RAC as appropriate. If there must be an inspection or a configuration change to the system or equipment, issue an ITCTO (Refer to TO 00-5-15). ITOs and RACs applicable to TOs distributed digitally must be in the same digital format as the TO itself. RACs must be merged with the TO file, and ITOs must be attached to the file and digitally linked to the affected TO paragraphs.

4.2.2.1 Developing Interim Supplements.

4.2.2.1.1 Obtain the appropriate TO numbers from the TOMA. Research and develop the revised TO instructions, verify and coordinate them IAW this TO. Prepare a replacement interim or formal update if a previously published ITO must be changed before it is incorporated (RACs are incorporated upon issue).

4.2.2.1.2 Replace an ISS with a TO change or revision within 40 days of ISS release. Include IOSs/RACs in the next routine update. **EXCEPTION**: ISSs and IOSs issued to provide temporary instructions (for example, restrictions to operating parameters pending completion of a TCTO, use of prototype equipment for flight test, etc.) may remain active until completion of the task or project or for 30 months, whichever is shorter. For revisions, supplements shall be incorporated or reissued. Timelines for Interim Safety Supplements pertaining to flight manuals can be found in AFI 11-215.

4.2.2.2 Creating Rapid Action Changes (RAC). A RAC is a TO update loosely formatted as a TO Change and distributed electronically like an ITO/ITCTO. RACs will be formatted as closely as possible to the manuals they update, and will include a new title page and List of Effective Pages (LEP), as well as unchanged backing pages for each change page included. It is prepared using desktop publishing or word processing software and saved in a format compatible with the baseline TO file. RACs will be identified using the next sequential TO change number.

4.2.2.2.1 The TCM will develop the RAC content; the TCM, TOMA or editor will prepare (format) the RAC and create a merged RAC/basic digital baseline TO file for distribution to TODOs. The following steps are involved in creating a RAC:

4.2.2.2.2 The TCM, TOMA or editorial/production activity responsible for formatting the change obtains the digital baseline TO pages affected by the RAC (including title, LEP, data pages and corresponding backing pages), and converts them (if required) into a changeable digital format.

4.2.2.2.3 Make necessary changes to affected pages IAW the approved RC. Title page and LEP format may vary slightly from the current specification or parent TO file format (e.g., column alignment, font size, dot leaders, graphic lines, etc.). The title page notice must identify the change as an EMERGENCY or URGENT RAC.

4.2.2.2.4 The TCM and TOMA review and approve the RAC.

4.2.2.2.5 Convert the RAC file to PDF or other Page Description Language (PDL) software to convert RAC files to an insert file compatible with baseline TO files.

4.2.2.2.6 Merging and Publishing RACs. The TCM, TOMA or editor electronically merges the PDF RAC file with the PDF baseline TO file to create a new baseline TO, and re-links (indexes) the new file. The PDF RAC file shall also be included as attachment to merged PDF. Merged file with RAC attachment shall be uploaded to ETIMS (Paragraph 5.5.1), to replace the previous version, thereby providing access to the complete TO and RAC. Merge and upload non-PDF TO files in whatever file format was used to distribute the baseline TO file.

4.2.2.3 Approval and Release. Approval and release levels are listed in Table 4-2. The TO Management or FMM divisions shall be the **only** PM functions allowed to release approved ITOs.

4.2.2.4 Indexing. The TOMA will index ITOs and RACs in ETIMS, marking it as local print (which will set the interim indicator flag to yes), prior to release. Send notification of release through ETIMS with instructions for TODO on how to obtain. RACs will be listed as regular changes.

4.2.3 ITO/RAC Notification and Distribution.

4.2.3.1 Notification Messages. When an ITO/RAC is issued, the TOMA or FMM responsible for the TO will notify affected TODO accounts using the ETIMS notification process that the ITO/RAC is available and how to obtain it. The ETIMS notification message will be sent within established timelines for Emergency or Urgent changes. ITO/RAC notifications will contain:

- Affected TO number and title
- RAC number and date
- File names and sizes of the merged TO (if applicable) and RAC files (sizes are required to ensure users have enough hard drive space to accomplish the download)
- Messages must include a point of contact and phone number to call in case of any technical problems.

4.2.3.2 Distribution. TODOs with paper subscriptions will print the supplement portion or RAC attachment of the WA-1 file. If TO does not have a WA-1 media type, any method of electronic distribution described in Paragraph 5.5 may be used.

NOTE

- Restricted TO files must be password protected and encrypted (AFI 33-115), and loaded on an access-controlled (domain or user name and password) https site.
- RACs for distribution statement A TOs may be hosted on public web sites.

4.3 TECHNICAL ORDER MANAGEMENT PRACTICES USING ETIMS.

The TOMA makes changes to management data about a TO using the appropriate ETIMS screens when the correction, addition, or deletion of TO management data elements is required. Use the screen completion procedures described in the applicable FUG on the TOMA SharePoint site (https://cs2.eis.af.mil/sites/10531). The following paragraphs provide a variety of tasks that TOMAs must use ETIMS to perform.

4.3.1 Equipment Data Related to Technical Order Acquisition. The TOMA uses the Maintain Equipment List screens to input or update Weapon Systems, Commercial and Government Entity (CAGE) codes and item part numbers (Refer to FUG at https://cs2.eis.af.mil/sites/10531).

4.3.2 Establishing Sponsor Approval. Sponsor Approval is required on all TOs for which initial subscription and distribution requests must be justified, reviewed and approved prior to issue. Sponsor Approval is automatically set by ETIMS when conditions of Table 4-3 exist. The TOMA, in conjunction with the TCM, will determine the need to screen distribution of other unclassified TOs.

4.3.3 Processing ID Subscriptions Requiring Sponsor Approval. Screen and approve new ID subscriptions when the TO is flagged for Sponsor Approval in the Review Sponsor Approval Request screen in ETIMS. Obtain concurrence of the TCM before approving the subscription. Approval/Disapproval shall be completed within 10 calendar days of submittal by TODO. (See FUG at https://cs2.eis.af.mil/sites/10531).

4.3.3.1 Proprietary data may be automatically approved for release to F*xxxx TO Accounts, but may only be released to a contractor account owning the proprietary rights.

4.3.3.2 For export controlled TOs refer to TO 00-5-19.

4.3.3.3 TODO personnel are required to delete all paper media ID requirements outside TO 00-5-3, Paragraph 5.4.3 exceptions, or submit justification to the AF CTOM/MAJCOM representative for reconsideration. The TOMA is required to send an ETIMS notification to the TODOs 30 days prior to rescinding paper media. If paper media is still required, the

TOMA shall then make the paper Sponsor Approval. The TODO must provide their AF CTOM/MAJCOM representative justification to continue receiving paper TOs (see https://cs2.eis.af.mil/sites/12837/default.aspx). Approved forms will be coordinated with the TOMA. TOMA's may send subsequent 30-day paper media rescission notification annually.

4.3.3.4 If paper TOs have FMS customers on ID, the TOMA will not mark the TO as sponsor approval. The TOMA shall email the Security Assistance Technical Order Program (SATOP) office (AFLCMC.EZGTC.Workflow@us.af.mil) with the information and SATOP will contact the FMS customer within 30 days. If the TOMA does not receive a response from SATOP within 30 days, the TO will be marked as sponsor approval only. Once SATOP receives a reply, they will contact the TOMA. If paper copies are still required by FMS customers, the TOMA shall continue to provide TO paper copies.

4.3.4 Processing Requisition Transactions Requiring Sponsor Approval. TOMAs will receive notification of One-Time Requisitions (OTR) needing sponsor approval through their ETIMS home page. Approval of OTR sponsor approval is completed in TODPG (See FUG https://cs2.eis.af.mil/sites/10531).The TOMA will obtain concurrence of the TCM before approving the subscription/requisition. Approval/disapproval shall be completed within 10 calendar days of submittal by TODO. Justification is not required for accounts already on subscription for the TO.

NOTE

Subsequent requisitions after an account has approved subscription will not require sponsor approval unless order quantity is in excess of the Maximum Issue Quantity (MIQ).

4.3.5 Manage ETIMS Index. The TOMA uses the ETIMS Manage TOs screens, FUG and help screens procedures, (https://cs2.eis.af.mil/sites/10531) for changing TO Publication Type, TO Title, Pub Status, Sponsor Approval, Program Group/Name, Lead Command and management data. These screens are also used to add and index TO basics, changes, revisions, and supplements, and to mark rescinded, superseded, renumbered and 'FMS only' for increments, and to enter TO configuration and management information for the TO/TO increments.

4.3.5.1 Correct TO Configuration and Management Information Errors. ETIMS users report errors in the accuracy or quality of ETIMS TO Catalog data using ETIMS DDRs. TOMAs must verify and correct ETIMS Catalog TO record errors within 7 calendar days after receiving notification of the error. All ETIMS users will correct errors in the data they are authorized to modify, or will contact the responsible data owner to make corrections.

4.3.5.2 Correct Printing and Distribution Errors. Users can also report errors in the accuracy or quality of printing, reproduction and distribution of received TOs through the ETIMS DDR process. All TOMAs who receive issues from users with TODPG problems, printing, reproduction or distribution requirements, etc., that cannot be resolved locally, will report the issues by submitting a ticket to the Field Support Center, which will be directed to their TODPG Site POC. The TODPG POC reviews the ticket and forwards to AF TOFST. If an issue reported to the AF TOFST results in the need for a ticket to be created in the DLA Help System (DASH), then the AF TOFST will create the ticket. The AF TOFST will track the ticket in the Field Support Center and DASH systems through final resolution and notification back to the TODPG POC. Any TOMA/User that does not have a TODPG POC, will submit the issue directly to the AF TOFST.

4.3.6 Establish Shipping Priorities. Direct commercial printers to use classified mailing procedures (DoDM 5200.01, Vol 1) when distributing classified TOs. Direct use of first-class mail for all emergency requisitions and for ID shipments of TOs and TCTOs to APO/FPO destinations. When using the DLA Data Management Services TODPG for Initial Distribution (ID), local DLA Data Management Services facilities will distribute copies to subscribers in their service areas. FMS distribution will be handled by AFLCMC/LZPTC-TINKER.

4.3.7 Establish Maximum Issue Quantities (MIQ). Establish MIQs at a level that will be issued to a TODO without additional justification.

4.3.8 TCTO Rescission Review. TOMAs will use the ETIMS TCTO Rescission Report to generate a listing of assigned TCTOs approaching rescission dates and provide the listing to the TCM. For those within 150 days of rescission, the TCM will evaluate whether to extend the rescission dates or to rescind the TOs early or on the specified dates. TOMA will then update ETIMS with a new rescission date or rescind the TCTO.

4.3.9 Reports. ETIMS users can access numerous reports to assist with TO and TODO (TM) account management. These reports are available from the 'Manage TOs' screen, such as Requisition Report, TO Number Request Report, Sponsor Approval Report, Master Address Report, TO Catalog Report, etc. Procedures for accessing the reports are in the ETIMS help screens and appropriate FUGs.

4.3.10 Establishing TODO (TO) Accounts. TODO accounts are established in ETIMS following successful processing of AFTO Form 43 IAW TO 00-5-1.

4.3.11 Renumbering Technical Orders. The TOMA shall only request TO renumbering to correct serious numbering errors caused by erroneous or insufficient source data before the TO is published and distributed. Published TOs will only be renumbered when the assigned number prevents effective location or use of the TO, or the scope or range of the functionality covered by the TO changes significantly. TOs will not be renumbered to align with local sequence numbers or similar cross reference identifiers. The responsible TOMA will request renumbering actions be accomplished through local TO Site Functional office or AF TOFST (for locations without local TO Site Functional office). When renumbering a published TO, both the new and former TO numbers will appear in the upper right corner of the title page with the former number preceded by the word Formerly. Both numbers will remain on the title page until the next revision, at which time only the new number will appear. Only the new TO number will appear on the individual updated pages. Unchanged pages will continue to indicate the old TO number until they are changed for a reason other than simply renumbering, or until the next TO revision. Distribution media suffixes are not included as part of the TO number for the TO itself.

4.3.11.1 When AFLCMC/LZPTP-TINKER approves a new number for unpublished TOs, the TO record is updated and subscriptions submitted against the original number are automatically changed to the new one.

4.3.11.2 When published TOs are renumbered, ETIMS will automatically convert all past revisions and changes to the new number.

4.3.11.3 eTOs distributed from sites other than the ETIMS repository are indicated by a WA-2 media suffix, with the host site URL identified in the ETIMS TO details page in the WA-2 Repository/System Name Block. The WA-2 numbering is not to be used for PDF eTOs. PDF's should be WA-1 and distributed via ETIMS. An AFMC/A4F waiver is required for the use of the -WA-2 suffix, except for the IETMs nuclear weapon TOs (11N), ICBM TOs, and classified TOs. A WA-2 waiver is also required if a WA-1 suffix version is being distributed via the ETIMS repository and a second media version is to be distributed via a non-ETIMS repository (e.g., an html version for depot operations, distributed from a prime contractor site).

4.3.11.4 The TOMA will number TOs IAW TO 00-5-18, and index and manage digital media IAW this TO. The only procedural difference in numbering and indexing between the types of media is the suffix used to indicate media type. Media suffixes will only be used when indexing and subscribing to the digital versions of the TO, they will NOT appear on the TO title page.

NOTE

Even though the data on a CD/DVD is digital in its format, it is considered physical media.

4.3.12 TCTO Series Numbering. TCTO series header numbers are assigned IAW TOs 00-5-15 and 00-5-18. TOMAs will request a TCTO Series Header using the ETIMS Request TO number screen for an aircraft, missile or engine category when a new TO series is established. (Refer to 00-5-15) TOMAs will request new TCTO series headers for other TO categories when the first TCTO is in preparation. A separate TCTO series header must be established when individual TCTOs in the series will be assigned different classifications. Once a TCTO series header number is approved, ETIMS will automatically number individual TCTOs in the series.

4.4 INDEXING TOS BY MEDIA TYPES.

4.4.1 Media Type Definitions.

4.4.1.1 Physical Media: Paper and CD-ROM/DVD.

4.4.1.2 Digital Media: Online Electronic TOs (eTOs -WA-1& -WA-2, IETM/S1000D based TOs).

4.4.1.3 The minimum acceptable digital format for Air Force TOs is Adobe® Portable Document Format (PDF). When TOs will be distributed in two or more distribution media, each media version must be separately indexed in ETIMS. Each distributed media version will have its own TO Number consisting of the approved TO number plus the appropriate distribution media suffix code. (Refer to TO 00-5-18.) Each TO number indexed will be assigned a corresponding Publication Stock Number (PSN) as specified in TO 00-5-18, and paragraphs below.

NOTE

TO Numbers assigned to CD-ROM or DVD disks used for the distribution of single or multiple digital TOs shall reflect the TO number including the media suffix on the disk and case labels. (Figure 4-4.)

4.4.2 Paper TOs. The paper version of a TO must be marked FMS Only in ETIMS if there are FMS subscribers, even if the US TODOs only subscribe to the eTO version. Consult the spreadsheet on the AFLCMC/LZPTC SharePoint: https://org2.eis.af.mil/sites/21763/AFLCMCLZP/Tinker/LZPT/LZPTC/default.aspx to determine if there are FMS subscribers. When only FMS subscribers to a TO remain, set the TO status to FMS Only.

4.4.3 CD-ROMs/DVDs. If a single TO or multiple TOs will be distributed on a CD-ROM or DVD, the TOMA must establish a specific TO Number for the CD ROM or DVD distributed. These actions will ensure that users will be able to subscribe to the CD-ROM/DVD TO or collection of TOs.

4.4.3.1 If a single TO distributed on CD/DVD will replace a single paper version (no paper distribution at all), the TOMA requests CD/DVD number and supersede the paper TO.

4.4.3.2 For a collection of TOs that are to be distributed on CD/DVD, TOMAs will add TO collection to CD/DVD on Manage TO Detail screen in ETIMS. (See FUG https://cs2.eis.af.mil/sites/10531). If the CD/DVD distribution will be for an IETM/S1000D based TO, a Catalog Note will be included listing the TO groups contained on the CD/DVD (IETM/S1000D) and indicate the viewing application or system required. The TO Number printed on the CD will be the same as the TO Index. Individual TOs contained in the collection that are not available for distribution separately as paper shall be indexed as -WA-1, if available through ETIMS. TO Manager shall associate all TOs in collection on CD/DVD Manager Tech Order Detail page.

4.4.3.3 If TOs for multiple systems or commodities are included on the CD/DVD, use a disk TO number which will help identify all of the systems/commodities. (See the instructions for establishing a TCTO Series Header Number in TO 00-5-18.)

4.4.3.4 If multiple TO types are included (e.g., a disk containing operations, maintenance and inspection TOs), either use the lowest TO type dash (-) number contained on the disk or omit the TO type designator altogether in the CD/DVD TO number.

4.4.3.5 Numbering Multiple Disks in a Set. If a TO is published in volumes or a TO set is too large for a single disk, the ’n’ will indicate the volume/disk number. If a TO Set has varying classifications, or a supplemental TO has been published, the ’n’ can differentiate between differently classified disks. See examples, TO 00-5-18.

4.4.3.6 TO Distribution Media Suffix Codes. Media suffixes will only be used when indexing and subscribing to versions of the TO, they will NOT appear on the TO title page. TO Numbers assigned to CD-ROM or DVD disks used for the distribution of single or multiple digital TOs shall reflect the TO number including the media suffix on the disk and case labels (Paragraph 4.1.6.2).

4.4.4 eTOs. Digital TOs distributed electronically for use are known as eTOs. The distribution of eTOs is critically dependent upon the capability to publish updates in a timeframe that meets interim TO (ITO) requirements. An eTO numbering request will be given a standard TO number to include a -WA-1 suffix on the end of an existing or new TO number in the ETIMS Catalog. Non-ETIMS eTOs will be numbered ending in the -WA-2 suffix (waiver required except for IETM/S1000D based TOs, Nuclear Weapon Center TOs and classified TOs). The TOMA will create a new index record in ETIMS. These actions will ensure that users will be able to subscribe to the eTO and that one-time requisition for the eTO will not be processed. See FUG on TOMA SharePoint site at https://cs2.eis.af.mil/sites/10531 for detailed guidance and procedures.

4.4.4.1 If the eTO will immediately replace the paper (i.e., no paper distribution at all), then the TOMA will request a new WA-1 TO number for the digital version, and supersede the paper version. This will allow for a complete history of the paper TO, as well as a complete and continuing history for the digital eTO.

NOTE

- The AF TOFST numbers, indexes, optimizes and uploads MAJCOM supplements to those MPTOs distributed exclusively in pdf eTO format (Refer to TO 00-5-1). AF TOFST acts as a TOMA and TCM in ETIMS for indexing purposes. TODOs are responsible for establishing subscription to the merged eTOs.
- Do not replace paper version with an eTO version of an Active Air Force TO with FMS Subscribers. Query ID Requirement Report by logging into SATODS and viewing the ID Requirement Report or go to the SATOP SharePoint site at https://org2.eis.af.mil/sites/21763/AFLCMCLZP/Tinker/LZPT/LZPTC/LZPTC%20Public%20Access%20Files/Forms/AllItems.aspx to view the 'All ID TO Requirement Report' to determine if there are any FMS Subscribers. If there are FMS subscribers, do not supersede the paper with the eTO and do not rescind the paper version. Set the paper to FMS Only. Both paper and WA media will need to be updated concurrently.

4.4.4.2 TOMAs must manually mark eTO index records in ETIMS as Available for Published Index. Once the eTO is uploaded, validated and deployed using ETIMS processes, ETIMS will then mark the eTO available for distribution and distributed to authorized Master eTools for viewing. eTOs shall not be uploaded or deployed prior to the eTO publication date.

4.4.4.3 The AF TOFST has developed TOMA checklists to assist with ETIMS standard TO/eTO indexing, eTO mass indexing, and WA-2 and WA-1 conversion. Use of the checklists is CRITICAL for successful accomplishment of TOMA duties. Checklists are posted on the Air Force Technical Order Managers SharePoint site at https://cs2.eis.af.mil/sites/10531.

NOTE

All digital file media (-WA-n), are indexed as revisions with a publication date matching the latest paper TO increment (Revision, Change, or Supplement). The entire index history for the paper version should not be duplicated for the eTO version.

4.4.5 Numbering and Indexing Supplemental TO Manuals and Parent TOs. When a Supplemental Manual (see TO 00-5-1) is published as a child to a parent TO, both publications must have a supplement notice on the title pages when one cannot be used without the other. Use statement INCOMPLETE WITHOUT TO XX-XX-XX. The same statement will also be placed in the ETIMS Catalog Notes for both TOs.

4.4.6 Distributing Marked-up Changes during System Modifications. TOMAs issue a waiver, with the written agreement of the lead commands and MAJCOMs, to use verified preliminary changes (red-line, marked-up, or clean copies) for required modification programs such as data used to support maintenance on a TCTO-modified system until the related TO changes are formally published. Authorized use of red-lined or marked-up TOs shall not exceed 180 days unless Lead Command authorization is updated. The authorization memorandum must accompany the data at all times.

4.4.6.1 For electronic distribution, the TOMA will transmit as identified in the Lead Command authorization letter and IAW Paragraph 5.5.

4.4.6.2 For physical media distribution, the TOMA will arrange for distribution of limited quantities as described in the Lead Command authorization letter and IAW AFI 63-101/20-101, this TO and TO 00-5-1. Procedures to manage and control preliminary changes will rest with the local using organization.

4.4.7 Interim TOs (ITOs). Index ITOs using a PSN with media code P (Printed Copy). Interim TOs cannot be requisitioned and must be locally printed. TOMA will send notification using ETIMS when ITO is deployed with instruction to download.

4.4.8 Preliminary Time Compliance Technical Orders (TCTOs). ETIMS will provide TCTO numbers and data codes for new TCTOs based on the TCTO Header number.

4.4.9 Numbering and Indexing Digital TCTOs (eTCTOs). Prior to distributing TCTOs, an eTCTO series header record must be established in ETIMS. If eTCTOs are to be distributed using ETIMS, the eTCTO/eTCTO supplement will be indexed using the WA-1 media suffix code and PSNs ending with 11. Non-ETIMS eTCTOs will use the -WA-2 media suffix code. eTCTOs will be numbered as eTCTO Series-WA-1+ specific TCTO number (-501 or higher).

NOTE

- Care must be exercised to correctly sequence the first eTCTO number assigned for the new eTCTO series, if a matching physical media version of the TCTO already exists (see Paragraph 3.9.3.1). For example, if the latest paper TCTO ended with 513, establish a corresponding WA-1 eTCTO series header record and index the first eTCTO as eTCTO Series -WA-1-514. This will require an additional renumber action in ETIMS to change the ETIMS generated eTCTO Series-WA-1-501 to eTCTO Series-WA-1-514.

- If paper TCTOs continue to be issued in parallel, both must be indexed, i.e., TCTO Series -514 (paper) and eTCTO Series-WA-1-514. If paper TCTO files are distributed on CD/DVD, number and index the TCTO as TCTO Series-CD (or DV)-1-501 (or higher).

4.4.10 Supplements. The TOMA indexes a new TO supplement by using the ETIMS Manager Tech Order Detail screen and selecting the Add Supp in the Actions column. Supplement sequence numbers are assigned automatically in ETIMS and restart at 1 (or C depending on type of supplement) after each TO revision. The new supplement is then distributed IAW TO 00-5-1 and this TO. (Refer to FUG at https://cs2.eis.af.mil/sites/10531).

4.4.10.1 If a supplement is indexed incorrectly (not as a revision), an FSC ticket will be required to delete the incorrect increment and the TOMA will then index the revision.

4.4.10.2 FMP Supplements. FMP supplements have sequential supplement numbering for the life of the manual. ETIMS will continue the numbering process on FMP Supplements with any new revision.

4.4.11 Supplements Affecting Digital TOs.

4.4.11.1 Publication of formal TO supplements is incompatible with a digital-only TO publication and distribution process, and they shall not be used for HTML eTOs. However, if the publication of a formal TO Supplement is required to support paper distribution of a TO, number and index the stand-alone supplement as a paper document (TO Number + S-n or SS-n with a PSN ending in 06). The formal supplements for PDF eTOs or CD-ROM/DVD TOs will be merged into the digital TO file prior to issue. The TO media (-WA-1, -CD-1, or -DV-1) will be indexed as a Revision with a PSN ending in 11, and will be dated the same as the paper supplement. Do NOT index an eTO supplement as a stand-alone file with the -WA-1 media distribution code, as this will prevent loading either file to the ETIMS repository.

4.4.11.2 Paper interim supplements will be indexed in ETIMS by selecting Local Print, which ETIMS will automatically select the interim indicator and assign a PSN ending in P (Printed Copy, used for messages which have to be printed locally). Interim supplements to digital PDF eTOs will be merged into (posted to) the digital eTO prior to uploading to ETIMS. Refer to TOMA SharePoint site (https://cs2.eis.af.mil/sites/10531) for specific details. The merged TO file will be indexed as a Revision with a PSN ending in 11, with a publication date that matches the paper supplement date. HTML eTOs must use RACs instead of interim supplements.

4.4.12 Interim eTCTO Supplements. Supplements must be merged into digital PDF TO files and posted IAW TO 00-5-1 and fully linked and annotated by the TOMA before uploading to ETIMS for viewing and distribution. This includes a title page note referencing the supplement as well as hyperlinks to affected paragraphs. Refer to the FUG on the TOMA SharePoint site (https://cs2.eis.af.mil/sites/10531) for specific details.

4.5 TECHNICAL ORDER RESCISSIONS.

Rescind TOs when all media types will be deleted without replacement. Rescind single media type of TO only if FMS/SAP is not on subscription in SATODS. Rescind TCTOs/eTCTOs when rescission dates are reached IAW TO 00-5-15, or the TCTOs/eTCTOs are no longer required. Extend rescission dates on TCTOs/eTCTOs when required IAW TO 00-5-15.

Rescind TCTO/eTCTO series headers when all media types of TO series are deleted. Perform digital repository file maintenance as necessary. For rescission of supplements to digital data, see Paragraph 4.1.4.2.3.2.

NOTE

TOs and increments replaced by or combined into new TOs and TO updates will be superseded not rescinded.

4.5.1 TCM Procedures. The TCM will perform the following actions before recommending rescission of a TO without replacement, whether the need for rescission is identified through field inputs or through a periodic post-publication review. Rescind TCTO IAW TO 00-5-15.

4.5.1.1 Notify the TOMA of any proposed TO rescission of digital/paper/or both with the following information as a minimum: TO number, known operational systems, commodities and related TOs involved, part number, type/model and series of items, associated weapon system (and active/retired status), and also include any replacing data.

4.5.1.2 If provided by the TOMA, evaluate subscriber's justification to retain the TO. As required, contact subscribers requesting retention for additional information or clarification. Advise TOMA to retain or rescind the TO.

4.5.1.3 Ensure the system or commodities affected have been removed from operation and phased out of the inventory by checking the Standard Reporting Designator (SRD) through REMIS.

4.5.2 TOMA Procedures. The TOMA will perform the following actions prior to rescission of a TO without replacement.

4.5.2.1 Use the ETIMS Notify Subscribers Screen to advise all affected users and managers (TODOs, PMs, FMS (SATOP Office), etc.) of the proposed rescission. If the TO is joint-service, follow AFI 20-118 procedures to notify other DoD activities. Include all of the information provided by the TCM in the notification message. Request detailed justification be provided by any subscriber who opposes the rescission. Include a pending rescission date in the notification (not less than 30 days from the notification date).

4.5.2.2 If upon the pending rescission date, no subscribers have provided justification to retain the TO, the TOMA will use the ETIMS Manage TO screen to rescind the TO and update the ETIMS Catalog. The TO record remains in ETIMS.

4.5.2.3 If detailed justification to retain the TO is received, provide the justification and subscriber's contact information to the TCM for evaluation/resolution.

4.5.3 Rescission of Supplements on Digital (-WA-1) only TOs. ETIMS requires a newer date to deploy eTO so the following will be required:

4.5.3.1 Remove supplement and current annotations from PDF and annotate on Title Page S-X rescinded DDMMMYY.

4.5.3.2 Upload PDF to ETIMS with rescission date of supplement.

4.5.3.3 Index revision in ETIMS where pub date is rescission date of supplement and add catalog note stated S-X rescinded DDMMMYY.

4.5.4 Rescission of Single Media Type. This procedure is accomplished when only one media type requires rescission for USAF but is used by FMS/SAP. Prior to the rescission of one media, it must be determined if the TO is used by FMS/SAP. If the TO is used for FMS/SAP, set TO status in ETIMS to FMS Only.

4.5.5 Nuclear Weapons TOs. Send rescission requests for nuclear TOs to the AFNWC/NCL Technical Support Flight, 2000 Wyoming Blvd SE, Kirtland AFB NM, 87117-5617.

4.5.6 Joint Service to Retention. If joint-service-use TOs are still required by another service, transfer TO management, reproduction masters, and warehouse stocks to that service. (See AFI 20-118).

4.6 TECHNICAL ORDER SUPERSEDURES.

4.6.1 Definition. Superseded TOs and TO increments are defined as increments being replaced by a revision or a new increment in the same TO series, or when replaced by or incorporated into another TO in a different series. Supersede TCTOs when replaced by a new TCTO.

NOTE

Add a Catalog Note in ETIMS, to the record of any superseded TO that is replaced by a different TO, use the statement: Replaced by TO XXX-XXX-XX. Add a matching Catalog Note to the replacement TO record, use the statement: Formerly TO XXX-XXX-XX or Includes TOs XXX-XXX-XX.

4.6.2 Supersedure Notices. Unless otherwise specified, the supersedure notices shall be placed on the title page when the manual/change/revision/RAC under preparation supersedes all or portions of other manuals/changes/revisions. When specified, the supersedure notice shall include a list of all currently superseded supplements and RACs IAW MIL-STD-38784. No supersedure notice is required when PTOs are superseded. Provide any special instructions in the change package (e.g., the list of TO increments to be listed in the title page supersedure notice).

Examples:

- When an SH252 is being incorporated into a new increment, the SH252 Project Number and date must be listed on the title page supersedure notice of the new increment. Example: THIS PUBLICATION SUPERSEDES SPECIAL HANDLING AFTO FORM 252 PROJECT NO. 51Mxxxxxxxxxxx, DATED 20 JULY 2011.
- When an IOS/ISS is being incorporated into a change, the IOS must be listed on the title page supersedure notice of the new increment. Example: THIS PUBLICATION SUPERSEDES TO 00-5-3S-1, DATED 12 FEBRUARY 2010.

4.6.3 TO Disposition. The TOMA will supersede or rescind TOs when they have been replaced or are no longer required, IAW this TO. TOs will be retained in the Archives until six years after the equipment supported leaves the inventory (reference Paragraph 5.7, Archive Procedures).

4.7 REACTIVATE TECHNICAL ORDERS.

TOMA changes TO status from rescinded to active using the Manager Tech Order Detail screens IAW the ETIMS FUG (https://cs2.eis.af.mil/sites/10531).

4.8 TRANSFER OF TECHNICAL ORDER MANAGEMENT RESPONSIBILITY.

4.8.1 Business Practices. Responsibility for TO program and content management transfers to the new ETIMS proponent if the system or equipment covered by the TOs is transferred. Both losing and gaining proponents must agree on the transfer and schedules before any actions can occur. Transfer should include all TOs and all TO family increments in the affected TO series; i.e., all related basics, changes, supplements, source data, TCTOs and TCTO series headers. TOMA and TCM responsibilities must also be transferred within the proponent when the assigned personnel transfer or otherwise become inactive.

4.8.2 Transfer Agreements. If gaining proponent does not agree with the transfer, the applicable TO Site Functional Office has the authority to intercede and assist with the transfer. This can only be accomplished once research of all legacy systems indicate the TOs belong to the gaining organization. If proponent transfer is still a dispute, AFMC/A4F will make the final determination.

4.8.3 Proponent Transfer Procedures. The losing TOMA will identify to the gaining TOMA, TOs to be transferred on a spreadsheet (template located at https://cs2.eis.af.mil/sites/10531). The gaining TOMA completes spreadsheet with proponent, TO Manager and Equipment Specialist for each TO on spreadsheet. Spreadsheet is provided to local TO Site Functional Office or AF TOFST (for location with no local site office), who will, in turn, create and submit a Field Support Center ticket.

4.8.4 Print Ownership Transfer in TODPG. When transfer of TO management responsibilities occur and there are TOs residing in TODPG for printing, the losing and gaining TOMAs have actions to complete. See FUG at https://cs2.eis.af.mil/sites/10531 for instructions.

Add Page ATTACH

TECHNICAL ORDER PUBLICATION CHANGE REQUEST	DATE PREPARED	DATE RECEIVED

1. TO	2. FROM

3. PUBLICATION NUMBER	4. PUBLICATION DATE *(Basic)*	5. PROJECT NUMBER(S)
	LATEST CHANGE NUMBER AND DATE	

6. PUBLICATION TITLE

7. TYPE	8. NEED DATE	9. HARDNESS CRITICAL ITEM	11. CODES
☐ RAC ☐ TCTO SUP ☐ TCTO ☐ CHANGE ☐ REVISION	10. TCTO NUMBER	☐ YES ☐ NO ☐ N/A	A. DISTRIBUTION CODE B. REASON C. EXPORT CONTROL ☐ YES ☐ NO

12. SAFETY REVIEW (OSHA) *(Signature)*	13. WPNS SAFETY NUCLEAR SURETY TECHNICAL EVAL *(Signature)*
☐ N/A Click to sign	☐ N/A Click to sign

14a. FOREIGN DISCLOSURE (FDO) *(Signature)*	14b. AUTHORIZED TO *(Country Codes as Applicable)*
☐ N/A Click to sign	

15. RGL CERTIFICATION	16a. ENVIRONMENTAL IMPACT	16b. SPECIAL PACKAGING INSTRUCTIONS (SPI)	17. VERIFICATION
☐ N/A ☐ AFTO FORM 124 PREPARED	☐ N/A ☐ ENVIRONMENTAL ASSESSMENT PREPARED	☐ N/A ☐ REVIEWED BY PACKAGING SPECIALIST	☐ N/A ☐ BY PERFORMANCE ☐ BY SIMULATION/DESKTOP

18. REMARKS/COORDINATION	SYSTEM ENGINEER SIGNATURE (IF REQUIRED)
	Click to sign

19. ORIGINATOR	20. APPROVING OFFICIAL
NAME	NAME
OFFICE SYMBOL PHONE	OFFICE SYMBOL PHONE
SIGNATURE Click to sign	Click to sign

21a. PAGE NUMBER	21b. PARAGRAPH NUMBER	21c. INSTRUCTIONS *(Include below specific paragraph rewording, instructions for changing illustrations, new or changed listings in Parts Breakdown, etc.)*

AFTO FORM 252, 20170309 PREVIOUS EDITION IS OBSOLETE

G1704868

Figure 4-1. Technical Order Publication Change Request with Instructions (Sheet 1 of 4)

CONTINUATION DELETE PAGE			DATE PREPARED
3. PUBLICATION NUMBER		5. PROJECT NUMBER(S)	
6. PUBLICATION TITLE			
21a. PAGE NUMBER	21b. PARAGRAPH NUMBER	21c. INSTRUCTIONS *(Include below specific paragraph rewording, instructions for changing illustrations, new or changed listings in Parts Breakdown, etc.)*	

AFTO FORM 252, 20170922 CONTINUATION PAGE

TO00-5-3-001

Figure 4-1. Technical Order Publication Change Request with Instructions (Sheet 2)

	DATE PREPARED/ DATE RECEIVED	Enter the date Block 19 is signed in "Date Prepared." Enter the date the publishing activity receives the form in "Date Received."
Blocks 1-4 & 6		Self-Explanatory.
Block 5	**PROJECT NUMBER (S)**	Develop a project number IAW paragraph 4.1.1.7.1 and add the local control numbers (LCN) of any Recommended Changes (RCs) or SH252 Project Numbers included in the AFTO Form 252. Each number will be unique and cannot be duplicated. Continue in Block 18, REMARKS/COORDINATION.
Block 6	**PUBLICATION TITLE**	Self-Explanatory.
Block 7	**TYPE**	Select the appropriate type.
Block 8	**NEED DATE**	If the update requires expedited processing (i.e., for an Emergency or Urgent update), enter the need date here.
Block 9	**HARDNESS CRITICAL ITEM**	Check the applicable box. Use "NO" if the TO contains hardness critical items but this update does not affect them. Use "N/A" if nothing in the TO is hardness critical.
Block 10	**TCTO NUMBER**	If the update is related to a TCTO, enter the TCTO number here.
Block 11	**CODES**	Enter the update's STINFO distribution code and reason in "A" and "B". Check the appropriate "C" box to indicate whether the update is Export Controlled or not.
Block 12	**SAFETY REVIEW (OSHA)**	If the update affects Warnings or Cautions, or personal protective gear or other safety related issues, obtain local Safety Office coordination. (Paragraph 7.3) Otherwise check "N/A".
Block 13	**WPNS SAFETY/NUCLEAR SURETY TECHNICAL EVAL**	If the update affects nuclear weapon data or other weapon arming/release/handling/etc., data, obtain the appropriate Safety Office coordination (Paragraphs 7.6 and 7.7). Otherwise check "N/A".
Block 14a	**FOREIGN DISCLOSURE (FDO)**	If the update affects data to be released, or which could be released, to FMS/SAP countries, obtain a releasability review and signature from the FDO. Otherwise, if an update does not contain any restricted data, (Distribution Code A) and the TO itself was releasable, the FDO does not need to coordinate on the change package – check "N/A". NOTE The FDO may waive coordination on changes when the parent TO or series of TOs is for a non-releasable system or commodity (such as nuclear weapons), and the TOMA will enter a non-release statement in the Remarks Block (Block 18).
Block 14b	**AUTHORIZED TO**	List country codes the data is releasable to, or if there are no restrictions, enter "All".
Block 15	**RGL CERTIFICATION**	When required IAW 00-5-3, paragraph 4.1.3.2.2, prepare an AFTO Form 124, *Computation of Technical Order Reading Grade Level (RGL)*, and check the "AFTO FORM 124 PREPARED" box. Otherwise, check "N/A".

G1411740

Figure 4-1. Technical Order Publication Change Request with Instructions (Sheet 3)

Block 16a	**ENVIRONMENTAL IMPACT**	Obtain an Environmental Assessment if there are any environmental impacts (see AFI 32-7061, *The Environmental Impact Analysis Process*) and check the "ENFIRONMENTAL ASSESSMENT PREPARED" BOX. Otherwise, check "N/A".
Block 16b	**SPECIAL PACKING INSTRUCTIONS (SPI)**	Identify if packing specialist has reviewed, if applicable.
Block 17	**VERIFICATION**	Identify the method used to complete the verification.
Block 18	**REMARKS/ COORDINATION**	Enter the following types of information here; Recommended Change (RC) LCNs which would not fit in Block 5; additional coordination required (e.g., Chief Engineer, Non-Destructive Inspection (NDI), corrosion control, calibration, Support Equipment Work Group, etc.); Verification results, etc. If required, the programs' System Engineer will certify the recommended update by signing the System Engineer Signature Block using their CAC certificate.
Block 19	**ORIGINATOR**	The TCM (or other originator) will enter his or her name, office symbol and DSN phone number. He or she will sign using his or her CAC certificate.
Block 20	**APPROVING OFFICIAL**	If required, the program's Chief Engineer or designee will certify the recommended update by signing Block 20, using their CAC certificate.
Block 21a	**PAGE NUMBER**	Enter the affected page proposed TO changes.
Block 21b	**PARAGRAPH NUMBER**	Enter the paragraph numbers of the proposed TO changes.
Block 21c	**INSTRUCTIONS**	Enter the exact wording of the proposed TO changes. If there are too many changes to easily transcribe on the form, enter "See attached mark-ups" or similar wording, and attach marked-up TO pages, word files, etc. Other back-up documentation which clarifies the requested updates may also be attached.

G1411741

Figure 4-1. Technical Order Publication Change Request with Instructions (Sheet 4)

UNCLASSIFIED

Subject: (U) IOS 33XX-XX-XX-XS-2

Special Handling 252
51MWRLEETX0009C11

Date: 11-March-2010

From: WR-ALC/406 SCMS/GUHA

To: Distribution List for 33XX-XX-XX-1

Attachment(s): SH252 LCN 51MWRLEETX0009C11, 2 Pages

APPLICABILITY: DEPOT-LEVEL MAINTENANCE ONLY

1. THIS PUBLICATION SUPPLEMENTS TO 33XX-XX-XX-1, DATED 12 AUGUST 1987, TITLE: OPERATION AND MAINTENANCE INSTRUCTIONS WITH ILUSTRATED PARTS BREAKDOWN, XXXXX TITLE XXXXX.

2. COMMANDERS ARE RESPONSIBLE FOR BRINGING THIS SUPPLEMENT TO THE ATTENTION OF ALL AFFECTED AF PERSONNEL. MAJCOMS, LOAS, AND DRUS ARE RESPONSIBLE FOR RETRANSMITTING THIS IOS TO SUBORDINATE UNITS NOT INCLUDED AS ADDRESSED ON THIS MESSAGE.

3. DISTRIBUTION STATEMENT B: DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES ONLY (CRITICAL TECHNOLOGY) (10 MAY 2004). OTHER REQUEST FOR THIS DOCUMENT SHALL BE REFERRED TO 406 SCMS/GUHA, ROBINS AFB, GA 31098.

4. EXPORT CONTROL WARNING: THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, ET SEQ.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 ET SEQ. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

5. HANDLING AND DESTRUCTION NOTICE: COMPLY WITH DISTRIBUTION STATEMENT AND DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

6. PURPOSE: ISSUE SPECIAL HANDLING 252 LCN 51MWRLEETX0009C11TO PROVIDE CORRECTED OR NEWLY DEVELOPED DATA TO RESOLVE AN ACTUAL OR ANTICIPATED WORK STOPPAGE AT DEPOT-LEVEL MAINTENANCE ACTIVITY OR TO DEFINE IUID PART MARKING REQUIREMENTS AND PROCESSES.

7. THIS SH252 WILL REMAIN VALID UNTIL RESCINDED, SUPERCEDED OR RECIEPT OF AN INTERIM OR FORMAL TO UPDATE TO INCORPORATE THE DATA.

G1411742

Figure 4-2. Example of SH252 IOS Coversheet

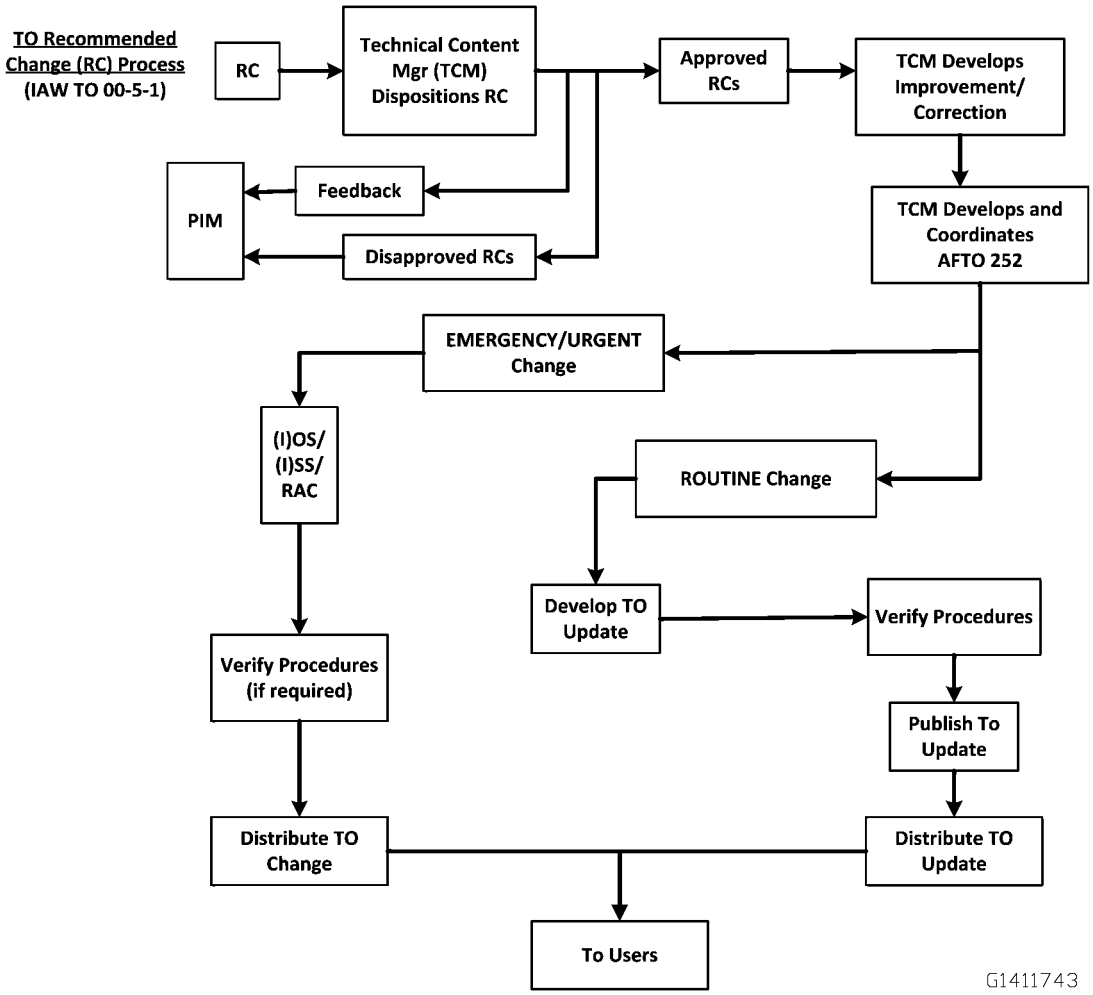

Figure 4-3. TO Improvement Process Flow Chart

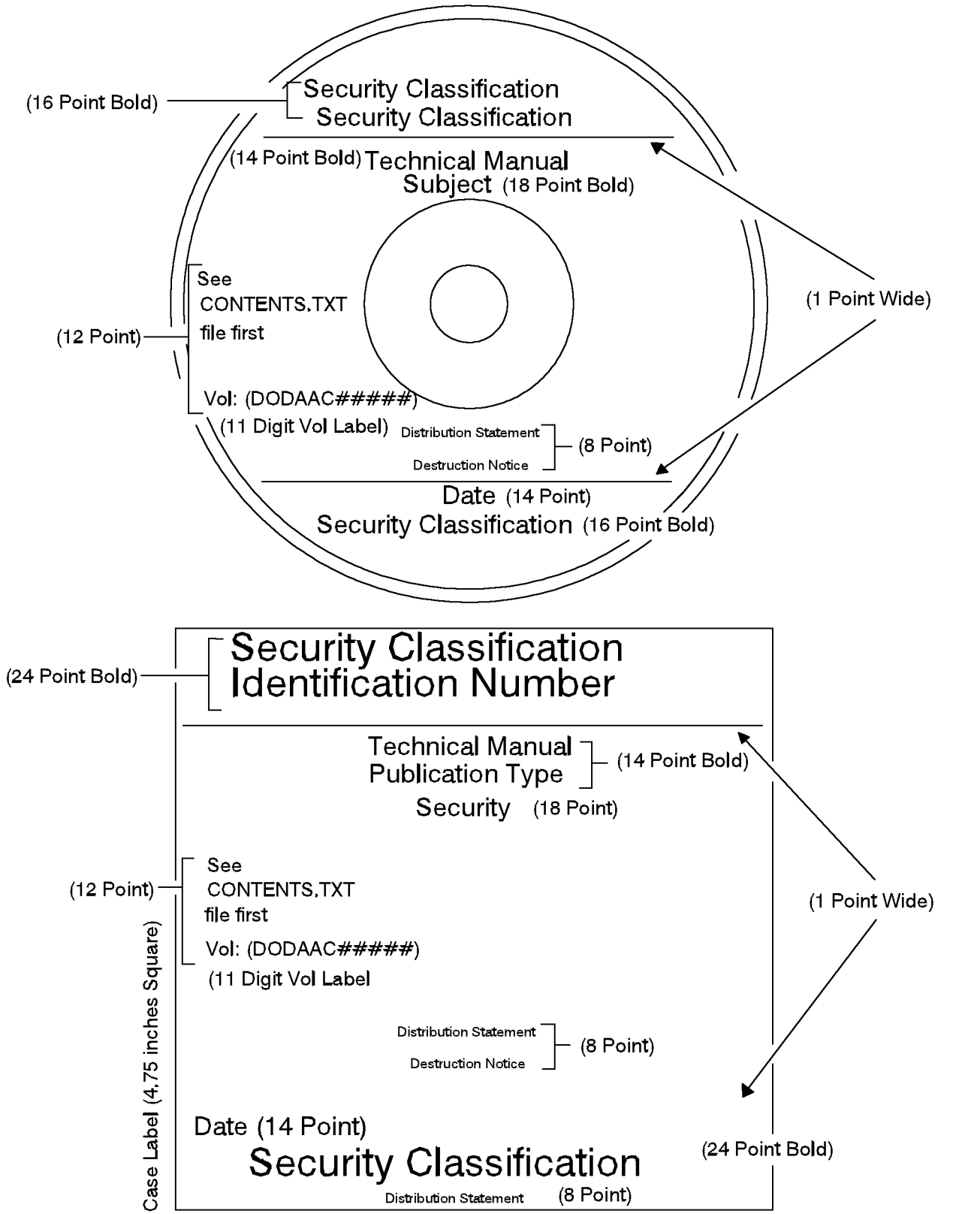

Figure 4-4. CD-ROM/DVD Disk and Case Label Format

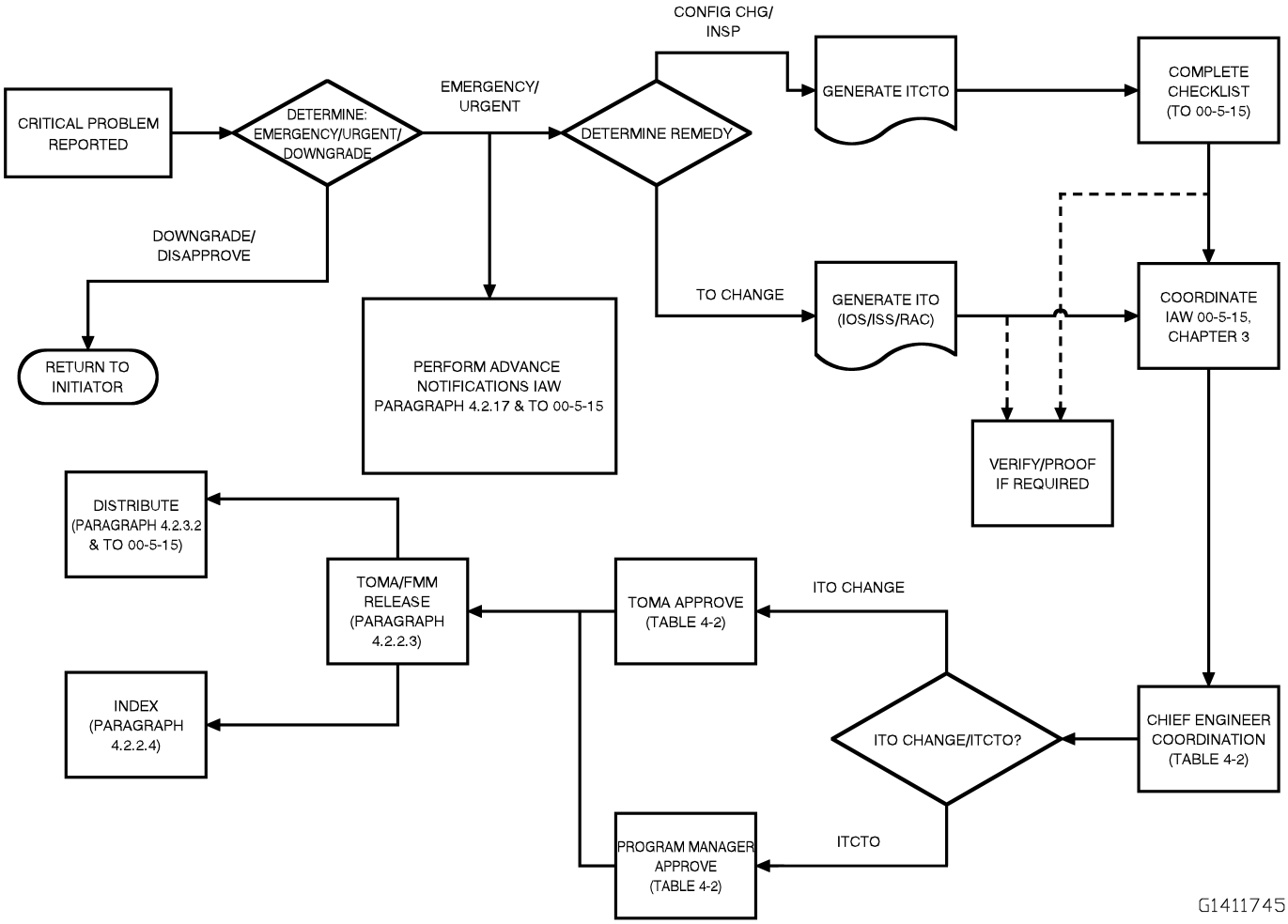

Figure 4-5. IOS/ISS/RAC Flow Chart

Table 4-1. Recommended Change Processing Time Limits

Category Report	Responsibility	Time	Action Required
USAF TOs AND JOINT SERVICE TECHNICAL MANUALS MANAGED BY AIR FORCE (Cognizant Activity Code F)			
EMERGENCY			
Issue RAC or ITO	TOMA/TCM	48 hours total from time of receipt for Emergency.	Record receipt and deliver/forward to evaluator.
		72 hours total from time of receipt for work stoppage.	APPROVED: Prepare and provide electronic Rapid Action Change (RAC) Notification message via email, or transmit electronic Interim TCTO IAW Paragraph 5.5. Complete the reply portion of an AFTO Form 22 and deliver to the TOMA with a copy of the RAC/ITCTO issued (See EXCEPTIONS, Paragraph 4.1.4)

Table 4-1. Recommended Change Processing Time Limits - Continued

Category Report	Responsibility	Time	Action Required
			DISAPPROVED/DOWNGRADE: Transmit an email message citing reasons for action to the responsible organization, including all information addresses from the original RC. Complete the reply portion of an AFTO Form 22 and deliver to the TOMA with a copy of the message form. Continue processing of the downgraded RC IAW instruction for the new category.
		40 Days	Return relaxed RAC format to basic TO format (if necessary) for next routine update, or draft a formal TO update to incorporate an ITO.
Follow-on Format TO update	TOMA	Issue a format change or revision within 40 calendar days.	Print and distribute the update incorporating an ITO.
URGENT Formal update	TOMA/TCM	40 days from time of initial receipt by the TO Management Office. Downgrade/ disapprove within 15 days.	Publish and distribute a TO update within 40 days after receipt of the recommended change by the TO Management Office (using activities must allow for mail and TODO redistribution time), or disapprove/ downgrade the recommendation within 15 days. Urgent recommendations can only be downgraded with the concurrence of the Lead Command CCP. Record receipt and forward to evaluator, provide response. APPROVED: Complete evaluation using reply portion of the AFTO Form 22 and forward to the TOMA. Forward one copy of the AFTO Form 22 to each activity shown in Blocks 1, 2 and 3. DISAPPROVED/DUPLICATE/ADVISEMENT/ DOWNGRADE: Complete the reply portion of the AFTO Form 22; enter reasons for action in Block 27; forward one copy each to activities shown in Blocks 1, 2 and 3, and to the TOMA. Continue processing of downgraded RCs IAW instructions for routine RCs.
Follow-on format TO update	TOMA	Issue a formal change or revision within 40 days.	Incorporate, print and distribute change.
ROUTINE Formal update	TOMA/TCM/Evaluator	45 Days from time of initial receipt	Record receipt and forward to evaluator, provide response. APPROVED: Complete evaluation using reply portion of the AFTO Form 22; and forward to the TOMA. Forward one copy of the AFTO Form 22 to each activity shown in Blocks 1, 2 and 3. DISAPPROVED/DUPLICATE/ADVISEMENT: Complete reply portion of the AFTO Form 22; enter reasons for action in Block 27; forward one copy each to activities shown in Blocks 1, 2 and 3 and to the TOMA. ABEYANCE: Complete reply portion of the AFTO Form 22 and forward one copy each to activities shown in Blocks 1, 2 and 3 and to the TOMA.

Table 4-1. Recommended Change Processing Time Limits - Continued

Category Report	Responsibility	Time	Action Required
			Combine all approved routine RCs received during the period between the last update and current copy freeze date. Prepare AFMC Form 252 for TO update. (NOTE: When an approved RC is later Deferred, furnish copy of the AFTO Form 22 with reasons for the action to activities shown in Blocks 1, 2 and 3)
Follow-on format TO update	TOMA	365 days total from time of initial receipt, includes Advisement/Abeyance Time	Update TO and distribute change.
JOINT SERVICE TECHNICAL MANUALS MANAGED BY ANOTHER DoD COMPONENT (Cognizant Activity Code: A - Army; C - Coast Guard; D - Defense Logistics Agency; M - Marine Corps; N - Navy. Processing will be accomplished as indicated for USAF TOs with the following additions/exceptions:			
	Evaluator		APPROVED: The incorporating issue will be an AF supplement to the Joint Service Technical Manual; a copy of the approved AFTO Form 22 will be furnished to the responsible DoD component. DISAPPROVED: A copy of the disapproved AFTO Form 22 will be furnished to the responsible DoD component. DUPLICATE/ADVISEMENT: A copy of the AFTO Form 22 to the DoD component is not required. However, when a RC placed in Advisement is later Approved or Disapproved, the requirements stated immediately above will apply. DOWNGRADE: Downgrade action of an AFTO Form 22 is not appropriate when the publication is managed by another DoD component.
Follow-on format TO update	TOMA		Upon publication by the responsible DoD component of an increment which incorporates an RC approved by the PM, initiate action to rescind the AF supplement which was issued when the RC was approved.

Table 4-2. ITO/RAC Approval Signature Levels

	ITO/RAC IS:	Action:	Official:
1	All ITOs	Coordinate/Approve Contents: Release after approval:	Chief Engineer TOMA/FMM
2	ISS/IOS/RAC	Approval/Signature:	TOMA/FMM
3	Emergency ITO/RAC affecting SIOP-tasked systems/equipment	Approval: Through: Signature:	Chief of Staff, USAF PM, CC, AFMC/CC PM
4	Emergency ITO/RAC other than 3. above	Approval/Signature:	PM
5	Urgent ITO/RAC	Approval/Signature:	PM
6	ITO Supplement	Approval/Signature:	Same as basic TO

Table 4-3. Automatic Mandatory Sponsor Approvals

CLASSIFICATION	DISTRIBUTION STATEMENT	DISTRIBUTION REASON
Top Secret	All	All
Secret	All	All
Unclassified	B, E, or F	All
Unclassified	C or D	Critical Technology
Unclassified	C or D	Foreign Government Information
Unclassified	C or D	Specific Authority
Unclassified	C or D	Vulnerability Information

Table 4-4. Technical Order Currency Review Guide

	ITEM	ACTION
1	Part Number on Cover Correct?	Review cataloging history for other part numbers that should appear on the cover of the manual
2	Distribution, disclosure, destruction and export control notices correct?	Verify distribution statement is correct. Update office symbol in distribution statement if required. Add disclosure notice, export control and destruction notice if required
3	Table of Contents, List of Illustrations and List of Tables	Update to reflect changes made to the manual.
4	Symbols and abbreviations	Add separate tables defining both the symbols and abbreviations that are used throughout the manual
5	Glossary	Add a table explaining the terms used in the manual if necessary
6	Related Publications	Add a table of related publications identified in throughout the TO
7	List of TCTOs	Identify any TCTOs that are currently in work. Remove TCTOs that have been rescinded.
8	Change recommendations	Add instructions for submitting the AFTO 22 along with the email address for the AFTO 22 office, and identify the MAJCOM responsible for the TO.
9	Safety Summary	Record warnings and cautions here that require emphasis.
10	Work cards	Review for reference to work cards. Verify work cards refer to part number and TO of the book you're reviewing.
11	Technical requests	Identify when a 107 or 202 is required and add supporting TO information.
12	Supplements	Update the manual to incorporate supplements
13	TCTOs	Verify changes identified in TCTOs are recorded in the TO
14	Inspections	Are intervals appropriate and procedures complete?
15	Warnings and cautions	Review for accuracy and clarity. Separate warnings and cautions from any instructions so that warnings and cautions stand alone
16	Source Maintainability Reparability codes	Verify SMR codes are accurate and up to date
17	Usable on codes	Verify completeness and accuracy
18	Part Numbers	Verify for currency, identify replacements for obsolete part numbers

CHAPTER 5
TECHNICAL ORDER REPRODUCTION AND DISTRIBUTION

5.1 TECHNICAL ORDER DISTRIBUTE AND PRINT GATEWAY (TODPG).

TODPG is the AF-directed system used for all printing of physical media TOs (paper, CD/DVD).

5.1.1 TODPG Concept of Operation. TODPG provides the central DLA Data Management Services repository with ready-for-production (print ready) PDF format TO files in support of physical media Initial Distribution (ID) and subsequent One-Time Requisition (OTR) transactions for complete TOs or for specific (active) TO Changes and/or Supplements. TODPG is the central point in a DLA Wide Area Network (WAN) connecting DLA Data Management Services production sites. TODPG sends ID/OTR print orders through the DLA network for reproduction, packing and shipment by DLA Document Services sites closest to the TODO customer-worldwide.

5.1.1.1 All ID transactions are processed by an interface between ETIMS and TODPG. Once a new physical media increment is made available for index in the ETIMS catalog, jobs are already created in TODPG for Technical Order Managers/Agents (TOMAs) to upload content. Once content is loaded, ETIMS is notified through interface and label information is sent automatically to TODPG to support ID print and distribution.

5.1.1.2 All OTR transactions are processed by an interface between ETIMS and TODPG. ETIMS TODO-approved OTR transactions are sent directly to TODPG where it is determined if the requisitioned TO has been uploaded to TODPG. If the TO has been uploaded and the correct version of the requisitioned TO is available, TODPG will deliver the print job to the DLA Data Management Services site closest to the TODO for printing and direct shipment. If the TO has not been uploaded to TODPG, or a current version of the requisitioned TO is not uploaded, it will be placed in a held status until it is correctly uploaded into TODPG for processing.

5.1.1.3 The following statement is required on the title page of merged master files for ALL TOs when incorporating previous increments: BASIC AND ALL UPDATES HAVE BEEN MERGED TO MAKE THIS A COMPLETE PUBLICATION. The merged master file will consist of the basic TO and all active changes and supplements. For reprints and OTR support, the master file is required to be uploaded to TODPG. For digital eTOs, see Paragraph 5.4.5.1.

5.1.1.4 Depending on profile settings, TODPG provides Job Status email notifications.

5.1.1.5 When USAF TOs are totally distributed as eTOs through ETIMS and there are still FMS paper printing distribution requirements, funding changes are required to the TODPG system to support the uploading of the digital file in support of the FMS printing requirement. See Functional Users Guide (FUG) at https://cs2.eis.af.mil/sites/10531 for instructions.

5.1.1.6 An interface between the Security Assistance TO Data System (SATODS) and TODPG will manage the printing and distribution of AF TOs directly to responsible freight forwarders when FMS customers are on subscription for Air Force TOs uploaded on TODPG.

5.1.1.7 Security Assistance Technical Order Program (SATOP) has assumed distribution responsibility of AF TOs to authorized FMS accounts.

5.1.2 Funding for Sustainment of TOs and TODPG Operations. TO Managers must identify printing, packing and shipping costs. TO sustainment funding requirements will be documented via the Comprehensive Air Force Technical Order Plan (CAFTOP), TO Information Sheet (TOIS) and Centralized Asset Management (CAM) processes.

5.1.2.1 TO Managers must establish fund cites in TODPG for reimbursement of funds to DLA Data Management Services for the printing, packing and shipping costs as applicable on all ID, OTRs and complete merged set uploads.

5.1.2.2 TODPG provides the capability to enter more than one fund cite per weapon system program, i.e., TODPG will support separate fund cites required for sustainment reproduction, modification production, TO packing and shipment. TODPG also allows the user to annotate a split percentage from a fund cite for a specific job. Example: A percentage from a sustainment fund cite and a percentage from a modification fund cite may be used for any single job to total 100% funding. See FUG at https://cs2.eis.af.mil/sites/10531.

5.1.3 Establishing TODPG Account. The TOMA or their designees will access TODPG to accomplish the following:

5.1.3.1 The first action must be to establish a TODPG User Profile (See FUG https://cs2.eis.af.mil/sites/10531).

5.1.3.2 Initial TODPG training for users will be accomplished by contacting the local TO Site Functional Office TODPG POC. Also, TODPG Functional User Guides are located on the Air Force Technical Order Managers SharePoint site at https://cs2.eis.af.mil/sites/10531.

5.1.4 Requirements for TODPG Operations.

5.1.4.1 Loading ID Increments. The TOMA or designee will prepare the digital TO ID print and merged packages. TOMA will submit by accessing TODPG and completing the ordering processes for job(s) created when Available for Index was set to Yes in ETIMS. For detailed instructions, refer to the FUG on the Air Force Technical Order Managers SharePoint site at https://cs2.eis.af.mil/sites/10531. Table 5-1 identifies jobs requiring completion based on ID print job.

Table 5-1. Print Job Requirements

Increment Type	PSN Type	ID Job	Merged Job
Basic	Paper	YES	NO
Revision	Paper	YES	NO
Change	Paper	YES	YES
Change/RAC	Local Print	NO	YES
Supplement	Paper	YES	YES
Supplement	Local Print	NO	YES
TCTO Basic	Paper*	YES	NO
TCTO Supp	Paper*	YES	YES**
*TCTO Local Print Jobs have no inputs into TODPG. * *TCTO Merge Copy is accomplished IAW Paragraph 5.1.4.2.2			

5.1.4.1.1 The user must upload a PDF master reproduction TO file (paper distribution) or Master CD/DVD files. For step by step procedures for uploading PDF files, access the TODPG Functional User Guides located on the Air Force Technical Order Management SharePoint site at https://cs2.eis.af.mil/sites/10531.

5.1.4.1.2 A Reproduction Assembly, AFTO Form 30, *Reproduction Assembly Sheet*, is not required but can be uploaded into TODPG when the TOMA has determined it necessary to specify printing instructions. Special printing requirements (i.e. foldouts, color pages, bleed border, etc.), will be shipped at the end of the TO and may require collating during TO posting.

5.1.4.1.3 Indiscriminate marking of jobs as emergency/urgent causes delays in true emergency/urgent processing as well as routine processing. Use of Emergency and Urgent submission of ID jobs will be limited to following cases:

- Emergency print requests support TO requirements that WOULD result in a fatality or serious injury to personnel, extensive damage or destruction of equipment or property and must be processed within 48 to 72 hours.

- Urgent print requests support TO requirements that COULD cause one or more of the following: personnel injury, damage to equipment or property, reduce operation efficiency and/or jeopardize the safety or success of mission accomplishment. Urgent must be published and distributed within 40 calendar days.

NOTE

Both the ID and merged jobs have to be at content loaded status in TODPG before ETIMS will set the Available for Distribution flags to yes and generate ID labels.

5.1.4.2 Mandatory Uploads of Complete Merged TOs & TCTOs. Once a single TO/TCTO has been made available for index in ETIMS or an interim supplement has been distributed digitally, a merged copy of the TO must be uploaded to TODPG.

5.1.4.2.1 Complete, merged TOs consist of the basic TO with all TO changes merged, all supplements including active formally distributed and interim supplements, which must be appended to the complete merged TO.

5.1.4.2.2 Complete, merged TCTOs consist of the basic TCTO and all supplements, including all active formally distributed and interim supplements which must be appended to the basic TCTO. Special instructions/procedures for upload of merged TCTOs can be found on the TOMA SharePoint at https://cs2.eis.af.mil/sites/10531.

5.1.4.3 Technical Order Page Supplements (TOPS). TOPS will NOT be used in TODPG (or ETIMS). If the AF TO contain TOPS, the TOPS must be incorporated into the basic TO as either a change or formal supplement before loading into TODPG (or ETIMS).

5.1.4.4 The TOMA has several controls that may be used with the DLA Data Management Services process: 1) request proof copies (for ID printing only); 2) require funds approval before printing (for both ID and OTR); and 3) establish ETIMS Sponsor Approval for the TO to limit requisitions.

5.1.5 TODPG Help Desk Procedure. When a user experiences problems with TODPG, printing or distribution requirements, etc., the user will notify the local Site Functional Office TODPG POC providing full details of the issue. The Site Functional TODPG POC will generate an incident ticket in the TODPG help system and will track and monitor until resolution has been reached.

5.1.6 TOMAs Management of TODPG Transactions. Proof and funding approvals shall be processed within 7 days of assignment. Sponsor approvals shall be screened and processed within 10 days. Emergency requisitions shall be screened and processed within 2 work days. Emergency requisitions can be processed by the TOMA as an emergency or as a normal transaction based on adequacy of justification provided.

5.1.7 Manage TODPG Held Transactions. All One-Time Requisitions (OTRs) will flow from ETIMS to TODPG. Held transactions are OTRs from ETIMS that cannot process due to a metadata mismatch or the TO not being loaded to TODPG and TOMA will be notified by email of a held transaction or information can be found in the TODPG held report. The held transactions shall be rectified within 7 days.

5.1.8 Concurrent Release of Physical TO Distribution Media. When paper TO distribution media is required to support the concurrent release of Flight Manuals, TO updates, and TCTOs, the FMM/TO Manager must document their concurrent release requirement on a spreadsheet. This enables the DLA Home Site to determine if the requirements can be satisfied at the DLA Home Site and allows the ordering of additional supplies, if required. This spreadsheet shall be provided to DLA 30 days prior to the job being submitted. If projected submittal date is delayed, FMM/TO Manager shall notify DLA of new projected submittal date. If the order has not been submitted by projected submittal date and DLA is not notified of delay, DLA is permitted to use the supplies for other jobs. If this happens, FMM/TO Manager may experience delay in completion of concurrent release if additional supplies are required when job is submitted. Spreadsheet format and the complete concurrent release process can be found in the TOMA FUG at https://cs2.eis.af.mil/sites/10531.

5.1.9 Reprinting Department of the Army (DA) Publications. When the Army TM manager cannot provide additional backup stock of joint-use DA publications, the affected TOMA may have to reprint copies for AF use. When DA publication masters are not available, a printed copy of the publication is sent to DLA Data Management Services for reproduction. Requests for printing and the reproduction assembly sheet will include the following instructions:

- The DA publication number is printed on the title page only. The Air Force TO number is printed on the title page (below the DA TM number) and all other pages of the reprint.
- Replace the heavy DA paper cover with a standard Air Force title and A page. Do not reflect changes separately on the A page since the reprint is considered a merged basic.
- Enlarge text and illustrations, if possible, to fill the normal printing area of the standard Air Force page size.
- Use standard Air Force TO binding, drilling, stapling, etc.

5.2 TECHNICAL ORDER REPRODUCTION (NON-ETIMS).

TOMAs must arrange for the reproduction and distribution of any PTO or TO that is not managed in ETIMS. DLA Data Management Services manages all TO printing and reproduction requirements for the Air Force IAW DoDI 5330.03, *Defense Logistics Agency (DLA) Document Services*.

5.3 TECHNICAL ORDER DISTRIBUTION PRACTICES.

5.3.1 Preliminary TOs (PTOs). PTOs are distributed by a contractor or other developing activity to support IPRs, verification, and prepublication reviews IAW the tables in Section 2 of the TMCR. Distribution is limited to the acquisition/review participants. Distribution of PTOs for Test and Evaluation (T&E) or operational use is controlled by the TOMA IAW AFI 63-101/20-101. PTOs are not distributed via ETIMS for viewing.

5.3.2 Operational Use PTOs. Using organizations may use preliminary data for hands-on training, operations, or maintenance when verified and authorized by the PM or representative along with concurrence from the Lead Command or Depot. Authorization for the use of preliminary data shall not exceed 180 days unless readdressed. The authorization memorandum must accompany the data at all times. The TOMA will arrange for printing, storage and distribution of PTOs approved for use in the operational environment IAW this TO. For major acquisition or modification programs, the prime contract may cover PTO storage and issue. Each page of the PTO will contain a watermark stating that the PTO is not for field use.

5.3.3 Formal TOs. Formal paper and CD-ROM/DVD TOs are distributed IAW TO 00-5-1 and Paragraph 5.5. Formal eTOs are distributed via ETIMS (Paragraph 5.5.1) unless program has an AFMC/A4 approved waiver.

5.3.4 Restrictions. Distribution of both formal and preliminary TOs may be restricted to government agencies, government contractors, or as otherwise specified by the TOMA and TCM (Chapter 3).

5.3.5 TO Shipments. All package service or USPS shipments shall use tear-resistant, secure envelopes for TO packages weighing less than five pounds. TOs boxed for shipment will be secured using strapping tape or bands.

5.3.6 Manage Outside Agency Requests for Air Force TOs. Process requisitions from other U.S. government agencies, contractors and civilians IAW TO 00-5-1 and AFI 20-118. Process Freedom of Information Act (FOIA) requests for TO data strictly IAW DoDM 5400.07, DoD *Freedom of Information Act Program*, DODD 5230.25, *Withholding of Unclassified Technical Data From Public Disclosure*, this TO and TO 00-5-1.

5.3.6.1 TOs with Distribution Limitation codes B through F may be exempt from release under FOIA, IAW DoDD 5230.25, DoDM 5400.07, and AFI 61-201 .

5.3.6.2 Requests for TOs from activities or individuals outside the limitations specified by the assigned Distribution Statement must be approved by the DoD Controlling Office (responsible TOMA and TCM). If the responsible office cannot be identified, refer requests for TO release to HQ AFMC/A4F, email: afmc.a4.af.topp@us.af.mil, to determine the proper release authority.

5.3.6.3 If the TO or other technical data is not marked, it will be handled as STINFO Distribution Statement F, and will be referred to the responsible TCM for assignment of an appropriate Distribution Statement prior to being issued.

5.4 PUBLISHING ELECTRONIC TECHNICAL ORDERS.

5.4.1 Ensure Configuration Control of Multi-Media TOs. When TOs are published in more than one medium (e.g., paper and WA-1), information about the configuration of the TO (TO Catalog data) and all media formats must reflect the same content configuration. The digital online (-WA-1) version, after optimization, shall be uploaded to ETIMS, and deployed when other media types are submitted to TODPG for reproduction. This ensures eTOs are deployed at same time or before other media. EXCEPTION: Flight manual and/or checklist distribution of electronic media type may not be concurrent with the paper media type. See AFI 11-215 for further guidance.

5.4.2 Transition to Electronic TOs. The AF CTOM/MAJCOM representative responsible for coordinating transition to digital only distribution shall assess eTool deployment status at their operational locations to ensure effective eTool programs are in place. When the MAJCOM operational locations have effective eTool programs, they will notify their TODOs to remove paper ID. The TOMA will send an ETIMS notification (or email) to the TODOs 30 days prior to rescinding a paper

TO, requesting a response from the TODO. If no response is received, the paper TO will be rescinded after 30 days. When a paper TO has been rescinded, the TODO receives a notification via ETIMS. TOMAs shall not remove TODO IDs. If paper is still required, the TOMA shall then make the paper Sponsor Approval. The TODO must notify their MAJCOMs and have their AF CTOM/MAJCOM representative provide justification to continue receiving paper TOs. Refer to Paragraph 4.3.3. When paper ID requirements no longer exist, the TOMA shall rescind the paper version for Air Force use or make FMS Only in ETIMS if there are FMS customers. Verify FMS/SAP users prior to rescission of paper TOs.

5.4.2.1 The TOMA will send an ETIMS notification to the TODOs and contact SATOP (AFLCMC/EZGTC.Workflow@us.af.mil) for TOs 30 days prior to rescinding a paper TO. When no FMS ID exists, the TOMA will make the paper Sponsor Approval for new ID requirements. When FMS requires paper distribution the TOMA will not mark sponsor approval (Paragraph 4.3.3).

5.4.2.2 The USAF TODOs must provide their AF CTOM/MAJCOM representative justification to continue receiving paper TOs. The form required for justification can be found at https://cs2.eis.af.mil/sites/12837/default.aspx. SATOP office must receive paper retention justification email from FMS customers within 30 days of TOMA rescission notification.

5.4.2.3 The AF CTOM/MAJCOM representative or SATOPS representative will send all approvals to the TODO and TOMA. The TOMA will continue to provide the TODO with paper TO media.

5.4.2.4 The TOMA and SATOP may remove paper ID subscriptions from TODOs that do not provide justification within 30 days.

5.4.3 Paper Distribution Justifications. A justification is not required when distributing paper for the following reasons:

- Flight Manual Program TOs exempted from digital distribution and use by AFI 11–215.
- TOs which must be taken into and removed from highly restricted areas. (Ref AFI 21–101, Paragraph 1.19.10; 1.19.11)
- Active AF TOs used by FMS customers who require paper copies.
- TOs which are 100% foldout wiring diagrams or schematics or the contained wiring diagrams or schematics are unusable electronically in the intended workplace.
- AFNWC managed TOs in the 11N Indices
- Any other circumstances must be approved by AF CTOM Representative/MAJCOM based on justification requests submitted using the justification format.

5.4.4 Preparing an eTO for Distribution. The TOMA must index the required increment and mark Available for Index, upload, validate and deploy an optimized eTO using the ETIMS program. For specific procedures, refer to the FUG on the TOMA SharePoint https://cs2.eis.af.mil/sites/10531.

5.4.5 Publishing eTO Updates. The eTO version of a TO also available in paper is published by issuing the TO file with all changes and supplements merged into a single document file. See Technical Order Supplement Merging Process at https://cs2.eis.af.mil/sites/10531. If unable to access this https site, send an email to: af.etimstofst@us.af.mil.

NOTE

The use of formal or interim supplements is strictly forbidden in HTML eTOs.

5.4.5.1 The title page of an eTO version will be identical to the paper version (i.e., it will indicate the same basic date and show the latest change and change date). Supplements will be merged (posted) to the TO file IAW TO 00-5-1, annotated and linked from the title page and each affected paragraph. The digital TO version will have a merged statement: BASIC AND ALL UPDATES HAVE BEEN MERGED TO MAKE THIS A COMPLETE PUBLICATION.

5.4.5.2 WA-1 eTOs. WA-1 eTOs are indexed as revisions with a publication date matching the latest paper TO increment. The updated, merged electronic TO file content will retain the appearance and layout of the paper TO to include changes, supplements (interim or formal) or Rapid Action Changes (RACs) as appropriate.

NOTE

Publishing processes for digital-only TOs must be capable of producing complete TO updates (revisions) as quickly as an Interim TO supplement could be produced for a paper version. Managing TO supplements is incompatible with digital publication and distribution processes.

5.4.5.3 WA-2 eTOs. WA-2 eTOs are eTO versions not accessible through ETIMS. TO Details page will indicate the location of the complete eTO file. These eTO updates are often published using proprietary publishing capability. TOMAs must take steps to ensure only current and complete eTOs are available for viewing or distribution. NOTE: A waiver is required to distributed WA-2 eTOs outside of ETIMS. See Paragraph 4.3.11.3.

5.4.6 CD/DVD Media. CD/DVD media will only be used as a distribution method in situations when ETIMS cannot provide electronic TO distribution. Once electronic distribution can be provided, the CD/DVD will be rescinded using the same process as paper in Paragraph 5.4.2.

5.4.6.1 CD-ROM/DVD Contents. The TOMA for the CD-ROM/DVD is responsible for CD-ROM/DVD format, numbering, labeling, publication, packaging and distribution. The content of TOs on a CD-ROM/DVD must be identical to that of the individual (stand-alone) paper TOs. The TCM for the CD/DVD, in coordination with the TOMA and MAJCOM, is responsible for determining which TO files will be included on the CD/DVD (Paragraph 4.1.6.1). Classified and unclassified TOs will not be mixed on a single CD. The TOMA will determine routine update intervals, in conjunction with the Lead Command, and the TCMs of the TOs included on the CD/DVD.

5.4.6.2 Grouping TOs on CD/DVD Media. Groupings shall be made logically (e.g., by TO category, series, sub-system, subject, distribution limitation, classification, etc.) by the TCM, with the concurrence of the Using/Lead Command. The TCM must revise the CD or DVD whenever any TOs on the disk are updated, and must re-associate the included TOs with the CD/DVD TO number.

5.5 ELECTRONIC DISTRIBUTION OF TECHNICAL ORDERS.

The below paragraphs outline the authorized methods and procedures for disseminating Controlled Unclassified Information (CUI), applicable for any technical data (including Technical Orders, Technical Reports, Test Data, etc.) with STINFO distribution statements B through F. Reference publications include DoDI 5230.24 and DoDD 5230.25; AFI 63-101, AFI 17–130, *Cybersecurity Program Management*, Air Force Systems Security Instruction (AFSSI) 8520, *Identification and Authentication*, and AFI 61-201.

NOTE

The AF TO Field Support Team (AF TOFST) has developed TOMA Checklists to assist with ETIMS standard TO/eTO indexing, eTO mass indexing, and WA-2 and WA-1 conversion. Use of the checklists is CRITICAL for successful accomplishment of TOMAs duties. Checklists are posted on the Air Force Technical Order Manager SharePoint site at https://cs2.eis.af.mil/sites/10531. TOMA Checklists are under Document Management.

5.5.1 Distribution Using ETIMS (eTOs). ETIMS is the official method for distribution of Air Force eTOs; use of any other method on a program-wide basis will require a written, WA-2 waiver IAW Paragraph 4.3.11.3.

5.5.1.1 TOMAs access GCSS-AF eTO Services' eTO Repository to upload eTOs and updates for electronic distribution. TOMAs and their support organizations will need stylesheets, ArborText Editor and CPS software to transform SGML-tagged TO files to HTML eTOs for publishing on the ETIMS Repository. When uploading PDF eTO files, filenames shall consist of the paper TO number with a .PDF extension (e.g., eTO 00-5-3-WA-1 would be 00-5-3 .PDF). This filename remains static during subsequent update by the TOMA in support of external linking to eTOs within and outside of their management control. Do not confuse the static filename for the .PDF file with the .CAB filename which is created by the

CPS software and should not be changed. Once the eTO update is uploaded, validated and marked Available for Index, the TOMA can deploy through the ETIMS Manage Technical Order screen. Once deployed, the eTO will be distributed to Master eTools and made available to view online in ETIMS.

NOTE

Failure to comply with the standard, static eTO filename convention renders external links to eTOs inoperative. This forces TODO personnel and TO users to adopt labor-intensive workarounds to accomplish the mission.

5.5.1.2 The GCSS-AF framework suggests a file-size limitation on ETIMS of 128 MB for loading eTO files, due to the excessive amount of time required to download the file to the ETOV. If any eTO files are larger than 128 MB that are to be loaded into ETIMS, it is highly recommended to section the TO into two or more volumes. TOs may be broken out by chapters or other logical divisions as necessary, and each volume must have its own title page, TO number, LEP and Table of Contents; title pages must have this statement: This TO is not complete without TO ###; and the volumes must be indexed in ETIMS as-WA-1 for upload to ETIMS. This requirement is in addition to the rules for multivolume manuals in MIL-STD-38784. See TO 00-5-18 for numbering rules.

NOTE

TOMAs will ensure their authoring entity optimize TO files by using the fast web view Adobe function prior to upload into the ETIMS repository. The same optimized version of the file will be used for printing.

5.5.1.3 Other eTO Distribution Systems. Consult local procedures for uploading eTOs (non-AF HTML or PDF files with a -WA-2 suffix) to other repositories for eTO viewing and distribution operations. Access or distribution of eTOs available or hosted by systems other than ETIMS is dependent upon each system's design for access or distribution. TODOs with subscriptions for these eTOs must independently establish access to these systems.

5.5.2 PDF eTOs with Paper Distribution. If a PDF version of a TO will be distributed both in paper and electronically, the same .PDF file will be used to support both methods.

5.5.2.1 A copy of the .PDF TO or TO update file will be indexed in ETIMS and uploaded to TODPG for printing paper and Initial Distribution. Then the TO file and any update files will be merged to make a complete, current TO for follow-on Print-On-Demand (POD) through TODPG.

5.5.2.2 For distribution as an eTO, the merged PDF TO file will be indexed as a revision having a -WA-n suffix and with the same date as the latest update. It will then be uploaded to ETIMS for distribution and viewing.

5.5.2.3 Interim (Local Print) TOs are not uploaded to TODPG for distribution. ETIMS eTO will be used to support TODO local print requirements.

5.5.3 HTML/XML eTOs with Paper Distribution. HTML/XML TOs can only be updated by revisions, changes or RACs. Supplements cannot be used with HTML/XML format. If paper is required, the same source SGML file that created the HTML/XML TO is used to create Adobe PDF file for TODPG printing and ID. After ID is complete, the PDF TO file and any PDF update files will be merged into a complete current TO for follow-on OTRs. The HTML TO file is updated with all changes and regenerated from the source SGML. The transformed files can be viewed using the AF eTO Viewer in ETIMS or eTools.

NOTE

Distribution of ITOs using email shall be limited to instances where no ETIMS version of eTO exists. A notification shall be sent using ETIMS to ensure all subscribed TODOs are aware of emailed TOs.

5.5.4 Distribution Using Email. There are two levels of email available to most TO system users:

- Medium Grade Service using Microsoft Outlook and a CAC on the NIPRNet to digitally sign and encrypt Controlled Unclassified Information (CUI), restricted distribution messages, and a SIPRNet Account for transmitting classified messages.

- Unsigned, unencrypted Outlook (or other Simple Mail Transfer Protocol (SMTP) programs) for publicly releasable messages (distribution statement A).

5.5.4.1 Simple Mail Transfer Protocol (SMTP) Email (Microsoft Office Outlook) with CAC. This method can be used to send signed and encrypted CUI on the NIPRNet. Classified information must be sent over the Secure Internet Protocol Router Network (SIPRNet) which requires username and password access. Both sender and recipients must have their CAC certificates properly registered in order to sign and encrypt/decrypt messages. Refer to the Setting Up and Using PKI for End Users training page on the Public Key Infrastructure (PKI) web site at https://afpki.lackland.af.mil/html/. For Organizational Accounts, (Paragraph 5.5.4.6).

NOTE

- There is an alternative practice for use by Certified U.S. Contractors not authorized CACs. They can request a DoD-approved External Certificate Authorization (ECA) issued by Verisign, Digital Signatures Trust (DST), or Operational Research Consultants (ORC). Refer to the ECA web site at http://iase.disa.mil/pki/eca/.
- Prime contractors and vendors may not have access to signed, encrypted email if they do not have .mil access, nor will FMS customers have access. A copy of AF ITOs will be sent to TinkerSatopInterim@us.af.mil for distribution by SATOP.
- Ensure all recipients on address lists are authorized access to the data being transmitted. Do not send CUI to organization addresses which go to all or most of the organization. A TODO email address is authorized for use. Reverify address lists as often as practical but at least annually.

5.5.4.2 Secure Distribution via Email. This policy applies to all methods used for email, including BlackBerry and other handheld devices, Outlook Web Access, and remote email via Virtual Private Network (VPN) or Remote Procedure Call (RPC) over secure hypertext transfer protocol.

NOTE

- For security reasons, unsigned, unencrypted Simple Mail Transfer Protocol (SMTP) email can only be used for transmitting distribution A (public release) Interim TOs, RACs or ITCTOs. Any Outlook messages containing restricted-distribution data (codes B-F) must be digitally signed and encrypted using a CAC or External Certification Authority (ECA) certificates.
- Personnel who do not have certificates published to the Global Address List (GAL) may have to exchange emails to get their certificates recognized. Public key certificates for DoD personnel can be obtained at DoD Global Directory Services (GDS) web site https://dod411.gds.disa.mil/ (.mil domain and CAC required).

5.5.4.3 Use the Sign and Encrypt icons in Outlook (envelope with a red seal and envelope with a lock superimposed), to secure messages before they are sent. See the Help function in Outlook for more information. To ensure receipt by the addressees, ask for an S/MIME Receipt (Outlook Tools/Options/Security).

NOTE

Recipients must have current, valid, registered CAC certificates.

5.5.4.4 Digitally Signing Emails. Digital signatures shall be used whenever it is necessary for the recipient to be assured of the sender's identity, have confidence the email message has not been modified, or when non-repudiation is required. Examples include formal direction to a government employee or contractor, messages that stipulate an Air Force official position on any matter, and messages committing, authorizing or denying funding in some manner. Do not sign messages containing only unofficial information and not containing an embedded hyperlink and/or attachment.

5.5.4.5 Encrypting Email. Emails shall be encrypted when they contain For Official Use Only (FOUO) information; Privacy Act Information; Personally Identifiable Information (PII); individually identifiable health information, DoD payroll, finance, logistics, personnel management, proprietary and foreign government information; contract data; export controlled technical data or information; and operational information regarding status, readiness, location, or operational use of forces or equipment. Encryption increases bandwidth and resource requirements; therefore, email encryption should be used to protect only the above types of information, and the number of email recipients should be kept to a minimum. (This includes technical data with STINFO codes B through F) DoD PKI-based encryption is not authorized for protection of classified information on non-secure systems, such as the Non-classified Internet Protocol Router Network (NIPRNET).

5.5.4.5.1 Each major AF installation has a service delivery point through which all email traffic (both in- and out-going) is funneled. The link between SDPs (e.g., Wright-Patterson AFB to Hill AFB) is encrypted. Beyond the SDPs, there is no

guarantee that data is encrypted. It is possible that data could be sent or received by a .mil user connecting through an unprotected connection. Additionally, on base transmissions may not encrypt the data.

5.5.4.5.2 Verify receipt of controlled data by requesting a delivery receipt using the Outlook Options icon found in the new or forwarded message window.

5.5.4.5.3 Regular SMTP Outlook Email: Use of regular, unencrypted email messages is only authorized for distribution statement A (public release) data.

NOTE

Due to problems with distribution, especially to FMS/SAP customers, ITOs and other eTO updates may also be distributed physically on paper or CD-ROM using address labels like paper TO distribution, to ensure all accounts on subscription for the TO receive all authorized updates.

5.5.4.6 Exchanging Emails with TODO Organizational Accounts. US Government TODOs (i.e., F* accounts) are required to associate an organizational email account with their TODO account. For TOs containing public releasable content, TOMAs may augment ETIMS distribution (Paragraph 5.5.1) of urgent TO updates by exchanging emails with these TODO accounts. For TOs containing controlled, unclassified content, TOMAs shall send notification through ETIMS and may augment with an email notification to TODOs for urgent TO updates. TOMAs can upload the content to internet sites with appropriate access controls.

5.5.5 Distribution Using the Internet.

5.5.5.1 Non-ETIMS Sites. Use of such sites instead of ETIMS requires a WA-2 waiver from AFMC/A4F IAW Paragraph 1.2.1, https://cs2.eis.af.mil/sites/12837/default.aspx. TO listings on host servers will include the TO Number, Date, Title, and Change Number/Date to allow users to verify configuration of downloaded copies without opening or downloading the file. Additional information, such as TOMA or TCM information, is optional. Ensure the host server has appropriate access controls to protect limited distribution TOs and data (AFIs 33-115, 17–130).

5.5.5.2 AF SharePoint Folders. TOMAs may augment the dissemination of restricted distribution TOs via ETIMS through the use of AF SharePoint folders. TOMAs create restricted TO folders and provide advance access while authorized users set alerts to automatically receive an email when restricted TOs are uploaded. TOMAs shall follow the FUG procedures at https://cs2.eis.af.mil/sites/10531 to ensure SharePoint folders are clearly identified as restricted and access is limited to subscribers previously authorized in ETIMS.

5.5.6 Other Distribution Methods. There are several other methods, both electronic and physical, for distributing controlled, unclassified data.

5.5.6.1 Secure facsimile machines (fax) which encrypt the data for transmission may be used.

5.5.6.2 Physical distribution on physical media via USPS mail or U.S. package delivery service is authorized. The data may be printed and mailed using the same delivery methods as physical media or paper TOs (references: AFI 16-1404, TOs 00-5-1, and 00-5-19.

5.5.6.3 In all cases, the sender must verify the address by checking the Master Address Report (MAD) in ETIMS and ensure the recipient is authorized access to the data being sent. The authorizations must be reverified as often as practical but at least annually.

5.6 ERRATA SHEETS.

TOs and TO increments distributed with missing or misprinted pages may be corrected by redistributing the missing/reprinted pages using an Errata cover sheet and ETIMS Errata Process. Refer to FUG on https://cs2.eis.af.mil/sites/10531. The Errata Cover Sheet (see Glossary) will provide instructions to insert/replace the pages into the affected TOs and how to document receipt in ETIMS. The TOMA will also add a Note on the Errata Cover Sheet explaining the purpose of the errata package.

5.6.1 SAP/FMS Customers for TOs in TODPG. SATOP will notify TODPG to re-accomplish requisition jobs using correct Errata job.

5.6.2 Errata Sheet Procedures for POD (TODPG) and ETIMS Distribution. Errata sheets may be processed for AF POD (TODPG) TOs. If the problem requiring errata sheets is due to printing problems, DLA Data Management Services will reprint and distribute the corrected TO or increment at their cost. If the problem is due to administrative errors or incomplete reproducible PDF masters, the TOMA will provide an errata package to the TODPG and fund for its reproduction and distribution. Prepare the errata package including cover sheet and pages for distribution as a PDF file. Refer to ETIMS Errata FUG at https://cs2.eis.af.mil/sites/10531 for procedures.

5.7 OFFICIAL AIR FORCE TECHNICAL ORDER ARCHIVES.

5.7.1 Business Practices. One copy of every published TO and TCTO increment (Basic, revision, change and supplement) must be preserved in an official Air Force TO Archive to comply with record retention provisions of the Federal Records Act and to ensure preservation for Air Force needs. Archived files will only be the digital or printing source file (.pdf).

5.7.1.1 TOs are held for 6 years after they are rescinded, contracts are closed and the supported equipment is dropped from AF inventory (Air Force Records Disposition Schedule, (https://www.my.af.mil/gcss-af61a/afrims/afrims/, Table 33-40, *Specialized Publications* ; Rule 3, *Technical Orders*). Program offices will coordinate with their applicable TOMA to establish a TO archive. All programs will document their archive processes within their TO Life Cycle Management Plan. See EXCEPTIONS in Paragraph 5.7.1.9

5.7.1.2 The official archive for all Hill AFB TO management programs is the Comprehensive Integrated Technical Order Management System (CITOMS).

5.7.1.3 The official archive for all Robins AFB TO management programs is the Centralized TO Repository (CTOR).

5.7.1.4 Programs utilizing IDM with content management may use the IDM environment as the archive.

5.7.1.5 The official classified digital archive is Robins Secure TO Repository (STOR).

5.7.1.6 All AF TOs in the 11N index will be officially archived by AFNWC.

5.7.1.7 Programs not currently using one of the above archive repositories will establish archive capability with Robins AFB CTOR. Contact the Robins TO Site Functional Office for assistance. (Appendix B)

5.7.1.8 All requests for archival TOs will be performed IAW TO 00-5-1, para 3.4.

5.7.1.9 **EXCEPTIONS**: JNWPS TOs managed by AFNWC/NCL are archived by the Defense Threat Reduction Agency (DTRA). DTRA also archives nuclear EOD TOs. See Chapter 7 for archive procedures for JNWPS TOs.

5.7.1.10 Tinker Archive is no longer required to maintain physical TOs; paper, CD, DVD, regardless of the TO status, i.e., active, rescinded, renumbered, or superseded. EXCEPTION: FMS-Only status TOs and TOs with FMS ID. All physical media TOs will be dispositioned by TOMA offices accordingly, i.e., specified to destroy or retain. For election to retain TO, shipping funds and manpower will be required; for election to destroy TO, TOMAs must ensure a digital copy is archived per Paragraph 5.7.1.1.

CHAPTER 6
ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH

6.1 GENERAL.

Safety and environment hazard information and precautions must be included in TOs and technical data for operation, maintenance, modification and disposal of systems and commodities, IAW MIL-STD-38784. This includes MILSPEC TOs, commercial manuals, AFMC Form 202 and AFTO Form 252, etc. TOs must identify any hazards that exist and must not create hazardous situations. Everyone involved with the TO System must assist in evaluating, identifying, and correcting safety and health hazards.

6.1.1 Safety Offices. The appropriate office should be involved from the start of TO development, beginning with the TOP/RC. Safety will provide guidance on the placement, wording and application of warnings, IAW MIL-STD-38784.

6.1.2 Commercial Manuals. Commercial manuals may require supplementing to add warnings and cautions due to the Air Force environment or application. Any conflict in the use or wording of warnings shall be resolved by HQ AFMC/SE.

6.2 TECHNICAL ORDER MANAGER RESPONSIBILITIES.

The TOMA should establish points of contact with Engineering, Safety, Bio-environmental Engineering (or equivalent) and Environmental Management (EM) offices to resolve Environment, Safety, and Occupational Health issues.

6.3 ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH (ESOH) REQUIREMENTS.

Engineers or ESs responsible for TO content will coordinate any new or revised procedures in non-exempt TOs (see Table 6-1 and Table 6-2) that might affect the environment and/or safety and health of personnel, cause damage or destruction of equipment, or affect TO warnings or cautions, with the appropriate ESOH activities (e.g., Appropriate Safety, Bioenvironmental Engineering, and Environment Management).

6.3.1 Safety Review. Appropriate Safety offices must approve new or revised technical procedures affecting the safe operation and maintenance of systems and equipment (AFI 91-202, *USAF Mishap Prevention Program*). This requirement applies to Ground, Flight, Missile and Explosives safety for Nuclear Surety, see Paragraph 6.7.

6.3.2 Health Review. Appropriate Bio-Environment Engineering (BEE) offices must approve new and changed technical procedures affecting personnel health (involving noise, heat, air contaminants, chemicals, radiation, lasers, thermal stresses, biological and ergonomic hazards, etc.). The Appropriate BEE (or equivalent) offices may request consultative assistance from: (1) U.S. Air Force School of Aerospace Medicine 711th Human Performance Wing (HPW) Occupational & Environmental health Division (711 HPW/OEH), Air Force Research Laboratory, Wright-Patterson Air Force Base, Ohio, (2) the 711th HPW/HPO - Human Systems Integration office, (DSN 798-2666), and/or (3) HQ AFMC/ SGPE - Command Bio-environmental Engineer (DSN: 986-3634).

6.3.3 Exemptions. The following types of TO/TO updates are exempt from ESOH review:

Table 6-1. Exempted TO Types

Series or Category	Type
-01 Series	List of Applicable Publications
-06 Series	Work Unit Code Manuals
-8 Series	Tape and Tape Manuals
-4 Series	Illustrated Parts Breakdown
Category 1, -1 Series	Flight Manuals
1-1C-1 Series Category 1,	Air Refueling Procedures Manuals
-5 Series Category 1, -	Basic Weight Checklist and Loading Data Manuals

Table 6-1. Exempted TO Types - Continued

Series or Category	Type
6CF-1 Series Category 1, - 34 Series (Various) Category 60 Category 60	Acceptance and Functional Check Flight Manuals Conventional Munitions Delivery Manuals In-Flight Maintenance Manuals Explosive Ordnance Disposal (EOD)

Table 6-2. Exempted Update Types

Series or Category	Update Types
All	Extension of TCTO Rescission Dates Part Number Changes Source Maintenance and Recoverability (SMR) Coding Changes Editorial Changes Numerical Changes Art/Illustration changes not involving personnel protective devices or equipment

6.3.4 Special Review Lists. The Safety Office will coordinate with local program TCMs to identify additional TOs (over and above the ones listed below in Table 6-3) requiring special safety or health reviews before printing and distribution, IAW AFMCI 21-301. Additionally, changes to the following TOs will be sent to the indicated office within the U.S. Air Force School of Aerospace Medicine 711th HPW/OEH, Building 840, Wright Patterson AFB, OH 45433 for review and coordination:

Table 6-3. Special Review Lists

TO Number	Title	Office
1-1-3	Inspection and Repair of Aircraft Integral Tanks and Fuel Cells (Health related issues only)	AFIOH/RS
1-1-8	Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment	AFIOH/RS
1-1-17	Storage of Aircraft and Missile Systems	AFIOH/RS
1-1-686	Desert Storage, Preservation and Process Manual for Aircraft, Aircraft Engines, and Aircraft Auxiliary Power Unit Engines	AFIOH/RS
1-1–689–5	Cleaning and Corrosion Control, Volume V, Consumable Materials and Equipment for Avionics	AFIOH/RS
1-1-691	Aircraft Weapon Systems– Cleaning and Corrosion Control and Control Aerospace and Non-Aerospace	AFIOH/RS
33B-1-1, Section 9	Non-Destructive Inspection Methods, Radiation Protection	AFIOH/SDR

6.4 GROUND SAFETY.

Safety Offices, in conjunction with Bio-Environment Engineering (BEE), Fire Department and Environment Management (EM) Offices, are tasked to periodically review design handbooks, TOs, MIL-PRFs, MIL-DTLs, MIL-STDs, and Table of Allowances to ensure safety and health criteria and procedures (to include fire safety and environment concerns) in those documents comply with Occupational Safety and Health guidance (AFI 91-202, *USAF Mishap Prevention Program* and AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*).

6.4.1 TO Safety Reviews. The acquisition agency System Safety or Ground Safety (SEG), BEE (or equivalent), Fire Safety and Environmental Management (or equivalent) Offices are responsible for supporting TO reviews during the acquisition process. When the acquisition agency is at Product Center coordination with the Air Logistics Complex counterparts is essential. System Safety and/or SEG personnel are the SMEs for electrical, mechanical, chemical, radiation, and laser hazards. BEE and EM personnel review TOs for personnel hazards and hazardous material (HAZMAT)/Ozone Depleting Substance (ODS) usage and hazardous waste risk. The Fire Safety Office will review any procedures involving fire protection matters such as exposure to heat and fire.

6.4.2 TO Procedures. TO procedures shall be developed to protect equipment from abuse, inadvertent operation, or any condition which could cause damage or degradation. However, the TO must not become a work-around for hazardous equipment design.

6.4.3 Electrostatic Discharge Sensitive (ESDS) Devices. ESDS devices within most modern electronic equipment require special protection and handling procedures. The guidance contained in TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance and Test of Electrical Equipment*, and MIL-STD-1686, *Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)*, may be provided to the contractor as source data and references.

6.5 HAZARDOUS MATERIAL RISK MANAGEMENT.

Managing HAZMAT risk and preventing pollution requires a proactive and dynamic management approach because prevention achieves environment standards through source reduction rather than after-the-fact correction.

6.5.1 Reduced Use of HAZMAT and ODS. TO procedures shall be developed to reduce the use of hazardous materials in all phases of weapon system development from concept through production, deployment and ultimate disposal. TCM must ensure compliance with Air Force 32-70, *(Environment Quality*) series instructions.

6.5.2 Establishing POCs. Points of contact should be established with engineering, safety, environmental management, Appropriate BEE, and Research and Development (R&D) offices to address HAZMAT risks and resolve pollution prevention requirements.

6.5.3 Waivers to Use Ozone Depleting Substances (ODS). If Class I ODS must be used, the PM must obtain a waiver from HQ USAF for ODS use. By international agreement, all Class I ODS production effectively ended on 31 December 1995 and Class II ODS production shall incrementally decrease and cease by 2030. Dependence on Class II ODS usage beyond the year 2015 will create potentially increasing risks to Air Force mission capability and costs. (AFI 32-7086, *Hazardous Materials Management*).

6.6 WEAPON AND FLIGHT SAFETY.

Weapon and flight safety programs are managed at several levels. Chapter 4 and Chapter 16 of AFI 91-202 list OPRs and procedures for specific types of TOs. These OPRs will identify the appropriate safety offices. Flight Safety and three major areas of weapon safety (explosive, nuclear and missile) must be addressed for any military system.

6.6.1 Flight Safety. Flight safety reviews for FMP TOs are the responsibility of the FMM. The TOMA is responsible for ensuring contractor compliance with direction. Cargo aircraft loading manuals which deal with explosives or nuclear weapons and weapon loading and delivery manuals must receive required explosive and/or nuclear safety reviews as well as flight safety reviews.

6.6.2 Explosive Safety Requirements. Basic TOs and all updates containing procedures on the operation, maintenance, inspection, modification, disposal, etc. of aircraft systems, ammunition, missiles (strategic or tactical), missile motors, explosives, egress systems, armament items (such as guns, launchers, dispensers, pods, etc.), and handling, support or test equipment peculiar to these items must receive a weapons safety review by the Appropriate Weapons Safety Office. All TO procedures involving explosives must comply with AFMAN 91-201, *Explosives Safety Standards.* **EXCEPTIONS**: The GACP, AFLCMC/EBHMA, has safety review responsibility for TOs prime at Hill AFB. The Naval EOD Technology Division (NAVEODTECHDIV) performs an internal explosives safety review on all Category 60 EOD TOs.

6.6.3 Nuclear Surety Requirements. (Chapter 7)

6.7 PROCEDURES FOR NON-WEAPON NUCLEAR MATERIALS.

Coordinate any procedural changes involving other radioactive materials (e.g., depleted uranium counterweights, luminous exit markers, optical lens coatings containing thorium, or nucleonic fuel indicators), with the USAF Radioisotope Committee Secretariat, HQ AFMOA/SGPR, 8901 18th St, Brooks AFB TX 78235-5217 (through HQ AFMC/SGBR), IAW AFI 40-201, *Radioactive Materials Management.*

CHAPTER 7
NUCLEAR WEAPON CENTER (NWC) TECHNICAL ORDER PROCEDURES

7.1 GENERAL.

7.1.1 NWC TO Management. This chapter outlines procedures for acquisition and sustainment of Joint NWC Publications, AF nuclear weapons TOs and nuclear related EOD TOs indexed in TO 0-1-11N-CD-1, Numerical Index to Joint Nuclear Weapons Publications and TO 0-1-11N-1-CD-1, Air Force Supplemental Manual Numerical Index to Joint Nuclear Weapons Publications. Procedures in previous chapters will be used unless specifically addressed in this chapter. For example, select NWC managed TOs are numbered and indexed in ETIMS using procedures addressed in previous chapters (see Paragraph 2.5.4).

7.1.2 Contact Points.

7.1.2.1 The Air Force Nuclear Weapons Center (AFNWC) is responsible for nuclear certification as defined in AFI 63-125, *Nuclear Certification Program,* and overall nuclear surety and safety of AF nuclear weapons TOs.

7.1.2.2 AFNWC Engineering Directorate (EN) is the focal point and technical authority for nuclear weapons policy, process and guidance for System Engineering; Deviation and Dispensation Policy (e.g., AFMC Forms 202, 107); technical data and Technology Information Management; and other technical programs. Also, conducts independent reviews and engineering evaluations to support nuclear safety design certification of nuclear capable systems (e.g., hardware, software, procedures, and facilities).

7.1.2.3 AFNWC/LG is the review authority for cruise missiles, Reentry Vehicle/Reentry System, and AFNWC/NC managed equipment TOs, weapons maintenance techniques and procedures.

7.1.2.4 The AFNWC ICBM Systems Directorate (NI) (Hill AFB UT) is responsible for ICBM TO Life Cycle Management. ICBM is the Technical Order Manager/Agent (TOMA) for all ICBM TOs listed in TO 0-1-11N-1-CD-1. (Refer to Paragraph 2.5.4).

7.1.2.5 AFNWC Nuclear Capabilities Directorate (NC) is responsible for overall Nuclear Weapons Program engineering and logistics safety and surety.

7.1.2.6 The Nuclear Weapons Logistics Division (NCL) Technical Support Branch (NCLS) (formally 708 NSUS/NWLT) is responsible for:

7.1.2.6.1 TO management activities for weapons loading (-16), aircrew delivery (-25 & -30), and nuclear air cargo delivery tie down procedures (-16).

7.1.2.6.2 Management of TO 0-1-11N-1-CD-1 Index. TOMA responsibilities for TOs listed in TO 0-1-11N-1-CD-1 are identified within the index.

7.1.2.6.3 Account management and distribution of Joint Nuclear Weapons Publication System (JNWPS) technical publications listed in TO 0-1-11N-CD-1 and AF Nuclear TOs in TO 0-1-11N-1-CD-1.

7.1.2.7 The AFNWC NCL Logistics Operation Branch (NCLL) is responsible for Joint Nuclear Weapons Publications unsatisfactory report processing, AF DIAMONDS focal point, and approval of JNWPS TO requests.

7.1.2.8 AFNWC/NDMET (Tinker AFB, OK) is responsible for Cruise Missile TOs listed in TO 0-1-11N-1-CD-1 (Refer to Paragraph 2.5.4).

7.1.2.9 AFLCMC/WWZL (Tinker AFB, OK) is responsible for B-2 Rotary Launcher Assembly (RLA) TOs listed in TO 0- 1-11N-1-CD-1.

7.1.2.10 AFSC/424 SCMS (Tinker AFB, OK) is responsible for Cruise Missile Commodity TOs, B-52 Bomber/Cruise Missile Integration Equipment Commodity TOs and B-2 RLA Commodity TOs listed in TO 0–1–11N-1–CD-1.

NOTE

For AFLCMC/WWL and AFSC/424 SCMS 11N TOs, Paragraph 7.2.1 through Paragraph 7.10 apply.

7.2 NWC SURETY REQUIREMENTS.

7.2.1 Technical Evaluation. TO procedures involving nuclear weapons, nuclear combat or non-combat delivery systems, or support equipment certified and approved for use with nuclear weapons (see Master Nuclear Certification List, https://wwwmil.nwc.kirtland.af.mil/mncl/index.cfm) must receive a technical evaluation for nuclear surety (AFI 63-125, *Nuclear Certification Program*, and AFI 91-103, *Air Force Nuclear Safety Certification Program*). AFI 63-125 requires nuclear certification of TO procedures involved in a weapon system's nuclear mission operations, maintenance, troubleshooting, OPCERT, DECERT, nuclear compatibility, handling, movement, restraint configuration, loading, unloading, delivery, and testing. Nuclear Safety Certification is required to ensure compliance with nuclear Weapon System Safety Rules (WSSR); requirements in 91-100 series Safety AFIs, nuclear safety, and design safety features. The technical evaluation for nuclear surety is a continuing process applicable to system or commodity operational usage changes, modification procedural changes, and changes to individual nuclear WSSRs.

7.2.2 Documentation and Marking. The TCMs and responsible engineers for nuclear weapon TOs will accomplish and document technical evaluations on all change packages against assigned TOs. Mark applicable procedures in the TOs with HCP or NSP (Hardness Critical Procedure or Nuclear Surety Procedure) as appropriate per MIL-STD-38784. Review safety rules and record/review accomplishment as required by AFI 91-102, *AFMC Sup, Nuclear Weapon System Safety Studies, Operational Safety Reviews, and Safety Rules*. Ensure TOs used with or in support of nuclear weapons specify use of nuclear surety certified equipment only (AFI 91-103).

7.3 ACQUISITION/MODIFICATION PROCEDURES.

Nuclear technical orders are an integral part of the Nuclear Certification Process. Certification requirements must be identified early to ensure the program is properly funded for TO development/changes and TO requirements do not negatively impact the program's overall schedule.

- The PM will submit a Nuclear Certification Impact Statement (NCIS) for a new acquisition or system modification as early as possible so the certification process can begin. Include any impacts to nuclear weapon TOs in the NCIS (Refer to AFI 63-125).

- PMs must involve the applicable AFNWC, AFSC/424 SCMS and/or AFLCMC/WWZL TOMA from the beginning of all acquisition or modification programs affecting nuclear weapons/nuclear weapon systems.

- AFNWC, AFSC/424 SCMS and/or AFLCMC/WWZL TOMAs must be involved in all TO Guidance Conferences, In-Process Reviews, TO Verification Planning Conferences, etc., when nuclear weapon TOs are affected.

7.4 NUMBERING.

The PM or Program TOMA will coordinate with AFNWC/NCLS TOMA for any new 11N TO numbers. For any non-11N TO numbering requests, NWC will submit requests through AFLCMC/LZPTP-TINKER (AFLCMC.LZP.TinkerTONumbering@us.af.mil).

7.5 TODPG.

AFNWC/CC has not authorized distribution of nuclear TOs identified in TO 0-1-11N-1-CD-1 through a web based system. Therefore those TOs will not be distributed through TODPG but will be distributed in physical media as identified in the index. The Defense Threat Reduction Agency (DTRA) must authorize the use of any web based distribution for JNWPS TOs and DTRA has not authorized the use of TODPG.

7.6 REQUISITIONS.

Requisitions for NWC TOs identified in TO 0-1-11N-1-CD-1 will be processed as identified in TO 00-5-1, Chapter 10.

7.7 REPOSITORY.

AF Nuclear TOs will be archived by the TOMA. Joint Nuclear Weapons Publications are archived by DTRA Albuquerque NM Office (AO).

7.8 SECURITY ASSISTANCE TECHNICAL ORDER PROGRAM.

FMS related nuclear TOs, identified in TO 0-1-11N-1-CD-1, are not covered under TO 00-5-19, SATOP Program but are managed by AFNWC through SAF/IA. These types of TOs should be identified during the NCIS process or early in the Program planning.

7.9 ENVIRONMENTAL, SAFETY AND OCCUPATIONAL HEALTH.

The Program Office will ensure ESOH is complied with by contractors or organic agencies providing source data through an evaluation process or certification letter from the provider of source data as requested by the TOMA/TCM.

7.10 TECHNICAL ORDER CHANGE PROCESSING.

Recommended changes must follow a manual process through encrypted email, secure SharePoint sites, or USPS mail. There are currently no AFNWC managed IETM/S1000D based TOs.

7.10.1 Recommended Changes During Acquisition. Changes during acquisition must be worked closely with the applicable AFNWC TOMA to assure Nuclear Certification impacts are addressed. Early involvement in the TO acquisition process will ensure changes can be addressed at the appropriate time and manner to prevent fielding delays.

7.10.2 Recommended Changes During Sustainment. Changes will be processed through the submitter's Product Improvement Manager (PIM), the MAJCOM, who will submit it to the TOMA, or as directed by the TOMA, for processing.

7.10.3 Recommended Changes for JNWPS TOs. Joint Nuclear Weapons Publications recommended changes and processes are managed as identified in TO 11N-5-1, *Unsatisfactory Reports (URs).* URs are processed through DIAMONDS. If you do not have access to a DIAMONDS terminal, contact AFNWC/NCLL workflow and they can help you process recommended changes. AFNWC/NCLL is the Air Force JNWPS Executive Agent to provide the interface between DOE and the Air Force for JNWPS TOs. It is important to note that JNWPS TOs do not follow the same criteria as AF TOs for assigning Routine, Urgent, and Emergency deficiencies. (Reference TO 11N-5-1).

7.11 SOURCE DATA.

Contractors or Program Offices, if organically developed, will provide written certification that all source data meets RGL, bio-environmental, and general safety requirements previously identified in this TO and are ready to be added to the nuclear operational technical orders, unless there is another process in place to validate those requirements. This will be part of the source data package or PTOs when delivered to AFNWC for TO updates or verification of PTOs. (Must meet Paragraph 3.9.5.1 Certification Requirements).

7.11.1 Nuclear Weapons Delivery Source Data - Weapons Delivery Source Data Package (Aircraft -25, -30 Series Technical Orders).

7.11.1.1 Content. Weapons delivery source data consists of a section for nuclear data and sections of aircraft-specific data for each aircraft that will employ the nuclear munitions. The content is described in MIL-DTL-38384, *Manuals, Technical - Aircraft Nonnuclear/Nuclear Weapon Delivery Procedures.*

7.11.1.2 Development. Delivery envelopes for nuclear weapons are normally developed by the Air Force SEEK EAGLE Office (AFSEO) in coordination with information provided by AFNWC and the Program Office (Reference AFI 63-104).

7.11.1.3 Procedures and Responsibilities. Nuclear procedures will be developed by the program office in coordination with AFNWC/NC to ensure nuclear surety and safety is met.

7.11.1.3.1 Flight Manuals will be developed by the contractor or organic agency as described in MIL-DTL-38384 and are part of the nuclear certification process administered by AFNWC/NC.

7.11.1.3.2 The lead MAJCOM is responsible for providing a Flight Manual verification team manager, a qualified aircrew member, and in coordination with the Program Office all equipment to support the verification effort.

7.11.1.3.3 The TOMA/FMM is responsible for conducting the verification to formally verify the flight manual procedures.

7.11.2 Nuclear Munitions Loading Source Data - Source Data Package (Aircraft-16 Series Technical Orders).

7.11.2.1 Requirements. A Source data package containing nuclear munitions loading source data is required during the development and testing of new nuclear munitions items or systems, for integration of existing munitions with new aircraft, for integration of new munitions with new aircraft, and for major modifications to existing aircraft/munitions configurations. (Reference AFI 63-104 and AFI 63-125.)

7.11.2.2 Development. The source data package is maintained by the program acquisition TOMA and is used to update the certified source data package. The source data package is maintained by the Program Office and is provided to aircraft contractors/organic agencies for development of aircraft -16 series TOs and checklists. It is important to note when developing procedures to integrate conventional defensive weapons with nuclear weapons, the entire process must be evaluated as a nuclear load. Nonnuclear conventional loading procedures may not meet nuclear surety and must be verified as part of the nuclear certification process when integrated. This is normally done using a nuclear/conventional integrated loading checklist.

7.11.2.3 Nuclear Munitions Loading TOs. The -16 series TOs and checklists contain descriptive data and procedures for loading nuclear munitions on or into Air Force aircraft. Participants: Source data package acquisition participants include the TOMA, MAJCOM(s), aircraft PMs, AFNWC, the RTO, and AFSEO.

7.11.2.4 Procedures for New/Modified Munitions and Systems. The Program Office will submit an NCIS as outlined in AFI 63-125.

7.11.2.4.1 For new/modified systems the TOMA/TCM will coordinate with the Program Office and lead MAJCOM to develop a plan to identify source data requirements, verification plan, and schedule to field nuclear certified TOs.

7.11.2.4.2 Verification is essential to the nuclear certification process and will be in compliance with the TOMA or ES/TCM life cycle verification plan. (Must meet Paragraph 3.9.6.4, TO Life Cycle Verification Plan Requirements.)

7.11.2.4.3 Verification participants will include representatives from each aircraft PM involved, affected MAJCOMs, and the OT&E manager.

7.11.2.4.4 The lead MAJCOM will provide the Verification Team Manager (VTM) and a certified weapons load team as requested by the TOMA/TCM.

7.11.2.4.5 The lead MAJCOM and/or PM, as applicable, will provide all necessary aircraft and support equipment for the verification effort.

7.11.2.4.6 All changes identified during the verification effort will be done by the contractor or organic agency to meet fielding requirements.

7.11.3 Depot Level ICBM Operation and Maintenance Control Manuals. The following applies to ICBM Control Manuals and associated Contractor Data Manuals (CDM), which consist of Utility Technical Manuals, D2s, Performance Criteria Documents, test equipment instruction manuals, etc.

7.11.3.1 Description. Control manuals and associated CDMs are acquired to support Minuteman II and III missiles using Boeing Space Division (BSD) Exhibit 64-29. Control manuals are numbered as USAF TOs and list applicable CDMs under the contractor-assigned numbers. Specific operation and maintenance procedures are included in the CDMs.

7.11.3.2 Deficiency Reporting. Deficiencies in CDMs are reported by AFTO Form 22 against the control manual TO number. Block 19 of the AFTO Form 22 will list the CDM number as well as the deficiency noted and recommended corrective action.

7.11.3.2.1 Control manual or CDM RCs are issued against the control manual TO number. When applicable, the CDM number is shown in the Deficiency field of the RC, and the other entries relate to the control manual. CDM change pages are provided with the control manual change.

7.11.3.2.2 The RC Local Control Number will be listed in the rescission notice of the control manual and CDM changes incorporating it.

7.11.3.3 Implementation. The depot level maintenance activity posts a printout of an SH252 with the control manual and CDM to which it applies. The printout will be retained until the TO RC is listed in the rescission notice of a permanent change to the control manual.

7.12 NUCLEAR TODO TRAINING.

Nuclear TODO training is in addition to general AF TODO training. It is provided for nuclear TODOs to familiarize them with unique nuclear requirements. AFNWC/NDET Home Office is responsible for this familiarization training. The training is a slide show that explains requirements identified in TO 00-5-1, Chapter 10. Access to this training is at the following website: https://cs1.eis.af.mil/sites/nmc2/AFMC/AFNWC/NDET/TODOTraining%20Supplement/Forms/AllItems.aspx.

APPENDIX A
GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

A.1 LIST OF REFERENCED AND RELATED PUBLICATIONS.

Number	Title
AFI 11-215	USAF Flight Manuals Program (FMP) (http://www.e-publishing.af.mil/)
AFI 16-1404 (Superseded AFI 31-401)	Air Force Information Security Program (http://www.e-publishing.af.mil)
AFI 17–100	Air Force Information Technology (IT) Service Management (http://www.e-publishing.af.mil/)
AFI 17–130	Cybersecurity Program Management (http://www.e-publishing.af.mil/)
AFI 20-118 (Superseded AFJI 21-301)	Instructions for the Interservicing of Technical Manuals and Related Technology Program (http://www.e-publishing.af.mil/)
AFI 21-113	Air Force Metrology And Calibration (AFMETCAL) Management (http://www.e-publishing.af.mil/)
AFI 24-203	Preparation and Movement of Air Force Cargo (http://www.e-publishing.af.mil/)
AFI 32-3001	Explosive Ordnance Disposal (EOD) Program (http://www.e-publishing.af.mil/)
AFI 32-7061	Environmental Impact Analysis Process (http://www.e-publishing.af.mil/)
AFI 32–7086	Hazardous Materials Management (http://www.e-publishing.af.mil/)
AFI 33-150	Management of Cyberspace Support Activities (http://www.e-publishing.af.mil/)
AFI 33-360	Publications and Forms Management (http://www.e-publishing.af.mil/)
AFI 35-102	Air Force Security and Policy Review Program (http://www.e-publishing.af.mil/)
AFI 38-402	Airman Powered by Innovation (API) Program (http://www.e-publishing.af.mil/)
AFI 40-201	Radioactive Materials Management (http://www.e-publishing.af.mil/)
AFI 61-201 (Supersedes AFI 61-204)	Management of Scientific and Technical Information (STINFO) (http://www.e-publishing.af.mil/)
AFI 63-101/20-101	Integrated Life Cycle Management (http://www.e-publishing.af.mil/)
AFI 63-104	Seek Eagle Program (http://www.e-publishing.af.mil/)
AFI 63-125	Nuclear Certification Program (http://www.e-publishing.af.mil/)
AFI 65-601V1	Budget Guidance and Procedures (http://www.e-publishing.af.mil/)
AFI 91-102	Nuclear Weapon System Safety Studies, Operational Safety Review and Safety Rules (http://www.e-publishing.af.mil/)

AFI 91-103	Air Force Nuclear Safety Design Certification Program (http://www.e-publishing.af.mil/)
AFMAN 91-201	Explosives Safety Standards (http://www.e-publishing.af.mil/)
AFMCI 21-301	AFMC TO System Implementing Policies (http://www.e-publishing.af.mil/)
AFMCI 63-1201	Implementing Operational Safety, Suitability, and Effectiveness (OSS&E) and Life Cycle Systems Engineering (http://www.e-publishing.af.mil/)
AFPD 10-9	Lead Command Designation and Responsibilities for Weapon Systems (http://www.e-publishing.af.mil/)
AFPD 32-70	Environmental Quality (http://www.e-publishing.af.mil/)
AFPD 63-1/AFPD 20-1	Integrated Lifecycle Management (http://www.e-publishing.af.mil/)
ASD-S1000D	International Specification for Technical Publications Utilizing a Common Source Database (http://www.S1000D.org)
ASSIST	Acquisition Streamlining and Standardization Information System databases (https://assist.dla.mil/online/start/)
DAG	Defense Acquisition Guidebook (https://dag.dau.mil/Pages/Default.aspx)
DI-ALSS-81531	Time Compliance Technical Order (TCTO) Supply Data (https://assist.dla.mil/online/start/)
DI-SAFT-80931	Explosive Ordnance Disposal Data (https://assist.dla.mil/online/start/)
DI-TMSS-80067	Technical Manual (TM) Contractor Furnished Aeronautical Equipment or Contractor Furnished Equipment (CFAE/CFE) Notices (https://assist.dla.mil/online/start/)
DI-TMSS-80229	Technical Order Improvement Report and Reply (https://assist.dla.mil/online/start/)
DI-TMSS-81532	Aerospace Emergency Rescue and Mishap Response Information (Emergency Services) Source Data (https://assist.dla.mil/online/start/)
DoD 5010.12-M	Procedures for the Acquisition and Management of Technical Data (http://www.dtic.mil/whs/directives/)
DoDD 5160.62	Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training (http://www.dtic.mil/whs/directives/)
DoDD 5230.25	Withholding of Unclassified Technical Data From Public Disclosure (http://www.dtic.mil/whs/directives/)
DoDI 5000.02	Operation of the Defense Acquisition System (http://www.dtic.mil/whs/directives/)
DoDI 5230.24	Distribution Statements on Technical Documents (http://www.dtic.mil/whs/directives/)
DoDI 5330.03	Defense Logistics Agency (DLA) Document Services (http://www.dtic.mil/whs/directives/)
DoDI 8500-01	Cybersecurity (http://www.dtic.mil/whs/directives/)
DoDM 4120.24	Defense Standardization Program Procedures (http://www.dtic.mil/whs/directives/)
DoDM 5200.01, Volume 1-4	DoD Information Security Program (http://www.dtic.mil/whs/directives/)
DoDM 5400.07	DoD Freedom of Information Act Program (http://www.dtic.mil/whs/directives/)
FAR/DFARS	Federal Acquisition Regulation/Defense Federal Acquisition Regulation Supplement (http://www.acq.osd.mil/)

MIL-DTL-7700	Flight Manuals, Performance Date Appendix, Mission Crew Manual, Supplemental Manual, and Abbreviated Flight Crew Checklist (https://assist.dla.mil/online/start/)
MIL-DTL-9977	Manuals, Technical - Nonnuclear Munitions and Nuclear Weapons Basic Information, Loading Procedures Manuals, and Standard Data Packages and Loading Procedures, NATO Stage B Cross-Servicing, Functional Check Procedures, and End of Runway Procedures Checklists (https://assist.dla.mil/online/start/)
MIL-DTL-38384	Manuals, Technical - Aircraft Nonnuclear/Nuclear Weapon Delivery Procedures (https://assist.dla.mil/online/start/)
MIL-DTL-83495	Technical Manuals—On-Equipment Maintenance Manual Set (https://assist.dla.mil/online/start/)
MIL-DTL-87158	Technical Manuals: Aircraft Battle Damage Assessment & Repair (https://assist.dla.mil/online/start/)
MIL-DTL-87929	Technical Manuals: Operation and Maintenance Instructions in Work Package Format (for USAF Equipment) (https://assist.dla.mil/online/start/)
MIL-HDBK-245	Preparation of Statements of Work (SOW) (https://assist.dla.mil/online/start/)
MIL-PRF-32216	Evaluation of Commercial Off-the-Shelf (COTS) Manuals and Preparation of Supplemental Data (https://assist.dla.mil/online/start/)
MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests (https://assist.dla.mil/online/start/)
MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) (https://assist.dla.mil/online/start/)
MIL-STD-3048	AF Business Rules for the Implementation of S1000D (https://assist.dla.mil/online/start/)
MIL-STD-38784	Manuals, Technical: General Style and Format Requirements (https://assist.dla.mil/online/start/)
TM 86-01	Technical Manual Contract Requirements (TMCR) document https://cs2.eis.af.mil/sites/10531
TO 0-1-11N	Numerical Index to Joint Nuclear Weapons Publications (Including Related Publications) (AFNWC.NCLSTOWork@kirtland.af.mil)
TO 0-1-11N-1-CD-1	Numerical Index to Joint Nuclear Weapons Publications (Including Related Publications) (Air Force Supplement) (AFNWC.NCLSTOWork@kirtland.af.mil)
TO 00-5-1	AF Technical Order System (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-5-15	AF Time Compliance Technical Order System (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-5-18	USAF Technical Order Numbering System (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-5-19	Security Assistance Technical Order Program (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-20-2	Maintenance Data Documentation (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-20-3	Maintenance Processing of Reparable Property and the Repair Cycle Asset Control System (https://www.my.af.mil/etims/ETIMS/ET IMS/to/SearchTOCatalog.jsp)

TO 00-25-113	Critical Alloys and Precious Metal Parts List - Gas Turbine Engines (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-25-234	General Shop Practice Requirements for the Repair, Maintenance and Test of Electrical Equipment (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-35D-54	USAF Deficiency Reporting and Investigating System (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-80G-1	Make Safe Procedures for Public Static Display (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 00-105E-9	Aerospace Emergency Rescue and Mishap Response Information (Emergency Services) (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1-3	Inspection and Repair of Aircraft Integral Tanks and Fuel Cells (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1-8	Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1-17	Storage of Aircraft and Missile Systems (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1-686	Desert Storage, Preservation and Process Manual for Aircraft, Aircraft Engines, and Aircraft Auxiliary Power Unit Engines (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1-689-5	Cleaning and Corrosion Control, Volume V, Consumable Materials and Equipment for Avionics (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1-691	Aircraft Weapons System — Cleaning and Corrosion Prevention and Control Aerospace and Non-Aerospace Equipment (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1A-14-2 (replaced TO 00-25-255-1)	Installation and Repair Practices -A/C Circular Electrical Connectors and Accessories (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1A-14-3 (replaced TO 00-25-255-2)	Installation and Repair Practices -A/C Circular Electrical Connectors and Accessories (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1M-33	Nonnuclear Munitions Information Manual -- Standard Volume (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 1-1M-34	Aircrew Weapons Delivery Manual -- (Nonnuclear) Standard Volumes (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 11A-1-10	Air Force Munitions Surveillance Program and Serviceability Procedures (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 11A-1-61 series	Storage and Outloading Instructions For Conventional Ammunition (IGLOO, Magazine, Military Van, Truckloading, and Carloading) (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp).
TO 11A-1-63	Munitions Assembly Procedures - Inspection& Assembly of Conventional Munitions (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 11N-1-1	Joint Nuclear Weapons Publication System (JNWPS) Operating Procedures, Specifications and Standards AFNWC.NCLSTOWork@kirtland.af.mil
TO 21M-1-101	Operational Instructions - Field/Depot Level Reliability Asset Monitoring System (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 33B-1-1, Section 9	Non-Destructive Inspection Methods, Radiation Protection (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)
TO 35-1-256WC-1	Service Inspection Workcards -- Powered Aerospace Ground Equipment (https://www.my.af.mil/etims/ETIMS/ETIMS/to/SearchTOCatalog.jsp)

A.2 LIST OF REFERENCED AND RELATED FORMS.

Number	Title
AF Form 847	Recommendation for Change of Publication
AFTO Form 22	Technical Manual (TM) Change Recommendation and Reply
AFTO Form 27	Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO Verification Record/Approval
AFTO Form 30	Reproduction Assembly Sheets
AFTO Form 124	Computation of Technical Order Reading Grade Level
AFTO Form 158	Technical Order Review Comment Sheet
AFMC Form 202	Nonconforming Technical Assistance Request and Reply
AFTO Form 252	Technical Order Publication Change Request
DD Form 254	Contract Security Classification Specification, Department of Defense
DD Form 1423	Contract Data Requirements List (CDRL) (CG)
DD Form 2345	Militarily Critical Technical Data Agreement

A.3 LIST OF ACRONYMS.

A&S	Acquisition& Sustainment
ABDR	Aircraft Battle Damage Repair
ACC	Air Combat Command
ACPINS	Automated Computer Program Identification Number System
AEODPS	Automated EOD Publication System
AETC	Air Education and Training Command
AF	Air Force
AFCEC	Air Force Civil Engineer Center
AFIOH	AF Institute of Operational Health
AFIT	Air Force Institute of Technology
AFLCMC	AF Life Cycle Management Center
AFMC	Air Force Materiel Command
AFMCI	AFMC Instruction
AFMCMAN	AFMC Manual
AFMETCAL	Air Force Metrology and Calibration (AFMC)
AFMOA	Air Force Medical Operations Agency
AFNIC	Air Force Network Integration Center (formerly Air Force Communications Agency)
AFNWC	AF Nuclear Weapons Center
AFOSH	Air Force Occupational Safety and Health
AFPD	Air Force Policy Directive
AFPI	Air Force Policy Instruction
AFPSL	Air Force Primary Standards Laboratory
AFRIMS	Air Force Records Information Management System
AFRL	Air Force Research Laboratories (AFMC)
AFSAC	Air Force Security Assistance Center (AFMC)
AFSEO	Air Force SEEK EAGLE Office
AFSPC	Air Force Space Command
AFSSI	Air Force Systems Security Instruction
AFTO	Air Force Technical Order
AF TOFST	Air Force Technical Order Field Support Team
ALC	Air Logistics Complex OC-Oklahoma City; OO-Ogden; WR-Robins

ANSI	American National Standards Institute
API	Airman Powered by Innovation Program (formally IDEA Program)
APO	Army/AF Post Office
APU	Auxiliary Power Unit
ASCC	Air Standardization Coordinating Committee
ASSIST	Acquisition Streamlining and Standardization Information System
ATD	Auxiliary Tag Description
ATOS	Automated Technical Order Systems
BEE	Bio-Environmental Engineering
BR	Business Rules
BSD	Boeing Space Division
C-E	Communications-Electronics
CAC	Common Access Card
CAFTOP	Comprehensive Air Force TO Plan
CAGE	Commercial and Government Entity (Code)
CAM	Centralized Asset Management
CBA	Cost Benefit Analysis
CBSG	Combat Sustainment Group
CBSS	Combat Sustainment Squadron
CCB	Configuration Control Board
CCL	Commerce Control List
CCP	Contract Change Proposal OR Command Control Point
CDD	Capability Development Document
CDM	Contractor Data Manuals (ICBMs)
CDO	Controlling DoD Offices
CD-ROM	Compact Disk - Read-Only Memory
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CFAE/CFE/CFEN	Contractor Furnished (Aeronautical) Equipment (Notice)
CG	Computer Generated (forms) or Combat (Support) Group
CI	Configuration Item
CITOMS	Comprehensive Integrated TO Management System
CLIN	Contract Line Item Number
CLS	Contractor Logistics Support
CMS	Calibration and Measurement Summary
CONOPS	Concept of Operations
COTS	Commercial Off-the-Shelf (Hardware, Software or Manuals)
CPAB	Corrosion Prevention Advisory Board
CPAR	Contractor Performance Assessment Report
CPIN	Computer Program Identification Number
CPS	Command Publishing Suite (ETIMS)
CR	Certification Recommendation (SEEK EAGLE program)
CSG	Combat Sortie Generation
CSTO	Country Standard TO
CTOCU	Central Technical Order Control Unit
CTOM	Centralized Technical Order Management (Committee or Group)
CTOR	Centralized TO Repository (Robins)
CUI	Controlled Unclassified Information
CWDS	Combat Weapon Delivery Software

DA	Department of the Army
DAG	Defense Acquisition Guide
DAU	Defense Acquisition University
DCMA	Defense Contract Management Agency
DD	Department of Defense (Forms)
DDR	Data Discrepancy Report
DECERT	De-Certification
Det	Detachment
DFARS	Defense Federal Acquisition Regulations Supplement
DIAMONDS	Defense Integrated and Management of Nuclear Data Services
DID	Data Item Description
DLA	Defense Logistics Agency
DLDSS	Digital Legacy Data Storage System
DoD	Department of Defense
DoDAAC	Department of Defense Activity Address Code
DoDD	Department of Defense Directive
DoE	Department of Energy
DPEM	Depot Programmed Equipment Maintenance
DSN	Defense Switched Network
DSP	DoD Standardization Program
DSS	Digital Support Suite
DST	Digital Signatures Trust
DT&E	Development Test and Evaluation
DT/OT	Developmental Test/Operational Test
DTD	Document Type Definition
DTRA	Defense Threat Reduction Agency
DVD	Digital Versatile Disc
ECA	External Certificate Authorization
ECP	Engineering Change Proposal
EDD	Estimated Distribution Date
EED	Electro-Explosive Devices
EM	Environmental Management
EN	Evaluation Notice
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ES	Equipment Specialist
ESDS	Electrostatic Discharge Sensitive
ESOH	Environmental, Safety and Occupational Health
ETIMS	Enhanced Technical Information Management System
ETM	Electronic Technical Manual
eTO	Electronic TO
eTool	Electronic Tool (fixed and deployable multi-user devices)
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulations
FDO	Foreign Disclosure Office
FMM	Flight Manual Manager
FMP	Flight Manuals (Program or Publications) (AFI 11-215)
FMS	Foreign Military Sales

FOIA	Freedom of Information Act
FOSI	Formatted Output Specification Instance
FOUO	For Official Use Only
FPO	Fleet Post Office
FQT	Functional Qualification Test
FSC	Federal Stock Class
FTE	Factory Test Equipment
FTORB	Flight Technical Order Review Board
FUG	Functional Users Guide
FYDP	Future Years Defense Plan
GACP	Global Ammunition Control Point (AFLCMC/EBHM and AFLCMC/EBRM)
GAL	Global Address List
GCSS-AF	Global Combat Support System-Air Force
GDS	Global Directory Services
GEIA	Government Electronics and Information Association
GFE/GFAE	Government Furnished (Aeronautical) Equipment
GFI	Government Furnished Information
GLR	Government License Rights
GOCO	Government-Owned, Contractor-Operated
GOTS	Government Off-the-Shelf Software Manuals
GPO	Government Printing Office
HAZMAT	Hazardous Materials
HCP / HCI	Hardness Critical Procedure / Item
HDBK	Handbook
HQ	Headquarters
HTML	Hypertext Markup Language
http(s)	Hypertext Transfer Protocol (Secure)
IAW	In Accordance With
ICBM	Inter-Continental Ballistic Missile
ICD	Initial Capabilities Document
ICS	Interim Contractor Support
ID	Initial Distribution or Identification
IDE	Integrated Data Environment
IDS	Integrated Data System
IDM	Integrated Data for Maintenance
IETM	Interactive Electronic Technical Manual
IMP	Integrated Master Plan
IMS	Integrated Master Schedule
IOC	Initial Operational Capability
IOS	Interim Operational Supplement
IOT&E	Initial Operational Test and Evaluation
IP	Internet Protocol
IPB	Illustrated Parts Breakdown
IPDS	Idea Program Data System
IPR	In-Process Review
IPT	Integrated Product (Process) Team
ISO	International Standards Organization

ISPM	Information Security Program Manager
ISS	Interim Safety Supplement
IT	Information Technology
ITCTO	Interim Time Compliance TO
ITIES	Interservice Technical Information Exchange System
ITO	Interim Technical Order
ITPS	Identifying Technical Publication Sheet (MIL-PRF-32216)
IUID	Item Unique Identification
JCO	Joint U.S./Canada Certification Office
JEDMICS	Joint Engineering Drawings Management Information and Control System
JNWPS	Joint Nuclear Weapons Publication System
JTCG-CMT	Joint Technical Coordinating Group - Calibration & Measurement Technology
LCN	Local Control Number
LEP	List of Effective Pages
LMI	Logistics Management Information
LOAP	List of Applicable Publications
MAJCOM	Major Command
MCTL	Militarily Critical Technology List
MDS	Mission/Design/Series
MIL-DTL	Military Detail Specification
MIL-HDBK	Military Handbook
MIL-PRF	Military Performance Specification
MIL-STD	Military Standard
MILSPEC	Military Specification
MIQ	Maximum Issue Quantity
MNCL	Master Nuclear Certification List
MOA	Memorandum of Agreement
MPTO	Methods & Procedures TO
MS	Microsoft®
N/A	Not Applicable
NAC	National Agency Check
NATO	North Atlantic Treaty Organization
NSWC IHEODTD	Naval Surface Warfare Center Indian Head EOD Technology Division
NDI	Non-Destructive Inspection
NGS	Non-Government Specification
NIPRNET	Non-Classified (or Non-Secure) Internet Protocol Router Network
NIST	National Institute of Standards and Technology
NOFORN	Not For Foreign Release
NSA	National Security Agency
NSN	National Stock Number
NSP	Nuclear Surety Procedure
NW	Nuclear Weapon(s)
O&M	Operation(s) and Maintenance
ODS	Ozone Depleting Substance
OEM	Original Equipment Manufacturer
OI	Operational Instruction

OPR	Office of Primary Responsibility
ORC	Operational Research Consultants
OS	Operational Supplement
OSS&E	Operational Safety, Suitability and Effectiveness
OT&E	Operational Test and Evaluation
OTR	One Time Requisition
PCO	Procuring Contracting Officer
PCR	Publication Change Request
PDF	Portable Document Format™ (Adobe®)
PDM/PDEM	Programmed Depot (Equipment) Maintenance
PEO	Program Executive Officer
PGM	Product Group Manager
PII	Personally Identifiable Information
PKI	Public Key Infrastructure
PM	Program Manager (SPD or PGM)
PMA	Production Management Activity
PMD	Program Management Directive
PME/PMEL	Precision Measurement Equipment (Laboratory)
POC	Point of Contact
POD	Print On Demand
POM	Program Objective Memorandum
PPR	Pre- or Post-Publication Review
PSM	Product Support Manager
PSN	Publication Stock Number
PSTK	Product Support Tool Kit (formally A&S Tool Kit)
PTO	Preliminary Technical Order
PTOWS	Prime TO Warehouse System
PWS	Performance-based Work Statement
QA	Quality Assurance
R&D	Research and Development
RAC	Rapid Action Change
RC	Recommended Change
RDS	Records Disposition Schedule
REMIS	Reliability and Maintainability Information System
RFP	Request For Proposal
RGL	Reading Grade Level
RSP	Render Safe Procedures
RTO	Responsible Test Organization
SA	Systems Administrator
SAF	Secretary of the Air Force
SAP	Security Assistance Program
SAR	Special Access Required
SATODS	Security Assistance TO Data System
SATOP	Security Assistance TO Program
SCG	Security Classification Guide
SCM	Supply Chain Manager
SDC	Standard Desktop Configuration

SDP	Standard Data Package OR Source Data Package
SE	Support Equipment
SERD	Support Equipment Recommendation Data
SGML	Standard Generalized Markup Language
SEP	Systems Engineering Plan
SID	Specification Interpretation Document
SIPRNet	Secure Internet Protocol Router Network
SIR	Specification/Standard Interface Record
SME	Subject Matter Expert
SMR	Source Maintenance and Recoverability (Code)
SMTP	Simple Mail Transfer Protocol
SOO	Statement of Objectives
SOW	Statement Of Work
SPD	System Program Director
SPM	System Program Manager
SRD	System Requirements Document or Standard Reporting Designator
SS	Safety Supplement
SSEA	Systems Safety Engineering Analysis
SSL	Secure Socket Layer (Internet)
STE	Special Test Equipment
STINFO	Scientific and Technical Information
T&E	Test and Evaluation
TAM	Tivoli Access Manager (GCSS-AF)
TCM	Technical Content Manager
TCTO	Time Compliance Technical Order
TDP	Technical Data Package
TDY	Temporary Duty
TIM	Technical Interchange Meeting
TLCSM	Total Life Cycle System Management
TM	Technical Manual
TMCR	Technical Manual Contract Requirements (document)
TMDE	Test, Measurement and Diagnostic Equipment
TMOP	Technical Manual Organization Plan
TMS	Type, Model, Series
TMSS	Technical Manual Specifications and Standards
TO	Technical Order
TOCU	TO Control Unit
TODA	TO Distribution Account
TODO	TO Distribution Office
TODPG	TO Distribute and Print Gateway (DLA Data Management Services)
TODPS	TO Distribute and Print Services (DLA Data Management Services)
TOFB	TO Financial Brochure
TOIS	TO Information Sheet
TOLCMP	TO Life Cycle Management Plan
TOLCVP	TO Life Cycle Verification Plan
TOMA	TO Management Agent/TO Management Agency
TOP/RC	TO Planning/Requirements Conference
TOPS	TO Page Supplement
TORB	TO Review Board
TRD	Technical Requirements Document

TSPSR	Total System Performance and Support Responsibility
URL	Uniform Resource Locator (Internet address)
U.S.	United States
U.S.C.	United States Code
USPS	U.S. Postal Service
USAF	United States Air Force
USML	United States Munitions List
VIN	Vehicle Identification Number
VPN	Virtual Private Network
VSP	Verification Status Page
VTM	Verification Team Manager
WAN	Wide Area Network
WD	Wiring Diagram (MIL-DTL-83495 Manual)
WIP	Work In Progress
WSDP	Weapons Source Data Package
WSSR	Weapon System Safety Rules
WUC	Work Unit Code
WWW	World Wide Web
XML	eXtensible Markup Language
6DOF	Six Degree of Freedom

A.4 DEFINITIONS.

Abeyance:**1**. Suspension of compliance with TCTOs and ITCTOs when safety hazards or possible equipment- damaging processes are discovered with the TCTO procedures.**2**. Deferring action on AFTO Form 22 or other TO change requests when they must be held for evaluation by a regularly constituted work group or committee.

AF HTML: AF HTML files are published (transformed) from TMSS-compliant SGML files using the COTS products CPS Transformer and Arbortext Editor publishing software in conjunction with AF TMSS Display Formatting Output Specification Instances (DFOSI) and Document Type Definitions (DTD).

AF HTML eTO: An HTML format TO file (updated using only TO Changes or RACs), merged and indexed as a revision, uploaded to ETIMS for distribution and viewing.

AF Technical Order Catalog : The ETIMS function which provides information and current status of TOs currently active in the TO system. The catalog is used for management of TO libraries, developing requirements and preparing orders.

Auxiliary Tag Description (ATD) Table : The ATD Table is built in conjunction with the screen FOSI to establish special processing features for particular elements.

Baseline: A configuration identification document or set of documents formally designated and fixed at a specific time during a configuration item life cycle. Baselines, plus approved changes from baselines, constitute the current configuration identification.

Bidder's Library: TOs that are not releasable but are available for review by bidders at the buying location.

Certification: Contractor written assurance that manuals and source data are current, adequate, accurate, and conform to contract requirements.

Commerce Control List: The list of items in the Export Administration Regulations at 15 CFR 399. Licenses from the Department of Commerce are required to export such items and the technical data relating to them.

Commercial off-the Shelf (COTS) Manuals : Manuals available off-the-shelf from a commercial source which include operation, maintenance, and other instructions for commercial equipment. Commercial manuals are prepared to support the equipment in the commercial market.

Commodity: A designated item, subsystem, or system which is not identified as a weapon or military system. Commodities which possess similar characteristics and applications benefiting from similar developmental, acquisition, and logistics support management processes are aggregated into Product Groups.

Computer Program: The software (code) containing a sequence of operating instructions or data in a format suitable for use with a particular computer system, provided on CD-ROM, DVD, or other physical or electronic media.

Configuration: The functional and/or physical characteristics of hardware and software as set forth in technical documentation and achieved in a product.

Configuration Changes: Alteration of the form, fit or function of a configuration item.

Configuration Control: The systematic evaluation, coordination, and approval or disapproval of all proposed changes in the configuration of a baseline CI, and implementation of approved changes.

Configuration Control Board (CCB) : A board composed of representatives from program or project functional areas such as engineering, configuration management, procurement, production, test, logistic support, training activities and using and supporting organizations. The board approves or disapproves engineering change proposals (ECPs), approves conversion of ECPs to TCTOs if applicable, and issues implementation instructions.

Configuration Item (CI): An aggregation of hardware and/or software, or any portion thereof that satisfies a function and is designated for configuration control. Items that reflect the current approved configuration of military systems and/or commodities currently in the Air Force operational inventory. CIs require the use of the latest TO information listed in the appropriate TO Index.

Contract Maintenance: The maintenance of systems or commodities performed by commercial organizations (including prime contractors) under contract on a one-time or continuing basis without distinction as to level of maintenance accomplished.

Contractor Personnel: Technical writers and/or engineering personnel assigned from the applicable contractor to provide on-site assistance to the TOCU and to function as members of the TORB.

Controlled Unclassified Information (CUI) : Unclassified information, including technical data to which access or distribution limitations have been applied in accordance with US laws, policies, and regulations. (AFI 16-201) Examples include:

- Unclassified STINFO
- Unclassified export controlled information
- Unclassified proprietary data (intellectual property)
- Information exempted from public release by the Freedom of Information Act
- Competition Sensitive, Source Selection Information
- Controlled Unclassified Military Information (CUMI)

Controlling DoD Office : DoD activity that sponsored the work that generated the technical data or the office that receives the data on behalf of a Government agency and has the responsibility for distributing the data to eligible recipients.

Copyright: A copyright is a form of intellectual property that grants its holder the sole legal right to copy their works of original expression, such as a literary work, movie, musical work or sound recording, painting, computer program, or industrial design, for a defined period of time.

Data Discrepancy Report (DDR) : ETIMS function which allows users to report TO Catalog data errors and printing/reproduction/distribution errors with received TOs.

Days: Days imply calendar days, unless otherwise stated.

Depot-Level Maintenance : The level of maintenance consisting of those on- and off-equipment tasks performed using highly specialized skills, sophisticated shop equipment, or special facilities of an ALC, centralized repair activity, contractor facility, or, in some cases, by field teams at an operating location. Maintenance performed at a depot also includes those organizational and intermediate-level tasks required to prepare for depot maintenance, and, if negotiated between the depot and the operating command, scheduled field-level inspections, preventative maintenance or TCTOs which come due while equipment is at the ALC for Programmed Depot Maintenance (PDM).

Derived Documents: Documents such as checklists, work cards, and local tech data extracted from a TO, or compiled from several formal TOs.

Digital Format: The software program and/or coding used to present technical data in a standardized electronic format that is cost-effective to acquire, author, distribute, use and sustain IAW Air Force Tech Manual Specs & Standards (TMSS). These formats must be accessed through common viewing applications such as web browsers and low cost vendor readers.

Digital Support Suite (DSS) : The set of files used to develop, deliver, reproduce and display SGML-tagged instances. A DSS includes the DTD and TDT (see definitions).

Digital TO: A digital TO file distributed either on physical media (e.g., CD-ROM/DVD) or via electronic means (i.e., eTO).

Distribution Statement: A statement used in marking a technical document, regardless of publication media or form, to denote the extent of its availability for distribution, release, and disclosure without additional approvals and authorizations from the controlling DoD office. See DoDI 5230.24 and AFI 61-201.

Document Type Definition (DTD) : A DTD clearly defines the structural components (SGML tags) of a TO in terms of elements, attributes and entities; for titles, paragraphs, tables, graphics, footnotes, etc. A specific DTD defines the structure of a TO type based on the governing specification. An SGML TO document (instance) is produced by inserting SGML tags into the document unformatted text, following the constructs (rules) of the specific TMSS DTD.

Electronic Technical Manual (ETM) : Technical Manual authored in a linear fashion for the purpose of page or in- line presentation (Type 1). ETMs may have a wide range of functionality ranging from indexed raster, hypertext linking, multimedia, interactivity between the data and the user, procedural guidance, navigational directions, and supplemental information. ETMs may also contain logistic-support functions supplemental to maintenance actions and are displayed IAW TMSS specifications.

Electronic (e)TO: A digital TO file available for viewing and distribution via electronic means. eTO files are identified by a media distribution code suffix of -WA-n, where-1 indicates ETIMS distribution, and -2 indicates distribution through other electronic means.

Electronic (e)Tool: Electronic Tools (eTools) are Portable Electonic Devices (PEDs) defined in DoDD 8100.02, Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG). eTools are required to optimize critical Mission Generation and Support warfighting functions at the point of use across Civil Engineering, Security Forces, Logistics Readiness, Aircraft and Munition Maintenance functions. eTools do not include electronic devices and test equipment issued and configuration managed by a system Program Manager (PM). eTools are Standard Desktop Configuration (SDC)-based devices that are permitted to connect directly to the Air Force Network and may include several pieces of additional software added to view and manage TOs, transact bar codes and perform other mission related activities. Unless specifically authorized by the appropriate Authorizing Official (AO), eTools devices are not authorized to connect to any weapon system.

Engineering Change Proposal (ECP) : A proposed engineering change and the documentation that describes and suggests the change. ECPs are submitted by contractors or from internal Air Force sources to the PM CCB for approval.

Equipment Specialist (ES): The individual or position responsible for assisting the acquisition team during the development/production phase and for technical management of a system, subsystem or commodity during the sustainment phase of a program.

Errata Sheets: Cover sheets used to transmit TO pages either omitted from or misprinted in distributed TO increments. The errata sheets will list the pages included and the actions to be taken to post them to the affected TO.

ETIMS eTO: A digital TO in AF HTML or PDF format that is uploaded to and distributed or viewed using ETIMS. These eTOs will be numbered with a -WA-1 TO number suffix. Both AF HTML and PDF TO files will be indexed as merged basics with the date of the latest TO increment. AF Portal users/eTools associated with TO Accounts on subscription for eTOs will always have access to most current and complete TO data available.

ETIMS Subject Matter Expert (SME) : An individual selected by the MAJCOM or base to receive intensive training on the use of ETIMS in the operating environment. The SME provides help and training to other base/unit ETIMS users.

ETIMS Version Date: ETIMS uniquely identifies every TO and TO increment by TO Number and Version date. The version date for any TO is the publication date of the most recent active TO increment (TO Revision, Change or TO Supplement).

Field-Level Maintenance : On-or Off-Equipment maintenance performed at an operating location. Field maintenance includes the traditional Organizational-level and portions of Intermediate-level maintenance under the Two-level maintenance concept (the rest of intermediate-level maintenance is covered under depot level maintenance).

Field Support Center : Application developed in SharePoint that provides support center incident reporting and tracking of TO customer support requests made to the AF TOFST.

Form, Fit, and Function: The physical and functional characteristics of an end item, but not the characteristics of any of the item components.

Formalization: The process of reviewing a TO for completion of the acquisition process. Verification should have been completed to the maximum extent possible, all corrections must have been made, and an AFTO Form 27 recommending formalization must be completed and signed by the TORB.

Format:***n***. **1.** The shape, size, binding, typeface, paper and general makeup or arrangement of a publication, as determined by military or commercial specifications and standards;**2**. Digital files developed to a particular computer application, such as Microsoft Word, Adobe Portable Document Format (PDF), or Standard Generalized Markup Language (SGML); **3**. Publication medium, such as paper versus digital. – ***v***. To arrange a document or publication IAW a specific format.

Formatting Output Specification Instance (FOSI): The FOSI specifies the layout for each page (page set), frame, or screen IAW the applicable specification and standard. The FOSI reads an SGML-tagged file and produces an output formatted for the specified presentation method (printer, computer screen, etc.) A separate FOSI is required for each document type and each output medium. Only print FOSIs are provided for ETIMS publishing using the Data-Logics (DL) Composer.

Functional User Guide (FUG) : Detailed, procedural documents on the Air Force Technical Order Managers SharePoint Site which are to be used in the management of fielded TOs.

Hardness Critical Item (HCI) : A hardware item at any indenture level that is mission critical and which could degrade system survivability in a nuclear or nonnuclear operational environment if special procedures are not used in the design, repair, manufacture, installation, or maintenance of the item.

Hardness Critical Procedure (HCP) : Procedures which could adversely affect the nuclear hardness of a system or equipment item, or compromise the safety and reliability of a nuclear weapon system.

Integrated Master Plan (IMP) : An event-driven document provided by a contractor as part of the proposal, covering the critical events leading to successful contract completion. Events will be listed with entry and exit criteria (what must happen before the process leading to the event can start, and what must be completed before the event is complete). For example, the event ’Deliver TOs’ could have an entry criterion of ’Complete In Process Reviews’, and an exit criterion of ’Perform included procedures successfully as written’.

Integrated Master Schedule (IMS) : The IMS is a CDRL deliverable, updated as required during contract performance, used for managing and tracking completion of program events.

Integrated Product Team (IPT) : A team formed to manage and execute an acquisition program, composed of personnel from all activities affected by the product. The TO IPT should consist of the TOMA, other affected AFMC managers, using command and other support agency representatives, and contractor personnel involved in the development and delivery of TOs.

Intellectual Property: Intellectual property is a form of legal entitlement which allows its holder to control the use of certain intangible ideas and expressions. The term reflects the idea that once established, such entitlements are generally treated by courts as if they were tangible property. The most common forms of intellectual property include patents, copyrights, trademarks, and trade secrets.

Interactive Electronic Technical Manual (IETM): Technical Manual authored in a non-linear fashion for the purpose of non-linear display (Type 2). IETM organization facilitates easy user access to technical information while the display device provides interactive procedural guidance, navigational directions, and supplemental information. An IETM facilitates the interchange of maintenance manual information with logistic support data supplemental to maintenance, such as maintenance data collection, training documentation, supply interface and data presentation control.

Item Unique Identification (IUID): Labeling which allows the automatic scanning of data matrices on parts to improve the reliability and usability of the Air Force's future Information Technology systems.

Lead Command: The Air Force assigns responsibility for overall management of each system to a lead command to ensure that all requirements associated with every system receive comprehensive and equitable consideration. This lead command provides a primary input into the process of developing and maintaining a force structure with a balance of complementary capabilities, and it establishes a basis for rational allocation of scarce resources among competing requirements. When only one command uses a weapon or equipment system, it is automatically assigned Lead Command. See AFPD 10-9 for aircraft/missile systems. and AFI 10-901 for communications and information systems assignments

Major Command (MAJCOM): The activity at the higher echelon responsible for management and command control of systems or commodities. As used in this TO, MAJCOM includes Field Operating Agencies (FOA) and Direct Reporting Units (DRU).

Militarily Critical Technology List (MCTL) : Issued by DoD under authority of the Export Administration Act of 1979 as amended and Executive Order 12730. It provides descriptions of technologies that DoD assesses to be critical to the development, production, and use of military capabilities of significant value to potential adversaries.

Military System: A discrete stand-alone collection of systems and related resources which, in conjunction with user support and operation, provides a capability to accomplish a specific military mission. The generic phrase used to describe the systems developed and supported by AFMC.

Modification: Any change, either retrofit or update, to the configuration of a CI.

Non-Configured Equipment : Equipment that is representative of but does not reflect the current configuration of vehicles or systems in the Air Force operational inventory (e.g., a prototype of a new aircraft which will not be updated to the final approved configuration, or a test-bed aircraft used to flight test and evaluate aeronautical commodities and subsystems.) The latest issues of the TO information compatible with the specific items of equipment are mandatory for use with this equipment, but might not be listed as active in the TO Catalog.

Non-ETIMS eTO: Electronically accessed, distributed and used digital TOs which are not available in ETIMS for various reasons. These eTOs will be numbered with a -WA-2 TO number suffix to differentiate them from ETIMS eTOs. TODOs must independently establish access to these eTOs IAW procedures provided by the TOMA on TO Details page in ETIMS.

Non-Government Specifications (NGS) : Specifications and standards developed and maintained by commercial interests. NGS may be cited on contracts when there are no government performance specifications (MIL-PRF). Any NGS proposed for development of TOs must be approved by AFLCMC/HIAM.

Nuclear Surety Procedure (NSP) : Procedures which could adversely affect the nuclear hardness of a system or equipment item, or compromise the safety and reliability of a nuclear weapon system.

Organic Maintenance: Maintenance performed by the government under military control, using government-owned or controlled facilities, tools, test equipment, spares, repair parts, and military or civilian personnel.

Operating Location: Generally, a physical location where military systems or commodities are assigned, operated, and maintained.

Optimization: To optimize a PDF file for web viewing. With the pdf document open, perform a Save As. When this is accomplished, Adobe Acrobat Pro will restructure the document for a page-at-a-time downloading from web servers.

Performance Specification: Specifications limited to defining Form, Fit, Function and Interface (F3I), without defining or limiting processes, procedures and methods used to achieve the end result.

Portable Document Format (PDF) eTO : An Adobe® PDF format TO file (updated using any update format), merged and indexed as a revision, uploaded ETIMS (-WA-1) or other sources (-WA-2) for distribution and viewing.

Preliminary Technical Orders (PTOs) : PTOs are in-work drafts of TOs from initial assignment of TO numbers until formalization. PTOs are assigned a TO number and are identified by a warning and the word PRELIMINARY on the title page; PTOs will contain a Verification Status Page (VSP) (MIL-STD-38784).

Preparing Activity: The organization or activity responsible for developing and maintaining specifications, standards and DIDs in accordance with DoDM 4120.24, Defense Standardization Program Procedures. The preparing activity for most AF TMSS is AFLCMC/HIAM. Two TMSS are managed by AFSPC for space and missile TOs. One specification is managed by AFMETCAL for calibration TOs.

Pre-Publication Review : A final review of a TO, prior to reproduction, to ensure that all verification comments are included and the TO conforms to all specification and contract requirements. The TOMA and designated representatives from the using and supporting commands, verification team, and contractor will comprise the review team. Members should have technical background in the area covered by the manual(s) under review. Familiarity with the specific hardware being covered is desirable.

Prime ALC: The Air Logistics Complex where the PM sustainment function is located.

Product Group: Aggregations of multiple products in all life cycle phases characterized by an ongoing development requirement as well as a much larger cumulative sustainment requirement. A Product Group consists of commodities which can benefit from common management practices.

Product Group Manager (PGM) : The program manager for a Product Group. PGMs fulfill the same responsibilities for their assigned products as a System Program Director for the assigned system. The PGM products are usually in direct support of one or more SPDs.

Product Support Manager (PSM) : The major duties of the PSM include supervising the entire staff and professional procurement of all material including hardware and software, etc.

Production Equipment: Equipment manufactured or procured and deployed to the field for operational use.

Program Manager (PM): As used in this instruction applies collectively to System Program Director, Product Group Manager, Single Manager, Supply Chain Manager or acquisition program manager. The PM has total life-cycle system management for one or more programs and is accountable to the Center Commander. The PM is vested with full authority, responsibility and resources to execute a program on behalf of the Air Force.

Program Office: The integrated AFMC organization responsible for cradle-to-grave management of a military system.

Program Objective Memorandum : A document submitted annually to forecast program's financial requirements.

Programmed Depot (Equipment) Maintenance (PDM/PDEM): PDM and PDEM requirements as identified by the using command and system engineers are compiled as work specifications in a Statement of Work (SOW). Requirements may include programmed upgrades, analytical condition inspections, and scheduled preventive maintenance. Aircraft MDS, equipment Type, Model, Series (TMS), and system age determine PDM requirements.

Proprietary Data: Proprietary data is technical data submitted to the sponsor under a contract and subject to protection by the contractor. Proprietary information is confidential information that constitutes a trade secret and/or information that is commercial or financial and confidential and privileged. Something proprietary is something exclusively owned by someone, often with connotations that it is exclusive and cannot be used by other parties without negotiations. It may specifically mean that something is covered by one or more patents.

Prototype: A model or preliminary design of a system or commodity suitable for evaluation of design, performance, and production potential.

Program Management Directive (PMD) : The PMD is the official Air Force document used to direct program responsibilities to the appropriate MAJCOMs, Program Executive Officer (PEO), Center Commander (CC), or appropriate organization for a specific system/subsystem development, modification, acquisition or directed procurement effort.

Publication Date: The TO title page date established by the TOMA; normally the date the reproduction copy is accepted by the Air Force, or the date after which no further changes to be contents are allowed (copy freeze date). This date shall be adjusted due to publication delays, issuance of Supplements or receipt of urgent changes, and should be IAW MIL-STD-38784. In all cases this date shall be later than all previously released increments (Basic, Revisions, Changes, and Supplements).

Quality Assurance (QA): QA is the process by which the contractor and government ensure TOs and source data are technically accurate, adequate, safe and readily understandable. The contractor QA program will be specified in the Integrated Master Plan. The primary government QA process is verification (Chapter 3). QA may include process controls which include actual task performance, simulation (when performance could cause hazards to personnel or equipment) or desktop analysis (for non-procedural data).

Rapid Action Changes (RAC) : Emergency or Urgent TO Changes distributed electronically to correct safety hazards or prevent mission degradation and work stoppages. RACs are formatted like routine TO Changes using the digital TO file composition software to allow seamless merging with the basic TO file. If the RAC is not composed for seamless merging, regardless of presentation format (page- or non-page-oriented), the data must be directly accessible via hyperlink to and from the affected location in the TO.

Recommended Changes (RC): Recommendations submitted on AFTO Form 22, 27, 158 or 252 for improvement of TOs or PTOs. RCs for flight manuals are submitted on AF Form 847 and AFTO Form 252. RCs are divided into the three categories of Emergency, Urgent and Routine specified in Chapter 4.

Scientific and Technical Information (STINFO) : Information relating to research, development, engineering, testing, evaluation, production, operation, use, and maintenance for military products, services, and equipment for military systems. This includes production, engineering, and logistics information (AFI 61-201).

Single Point of Access: A single program and web site which allows a user to access all active digital TOs, no matter where stored, required to perform mission requirements.

Standard Generalized Markup Language (SGML -MIL-PRF-28001): SGML is a computer-processable syntax for describing the logical and content structures of a document. Using an SGML document type definition (DTD), a specification can rigorously and strictly define the structure of a class of documents such as job guides, flight manuals, fault isolation procedures, etc. SGML describes the format and structure of the text in a document, not how the document will appear as an output. A Formatted Output Specification Instance (FOSI) is required to build an output presentation for a particular SGML document. Perhaps the most attractive feature is that documents coded with SGML can be output in many different ways without conversion or manual intervention with the copy. Additionally, MIL- PRF-28001C, dated 2 May 1997 is inactive for new design and shall no longer be used as a guidance reference for new designs. (See NOTICE 1 attachment, dated 22 April 2010)

Static Filename : When uploading PDF eTO files to the ETIMS repository, the naming convention is the paper TO number with a .PDF extension using all capital lettering (e.g., eTO 00-5-3-WA-1 would be 00-5-3.PDF). This filename remains static in support of external liking to eTOs within and outside of their management control.

Supply Chain Manager (SCM) : Designated individual(s) at an ALC responsible for managing a line of National Stock Number (NSN)-coded items. SCM functions include requirements determination; cataloging, standardization and engineering data management; stock control and distribution; technical management functions; and pricing for their assigned items. SCMs report to ALC Commanders, but are responsible for supplying, repairing, and managing materiel to support PMs.

System: A final combination of equipment items, technical data, supply support, transportation, policies and procedures which make up a self-sufficient entity designed to perform a specific mission.

System Maturity: System maturity occurs during the Production and Deployment phase when the system design is stable and management emphasis changes from the acquisition to the sustainment function.

System Program Director (SPD) : The individual in a System Program Office who is ultimately responsible and accountable for decisions and resources in overall program execution. SPD is the designated title for the program manager of a program that reports to a Program Executive Officer (PEO)/Product Center Commander during the acquisition phase, or an ALC/CC during system sustainment, and who presents the single face to the user while overseeing the seamless life-cycle processes.

Technical Content Manager (TCM) : The individual, usually an Equipment Specialist (see definition) or Engineer, responsible for maintaining the accuracy, adequacy, modification, classification, review and currency of the technical content of TOs and TCTOs supporting assigned systems, commodities or processes. In sustainment, the TCM is identified in the ETIMS record for his/her assigned TOs. TCMs are not generally responsible for style and format or other non-technical aspects of manuals.

Technical Data:**1**. (FAR definition) Technical data is defined in the Federal Acquisition Regulations (FAR) as: Recorded information (regardless of the form or method of recording) of a scientific or technical nature (including software documentation) relating to supplies procured by an agency. Technical data does not include computer software or financial, administrative, cost or pricing, or management data or other information incidental to contract administration. This definition includes engineering data, source data and TO data (for example, schematic diagrams, flow diagrams, manufacturer handbooks, manuscripts of O&M instructions, PTOs, commercial TMs, Research and Development (R&D) TMs, and other system or equipment O&M procedures developed under AFMC or other acquisition agency directions during the system acquisition phase). Avoid use of this term when referring to specific types of data. **2**. (DODD 2040.2,*International Transfers of Technology, Goods, Services, and Munitions*, definition) - Classified or unclassified information of any kind that can be used, or adapted for use, in the design, production, manufacture, repair, overhaul, processing, engineering, development, operation, maintenance, or reconstruction of goods or munitions; or any technology that advances the state of the art or establishes a new art in an area of significant military applicability in the United States. The data may be tangible, such as a model, prototype, blueprint, or an operating manual, or may be intangible, such as a technical service or oral or visual interactions.

Technical Manual Contract Requirement (TMCR) Document, TM 86-01: The document approved for use by the Department of the Air Force to acquire TOs. It fully describes statement of work criteria for contractor program management, TO Quality Assurance, TO development and update, TCTOs, delivery instructions, and generic tailoring of the approved standards and specifications.

Technical Order (TO): TMs developed to MIL-SPECs or commercial manuals reviewed and approved in accordance with MIL-PRF-32216, managed in the Air Force TO System, and meeting the criteria for TMs listed above. The term Technical Order is equivalent to the DoD term Technical Manual.

Technical Order Distribute and Print Gateway (TODPG): TODPG provides TOMAs interface to upload and manage TO content within TODPS.

Technical Order Distribute and Print Services (TODPS): TODPS is a Print on Demand concept of operation being implemented enterprise wide in the Air Force to replace legacy stock, store and issue processes and reliance upon ETIMS for process management. TODPS requires the distribution and storage of digital TO files in the DLA Data Management Services central repository.

Technology: The technical information and know-how that can be used to design, produce, manufacture, use, or reconstruct goods, including technical data and computer software. The term does not include the goods themselves.

TO Management Agent/TO Management Agency (TOMA): The individual or organization responsible for managing TOs related to systems and commodities. Management encompasses all activities (except content management) from acquisition through disposal of TOs after the systems or commodities supported leave the Air Force inventory. TOMAs are generally responsible for style, format and other non-technical aspects of manuals.

TO Life Cycle Management Plan (TOLCMP) : The government plan for management of all facts of a major acquisition TO program. Less-than-major programs may not require a TOLCMP.

TO Life Cycle Verification Plan (TOLCVP) : The government plan for management of TO Verification throughout the life of the program.

TO Review Board (TORB)/Flight TORB (FTORB) : The review boards responsible for evaluation and approval of suggested changes to TOs and flight manuals. The boards may be formal panels or a loosely structured group of qualified individuals, but must be instituted and empowered by PM letters of appointment.

TO System: The Air Force specialized publication system for the acquisition, management, publication, filing and use of technical manuals. The TO System includes the hardware and software for the standard TO management system, personnel and facilities, and all manuals developed or acquired for organic operation, maintenance, inspection, modification, or management of centrally-acquired and managed Air Force military programs and end items. This includes paper and digital copies of manuals developed IAW Technical Manual Specifications & Standards, non- embedded personal computer software which automates the function directed by a TO, contractor- developed manuals adopted for Air Force use, and approved Commercial Off-The-Shelf (COTS) manuals.

Type 1 Technical Manual: See: Electronic Technical Manual (ETM)

Type 2 Technical Manual: See: Interactive Electronic Technical Manual (IETM)

Updates: Any changes to TOs or PTOs based on approved RCs. Updates are distributed to users in TO changes, revisions, and supplements IAW TO 00-5-1.

User Friendly: Clear and concise instructions, easily found and accessed, reliable with standard processes for operating the eTool while navigating through the file and standard formats linking related sections of the file to provide a high quality and time saving experience during TO use. This implies user friendly tech data, user friendly eTO applications, and user friendly equipment to view them on.

US Munitions List: This list designates defense articles and defense services that are subject to the International Traffic in Arms Regulations.

Verification: Verification is the process through which Air Force personnel evaluate and prove TOs, TO updates and TCTOs are accurate, adequate, safe, and usable to support the using command operational and maintenance concepts.

Verification Status Page (VSP) : A VSP shall be included in preliminary TOs to list all procedures requiring verification, and shall conform to the requirements of MIL-STD-38784. On PTOs that are 100% verified, the VSP may be blank, but will indicate the current date of the TO and any changes. The VSP will also be included in formal TOs containing unverified procedures.

Verification Team: Personnel assigned from various participating commands to verify procedures and to participate in the TORB/FTORB when required. Team members should include personnel of the lowest skill level planned to perform the procedures in the operational units.

Verification Team Manager: The individual assigned the task of managing a verification effort, responsible for the verification of assigned system TOs as chartered by the TOMA. The VTM shall be provided by the using command.

Work Stoppage: Work stoppage refers to the inability to proceed with production on a repair or modification of an end item or commodity, or where a given process stops due to nonconforming material, inadequate technical data, or lack of proper parts, materials, components, tooling or facilities. Halted production of a component or part that prevents the repair or continued scheduled production flow of an end item constitutes a work stoppage.

APPENDIX B
POINTS OF CONTACT

B.1 LIST OF POINTS OF CONTACT.

Agency Organization/Address	Function/Responsibility
HQ USAF	
HQ USAF/A4LX 1030 Air Force Pentagon Washington DC 20330-1030 DSN: 227-8247 E-mail: usaf.pentagon.af-a4-7.mbx.workflow@mail.mil	Air Force TO Policy and Procedures
HQ Air Force Material Command (AFMC):	
HQ AFMC/A4F 4375 Chidlaw Rd, Ste 6 Wright-Patterson AFB, OH 45433-5006 DSN: 787-5667 Email: afmc.a4.af.topp@us.af.mil	AF TO System Functional Manager TO System and HQ AFMC TO Policy and Procedures TCM for TOs 00-5-1, 00-5-3, 00-5-15 and AFMC 21-3. OPR for TO Forms Single Point for all TO issues End-user devices (i.e., e-tools)
HQ AFMC/A3V 508 W Choctawhatchee Ave, Ste 4, Bldg 35 Eglin AFB FL 32542-5713 DSN: 872-7887 Email: afmc.a3v@us.af.mil	Flight Manuals Program (FMP) Publications Policy and Procedures – AFI 11-215
HQ AFMC/ENS 4375 Chidlaw Rd, Ste 6 Wright-Patterson AFB,, OH 45433-5006 DSN: 787-5572	STINFO policy
HQ AFMC/A6O 4227 Logistics Ave, Ste 6 Wright-Patterson AFB OH 45433-5745 DSN: 787-1904	Cybersecurity FOIA requests
HQ AFMC/SE 4375 Chidlaw Rd, Ste 6 Wright-Patterson AFB OH 45433-5006 DSN: 787-1531	Safety Policy and Procedures Make-Safe Procedures for Public Display Wright Combat Sortie Generation TOs and Procedures

Agency Organization/Address	Function/Responsibility
HQ AFMC/A4RC 4375 Chidlaw Road, Suite 6 Wright-Patterson AFB, OH 45433-5006 DSN: 787-8185	Aircraft Battle Damage (Assessment and) Repair (ABDR) TOs and Procedures
88 CG/SCQIP 2275 D Street, Room 90 Wright-Patterson AFB, OH 45433-7220 DSN: 787-7924	AFTO Forms Development AFMC Publications Manager
Air Force Life Cycle Management Center:	
AFLCMC/LG 1790 Tenth Street, Building 572 Wright-Patterson AFB, OH 45433-7630 DSN: 785-5491 Email: AFLCMCAQL.Workflow@us.af.mil	AFLCMC TO Home Office Wright Patterson AFB-Center TO Home Office Local TOMA, TODO, & ETIMS Support
AFLCMC/LZSA-EGLIN 102 West D Ave, Suite 160 Eglin AFB, FL 32542-5415 DSN: 872-9300 Email: aflcmc.aqwl.tohomeoffice@us.af.mil	Eglin AFB TO Site Functional Office Local TOMA, TODO & ETIMS Support Management of 1-1M-33 and 1-1M-34 Standard Volumes. AF Technical Order Field Support Team (AF TOFST)
AFLCMC/LZPTP-HILL 6032 Fir Avenue, Bldg 1237 Hill AFB, UT 84056-5820 DSN: 586-9177 Email: AFLCMC/ EZGTP.TOHomeOf@us.af.mil	Hill AFB TO Site Functional Office Local TOMA, TODO & ETIMS Support Local Management of Centralized Functions (ATOS, CITOMS)
AFLCMC/LZPTP-TINKER 7851 Arnold Street, Suite 201 Tinker AFB, OK 73145-9160 DSN: 336-3829 Email: AFLCMC/EZGTP.TO@us.af.mil	Tinker AFB TO Site Functional Office Computer Program Identification System (ACPINS). Local TOMA, TODO & ETIMS Support. TO Numbering, TODO Support, SATODS
AFLCMC/LZPTP-ROBINS 285 Cochran Street Robins AFB, GA 31098-1669 DSN: 468-6910 Email: Robins.tdho@us.af.mil	Robins AFB TO Site Functional Office Local TOMA, TODO & ETIMS Support Local CTOR
AFLCMC/AQAZ 5 Eglin Street Hanscom AFB, MA 01731-2116 DSN: 478-2774	Hanscom AFB TO Site Functional Office Local TOMA, TODO & ETIMS Support

Agency Organization/Address	Function/Responsibility
AFLCMC/WF 4375 Chidlaw Road, Bldg 262 Wright-Patterson AFB, OH 45433-5006 DSN: 787-4258	Air Force Security Assistance and Cooperation Directorate Security Assistance TO Program (SATOP) Policy and Procedures
AFLCMC/HIAM 4170 Hebble Creek Road, Door 15 Wright-Patterson AFB, OH 45433-5653	AF TMSS Preparing Activity; Legacy Data Conversion. Legacy TO Data Systems (ATOS) Air Force Standard TO Management System Program Office
AFLCMC/EZPT-NDIO 4750 Staff Drive Tinker AFB, OK 73145-3317 DSN: 339-4931	Non-Destructive Inspection (NDI) Program and TOs
AFLCMC/EZPT-CPCO 325 Richard Ray Blvd, Bldg 165 Robins AFB, GA 31098-1639 DSN: 468-3284	Corrosion Prevention and Control Policies
AFLCMC/EBHM 6043 Elm Lane (Bldg 1246) Hill AFB, UT 84056-5838 DSN: 777-2666 Email: 784CBSG.GACP@us.af.mil	Global Ammunition Control Point (GACP) all – Conventional Munitions and Explosives except Tactical Missiles, (Does Not Include Maverick)
AFLCMC/EBHMA 6043 Elm Lane (Bldg 1246) Hill AFB, UT 84056-5838 DSN: 777-4590/775-3078	Publish/Manage all Munitions loading SDPs Performs Certification/Verification of all Munitions Loading SDPs before TO inclusion
AFLCMC/LZPTC-TINKER 7851 Arnold Street, Suite 213 Tinker AFB, OK 73145-9160 DSN: 336-3226	Security Assistance TO Program (SATOP)
AFLCMC/EBRM 460 Richard Ray Blvd, Suite 19A Robins AFB, GA 31098-1670 DSN: 497-4371 Email: 575cbss.gacp.mw@us.af.mil	Air Superiority Cell (ASC) Global Ammunitions Control Point (GACP) (all Tactical Missiles except Maverick)
AFLCMC/WNM 813 Irving-Wick Drive West, Suite 4M Heath, OH 43056-6116 DSN: 366-5174	AFMETCAL Calibration TOs and Procedures

Agency Organization/Address	Function/Responsibility
Air Force Nuclear Weapons Center:	
AFNWC/NCLS 2000 Wyoming Blvd SE Kirtland AFB, NM 87117-5617 DSN: 263-3610 Email: afnwc.ncltodata@us.af.mil	Air Force Joint Nuclear Weapons Publication (JNWPS) TOMA
Other Agencies:	
AFCEC/CXR 139 Barnes Drive, Suite 1 Tyndall AFB, FL 32403-5319 DSN: 523-6114	Disaster Preparedness TOs and Procedures
AFCEC/CXF 139 Barnes Drive, Suite 1 Tyndall AFB, FL 32403-5319 DSN: 523-6150 Email: afcec.cxf.workflow@us.af.mil	Aircraft Emergency Rescue Information (TO 00-105E-9) (http://www.dodffcert.com/00-105E-9/index.cfm)
AFCEC/CXE – Nonnuclear EOD 2008 Stump Neck Road Indian Head, MD 20640-3861 DSN: 354-6824 Email: afcec_cxe@navy.mil	Nonnuclear Explosive Ordnance Disposal (EOD) Safe Procedure (RSP) TOs for all new or modified Aircraft, Munitions, Delivery Systems and Ordnance Items
AFNIC/EVPI 203 W. Losey Street, Room 2200 Scott AFB, IL 62225-5222 DSN: 779-6667 Email: afnic.evpi.org@us.af.mil	Communications Security (COMSEC) Policy and Procedures
AFNIC/ESPP 203 W. Losey Street, Room 1200 Scott AFB, IL 62225-5222 DSN: 779-6281	Communications Activity Management and Communication Systems/Equipment Management Policy and Procedures (as defined in AFI 33-150, Management of Communications Activities)
SMC/AXLM 160 Skynet, Suite 1070B LA AFB, CA 90245-4069 DSN: 833-6424	Space Command Site Functional Office

APPENDIX C
DATABASE MANAGER

C.1 INTRODUCTION.

C.1.1 General. The information in this Appendix identifies the key requirements for a program Database (DB) Manager as well as job responsibilities.

C.1.2 Requirements. The key requirements for a DB Manager are to be knowledgeable of TO 00-5-3, ASD-S1000D Specification *(International Specification for Technical Publications Utilizing a Common Source Database)*, MIL-STD-3048, *Air Force Business Rules For The Implementation of S1000D*, associated Business Rules (BRs) or Project Decisions (PDs) requirements, and applicable USAF directives/specifications. Knowledge of Standard Generalized Markup Language (SGML) and eXtensible Markup Language (XML) tagging schemas, and of software certification and licensing requirements. Ability to clearly communicate orally and in writing, and knowledge of computer security policies and practices. Ability to interpret and follow written technical instructions and procedures.

C.1.3 Responsibilities. The DB Manager is responsible for all aspects of the Common Source Database (CSDB) that contains the Interactive Electronic Technical Manual (IETM) and conventional Technical Order (TO) digital files. This includes server operation and maintenance, currency of required system operating software, status of text SGML and XML and graphic files, data publishing modules, and ensuring all files are correct before updating the CSDB. The DB Manager will work under the direction of the program Technical Order Management Agent/Agency (TOMA) and ensure compliance with the Technical Manual Contract Requirements (TMCR) as well as all applicable US Air Force (USAF) and Department of Defense (DoD) directives.