BY ORDER OF THE COMMANDER
AIR FORCE MATERIEL COMMAND

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AIR FORCE MATERIEL COMMAND
TECHNICAL ORDER SYSTEM
PROCEDURES

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This manual provides AFMC procedures for implementing and managing the Air Force Technical Order (TO) System established by AFPD 21-3, *Technical Orders* and AFI 21-303, *Technical Orders*. It implements the HQ AFMC policies in AFMCI 21-301, *Air Force Materiel Command Technical Order System Implementing Policies*. This manual applies to all AFMC units. Send drafts of proposed Air Logistics Center (ALC) and Product Center (PC) supplements to this manual to HQ AFMC/LGYE, 4375 Chidlaw Rd, WPAFB OH 45433-5006, before printing. Send a copy of published center supplements to LGYE. This manual does not apply to the Air National Guard or Air Force Reserve Command units and members.

SUMMARY OF CHANGES

This interim change is intended to improve the Engineering Technical Assistance Requests (ETARs) process and the inspection of these processes to ensure policy compliance. These changes are at the request of ETAR processing stakeholders to ensure more efficient support for this depot and field maintenance function, and to improve ETAR process accountability. Also throughout AFMCMAN21-1, **Chapter 5**, change most occurrences of “engineer or ES” to “engineer” and “engineers or ESs” to “engineers” and “engineer/ES” to “engineer” and “engineers/ESs” to “engineers” and “ES or engineer” to “engineer” and “engineering or ES” to “engineering” to ensure only the engineering authority approves all changes.

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Chapter 1

TECHNICAL ORDER (TO) MANAGEMENT AND PRODUCTION TOOLS; AFMC CENTRALIZED TO MANAGEMENT (CTOM) COMMITTEE; SPECIAL TO PROCEDURES; BUDGETING

1.1. General: This manual provides AFMC procedures relating to the Air Force Technical Order (TO) System. See **Attachment 1**, for Referenced and Related Publications and Referenced Forms.

1.2. TO Management and Production Tools. All TO System data input, management practices, and TO acquisition, sustainment and use procedures will be performed using the Joint Computer-aided Acquisition and Logistics Support (JCALS) system, AF-sanctioned interfacing program tools, or the Enhanced Technical Information Management System (ETIMS) currently under development. Exceptions are listed in AFMCI 21-301, and 00-5-series TOs.

1.2.1. **Enhanced Technical Information Management System (ETIMS).** ETIMS is the next-generation information management tool used to manage the TO System. It is being developed in "spirals." Spiral 1 will soon be "turned on" sequentially by base/region (to allow for site set-up and workflow development), with the TO user functionalities of review TO Catalog, order TOs and submit Recommended Changes. Additional TO management functionality will be added in subsequent spirals.

1.2.1.1. ETIMS will be highly automated, with most functions supported by in-depth on-line training and help modules. For support, users will call the standard Global Combat Support System (GCSS) Facilities Assistance Branch (FAB) Help Desk line, DSN 596-5771, Comm (334) 416-5771, or toll free (877) 596-5771. There will be a voice menu with ETIMS as one of the options. There will also be a unique e-mail address for reporting problems.

1.2.1.2. When ETIMS functions become available, they must be used, unless a waiver is granted by HQ USAF/ILMM. Because of the spiral development concept, ETIMS will overlap with JCALS (see below) until all JCALS functions are subsumed. At that time, ETIMS will become the sole Air Force system of record.

1.2.2. **Joint Computer-Aided Acquisition and Logistics Support (JCALS) System.** The JCALS system is a joint service, distributed technical management information system. The JCALS system automates the wholesale (supplier) Air Force TO system functions of manage, acquire, improve, publish, stock and distribute; and the retail (customer) functions of viewing TO Index data (metadata), ordering TOs, managing accounts and submitting TO improvement reports. The JCALS system connects TO users and managers in the operational environment.

1.2.2.1. JCALS Roles and Privileges. JCALS users are assigned "roles" that include a set of system privileges using a specific role name to provide capability to perform various functions. TO management functions require that a user profile contain at least the JCALS system default roles of Technical Manual (TM) Manager, Equipment Specialist, and Distribution Manager. These roles are normally shared by several people. Other commonly required roles include Writer/Editor, Quality Assurance

(QA) Manager, Ad Hoc Browser User, and TM Account Point of Contact. Unique JCALS system roles may also be established for a specific purpose locally. AF standard roles have been established for the retail functions. Unlike JCALS default roles, these roles must be established and administered at every JCALS site. See **https://techdata.wpafb.af.mil/jcals/jcals_main_screen.htm**.

1.2.2.2. JCALS Desktop Instructions (DI). Procedures for on-line use of JCALS functions are documented in the JCALS DI. This publication may be accessed from the Army JCALS web site (**https://www.jcals.army.mil/index.cfm**). Formal DI updates will be published when procedures change due to software upgrades, with interim updates ("DI Bulletins") published as required. All on-line JCALS users must ensure they are using a current copy of the DI and have applicable DI Bulletins. HQ AFMC/LGYE will notify JCALS site POCs when new DI revisions or DI Bulletins are available. Site POCs must notify local JCALS users.

1.2.3. **Automated TO Management System (ATOMS).** ATOMS is a PC-based relational database application designed to assist with maintaining TO Distribution Office (TODO) TO requirements and distribution records. TODOs without on-line JCALS or ETIMS access must use ATOMS to prepare and submit TO Publication Requests (TOPR) via Internet File Transfer Protocol (FTP) Service to OC-ALC (TO 00-5-1, *AF Technical Order System*).

1.2.4. **Automated Technical Order System (ATOS).** ATOS is a loose-leaf publication and document management system for developing, maintaining and sustaining Air Force TOs, operating at the three Air Logistics Centers. ATOS receives, stores, and maintains digital TOs and TO change page data and is capable of producing PDF output to meet Print On Demand (POD) requirements in a paperless environment. 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 Tech Manual Specification & Standard (TMSS) compliant.

1.2.5. **TO Management And Retrieval Tool (TO.MART).** TO.MART is a digital TO indexing and retrieval software application developed by the Air Force. The TO.MART application software files may be downloaded from **http://www.ide.wpafb.af.mil/field/ToolsMenu.htm**. TODOs may use this tool to identify, locate and access the most current versions of digital TO files. When TO.MART is hosted on a LAN server, other TO users serviced by the TODO may also use the program to locate and access TOs. TODOs register TOs and files in TO.MART, and the program then tracks the locations and versions across many CDs, network drives, local drives, floppies, and/or other media. TO.MART will present the user with a list of TOs in order by TO number, title, publication date or other characteristic, any of which are searchable. Individual users would open the TO.MART Index file and click on the desired TO number, which opens the file using the appropriate viewing software (Acrobat, MS Word, etc.). If the drive or medium containing the TO is not available (for example, if the CD containing the selected TO is not in the drive), TO.MART will prompt the user to insert the appropriate volume and then display the TO. User-defined groups allow TOs to be separated into categories and subcategories for more convenient browsing. Additional information about this application is available from the User Manual provided with the software.

1.2.6. **Other Tools.** There are specialized management systems used for various sub-categories of TOs, for example: (a) the Security Assistance TO Data System (SATODS) used to manage Foreign Military Sales (FMS) TO programs; (b) the Next Generation Automated Explosive Ordnance Disposal (EOD) Publication System (AEODPS-NG) used to publish and manage EOD TOs; (c) the Comprehensive Integrated TO Management System (CITOMS) used in conjunction with JCALS to acquire and manage TOs at OO-ALC and AAC/NWLT; and (d) the Digital Legacy Data Storage System (DLDSS) used for digital TO storage. At WR-ALC, the TO warehouse functions have been automated by the Prime TO Warehouse System (PTOWS), with digital copies of the entire inventory of assigned TOs hosted on the Central TO Repository (CTOR) System. OO-ALC is also storing some TOs on the CTOR System. The Reliability & Maintainability Information System (REMIS) is used to track Time Compliance Technical Order (TCTO) compliance and equipment configuration. Some of these tools will eventually be subsumed by ETIMS, while others will be eliminated altogether. For those systems to be subsumed or eliminated, only critical changes and routine maintenance are allowed–other updates must be approved by waiver submitted through HQ AFMC/LGYE to HQ USAF/ILMM.

1.3. AFMC Centralized Technical Order Management (CTOM) Committee Charter:

1.3.1. **Purpose.** The AFMC CTOM Committee provides a forum for experienced TO managers to review, understand and discuss TO management issues with headquarters staffers. The AFMC committee develops command policies and procedures to implement U.S. Air Force (USAF) TO System and Department of Defense (DoD) policy, and submits them for formal approval as official AFMC guidance. The AFMC committee works to resolve command issues and recommend positions on issues raised by or needing input to the AF CTOM Committee.

1.3.2. **Chair.** HQ AFMC/LGYE chairs the AFMC CTOM Committee and is one of the AF CTOM Committee members (AF CTOM guidance in AFI 21-303 governs AFMC participation). LGYE coordinates command issues with other HQ AFMC offices.

1.3.3. **Center Coordination.** Members obtain coordination from Program Manager (PM) functional OPRs affected by TO policy, practices and procedures in order to develop center positions on issues.

1.3.4. **Membership.** AFMC CTOM Committee membership is listed on the Internet at **https://www.hqafmc.wpafb.af.mil/en/toctom/**. "Advisors" are mandatory coordination offices for AF TO System policy and AFMC policy implementation affecting their activity. Advisors are invited to all meetings, but attendance is not essential. PMs are considered advisors for matters affecting the TOs they control.

1.3.5. **Meetings.** Meetings are held at the call of the chair, and will normally precede Air Force CTOM and AFMC TO Advisory Council (TOAC) meetings to allow developing an AFMC position on issues to be discussed. To minimize travel costs, meetings will use VTCs, e-mail, and meet-me telephone calls to the maximum extent possible. HQ AFMC/LGYE will post CTOM information on the CTOM Committee web site (**https://www.hqafmc.wpafb.af.mil/en/toctom/**).

1.4. Wholesale Level TO System Roles.

1.4.1. **Program Manager (PM).** A PM is the System Program Director (SPD) or Product Group Manager (PGM) for a system or product line, and serves as the single-face-to-the-user for the system or products. PMs are responsible to their customers for all aspects of the planning, development, sustainment, and evolution of the products they acquire and support. PMs are responsible for program performance and overall health of the product.

1.4.1.1. The responsible PM or Supply Chain Manager (SCM – see below) will appoint personnel to manage TOs according to AFI 21-303, 00-5-series TOs and this manual. Authorized personnel will be shown in the JCALS/ETIMS Index Record for each TO.

1.4.1.2. PMs managing aircraft programs will appoint Flight Manual Managers (FMM) to perform similar functions for flight manual TOs, IAW AFI 11-215, *Flight Manuals Program*.

1.4.2. **Supply Chain Manager (SCM).** Designated individual(s) at an Air Logistics Center 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 (including TOs) to support PMs. SCM functions are combined with PM functions in this manual.

1.4.3. **Chief Engineer.** The Chief Engineer (or his designee) is responsible for approving the technical content of all TOs, unless he delegates this authority in writing IAW AFPD 63-12, *Assurance of Operational Safety, Suitability & Effectiveness* and AFI 63-1201, *Operational Safety, Suitability and Effectiveness (OSS&E)*. Changes to technical data for end items and commodities must be coordinated with the single managers/chief engineers of all weapons systems that they will be/are used on prior to issuing any changes, unless the authority has been delegated in writing to the PM/SCM owning the TO.

1.4.4. **TO Manager.** The TO Manager is responsible for managing some or all of the TOs for a specific military system or commodity program. Management responsibilities include acquisition, sustainment, format, publishing, storage and distribution of TOs and related technical data in accordance with AFPD 21-3, AFI 21-303, and 00-5-series TOs. When acquisition is being performed at a product center, and sustainment will be managed at an ALC, the PM will ensure TO logistics supportability issues are coordinated with the candidate ALC TO Manager to assure compliance with applicable technical data guidance. TO Managers will:

1.4.4.1. Manage/assist with the acquisition and sustainment of TOs to support PM-managed systems and end items.

1.4.4.2. Manage the formatting, publication and distribution of assigned TOs.

1.4.4.3. Ensure proper Distribution Statements (AFI 61-204, *Disseminating Scientific and Technical Information*), are applied to the title pages of all assigned TO-numbered technical manuals and related data, and both the statement code (A-F or X) and primary reason are reflected in the index record for the TOs. Ensure TOs authorized for public release have been assigned a case number by the local Public Affairs (PA) office.

1.4.4.4. Deliver copies of preliminary data to verifying units no later than 30-days prior to the scheduled verification or in-process review.

1.4.4.5. In conjunction with the using command, 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 (JCALS, AFTO Information Management Tools (IMT) 22, **Technical Manual (TM) Change Recommendation and Reply** or AF IMTs 847, **Recommendation for Change of Publication**) received since the last review.

1.4.4.6. In conjunction with using MAJCOMs, establish and maintain DMS Address Lists (AL) or Personal Distribution Lists (PDL) for Interim TO (ITO) and Rapid Action Change (RAC) message distribution in accordance with AFI 33-119, *Air Force Messaging*, AFMCI 21-302, *Processing Interim Technical Orders and Rapid Action Changes (RAC)* and applicable MAJCOM directives. Each Using Command will assist the TO Program Manager with identification of the appropriate addressees within that command, IAW TO 00-5-1. ALs established solely for distribution of ITOs shall be maintained by the TO Manager. OC-ALC/LGLUB (DMS address ou:ORGANIZATIONS,1:TINKER AFB OK,ou:OC-ALC(UC), ou:LGLU(UC)), TM Account F*10SJ, will be an addressee in each AL or PDL notification.

1.4.5. **Technical Content Manager (TCM).** The 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 an PM-designated logistician or prime contractor, assisted by an Integrated Product Team (IPT) of engineers, Equipment Specialists (ES) and users. The TCM role for operational equipment is usually performed by the ES responsible for the equipment supported by the TO. TCMs are not generally responsible for style and format or other non-technical aspects of manuals. TCMs will:

1.4.5.1. Manage the content of assigned TOs, and apply the most appropriate Distribution Statement to control the content's dissemination.

1.4.5.2. Approve release of assigned limited distribution TOs to personnel and organizations over and above those authorized by the Distribution Statement.

1.4.5.3. Evaluate Recommended Changes (RCs) for assigned TOs.

1.4.5.4. Generate updates to assigned TOs.

1.4.5.5. Perform currency reviews on unclassified TOs which have not been changed for five years, and on classified TOs annually. The JCALS Perform Post-Publication Review function provides search capability to identify TOs scheduled for various types of review, and also provides a report of review results.

1.4.5.6. Determine if Service Bulletins, Operations Manual Bulletins, 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).

1.4.6. **Flight Manual Manager (FMM).** The individual responsible for managing the technical content and format of assigned FMP publications. The Flight Manual Manager acts as the Technical Content Manager and may also act as the TO Manager for Flight Manual TO publications. This includes initial acquisition and verification, maintenance, and periodic reviews. See AFI 11-215.

1.4.7. **AFMETCAL Det 1, WR-ALC.** AFMETCAL provides an Air Force member to the DoD Joint Technical Coordination Group for Calibration and Measurement Technology (JTCG-CMT), IAW AFI 21-113, *Air Force Metrology And Calibration (AFMETCAL) Program*. AFMETCAL also provides support to sub-group activities according to the Joint Program Operational Plan. AFMETCAL will publish and distribute Calibration TOs consistent with the mission and Joint Program Operational Plan. This may include use of an AFMETCAL information management system to manage, index, and distribute electronic versions of Air Force Calibration Technical Orders.

1.4.8. **JCALS Subject Matter Expert (SME).** The JCALS SME is a focal point available to assist users with JCALS implementation at a site where JCALS is installed and operational. The site JCALS SME will:

1.4.8.1. Assist site JCALS users to become proficient and productive with JCALS system tools to accomplish assigned TO System duties.

1.4.8.2. Guide and direct personnel to obtain and complete necessary JCALS system training.

1.4.8.3. Assist users with preparation of DD Forms 2875, **System Authorization Access Request (SAAR)**. Review and approve DD Forms 2875 requesting JCALS access and ensure only required JCALS roles and privileges are requested, consistent with AF policy. Forward approved forms to the Systems Administrator (SA).

1.4.8.4. Assist JCALS SA with evaluation of JCALS system performance, JCALS Incident Reports and to establish JCALS user organization structure and assign system roles. Assist JCALS SA and JCALS user personnel with installation and set up of JCALS system software and necessary system workflow templates to complete assigned duties.

1.4.8.5. Assist new users to build and install JCALS system workflow templates needed in the organization to accomplish assigned duties.

1.4.9. **ETIMS Functional Administrator (FA).** The ETIMS FA will perform many of the same functions for ETIMS as the JCALS SME does for JCALS (see AFI 21-303 and TO 00-5-1).

1.5. Information Security Requirements.

1.5.1. **General.** The following procedures apply to classified and unclassified TOs containing data whose distribution must be controlled. TO Managers and TCMs/Flight Manual Managers will:

1.5.1.1. 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 the TO is marked IAW DOD 5200.1-R, *DoD*

Information Security Program Regulation, and AFI 31-401, *Information Security Program Management*.

1.5.1.2. Issue classified technical data in supplemental manuals 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.

1.5.1.3. Use the applicable SCG as authority to classify TO data needing security protection. Review contractor-prepared classified Preliminary TOs (PTOs) to ensure they annotate the proper security markings according to DOD 5200.1-R and AFI 31-401. Advise the contractor of any required revisions to the PTOs or DD Form 254.

1.5.1.4. Review classified technical data during every TO update action or at least annually for possible classification downgrading according to the applicable SCG or DOD 5200.1-R (TO 00-5-1). JCALS does not furnish automatic review notices, but does provide the capability for the TO Manager/TCM to set up a periodic scheduled task for a Post Pub Review. The task schedule should be set for less than one year to allow time to complete the review within the required one-year period.

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

1.5.1.6. Issue unclassified updates to Classified TOs whenever possible. When indexing unclassified updates to a classified TO, TO Managers must first index the updates in JCALS, which will assign the parent TO classification to the update. Then the TO Manager must change the classification <u>of the unclassified update only</u> to “Unclassified,” ensure the JCALS indexing fields "PUB TITLE SECURITY" and "PUB SECURITY" indicate “Unclassified,” and verify that both fields match. ***NOTE:*** If the Security fields do not match, the JCALS index record will default to the parent TO classification, which will cause misidentification of an unclassified change as Classified.

1.5.2. **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/LGYE 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.

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

1.5.2.2. The TCM issues an Emergency Interim Operational Supplement (IOS) or RAC IAW AFMCI 21-302 to upgrade the affected TO, and notifies the responsible TO Manager to update the TO index entry.

1.5.2.3. The TO Manager notifies the warehouse responsible for the TO of classification upgrades. The warehouse will re-mark existing copies in stock, transfer them to a classified storage area, and update the stock location in JCALS.

1.5.3. **Classification Downgrade/Declassification.** The TO Manager will issue an update directing the appropriate downgrade or declassification actions. The warehouse will remark all stock of downgraded or declassified TOs before making further distribution. Transfer declassified TOs to unclassified TO storage and update the location in JCALS. ***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.

1.5.4. **Distribution Limitations.** Distribution Statements specified in DODD 5230.24, *Distribution Statements on Technical Documents*, shall be used IAW AFI 61-204 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. (Primary distribution is made by the Controlling [originating] DoD Office.) A distribution statement marking is distinct from and in addition to a security classification marking assigned in accordance with DOD 5200.1-R. Air Force personnel who originate or are responsible for technical documents must follow guidance contained in AFI 61-204, summarized below:

NOTE: Do not confuse the distribution statements from AFI 61-204 and required on TOs, with those described in AFI 33-360V1, *Air Force Content Management Program-Publications*, required on standard, non-technical publications. In particular, "Functional (F) Distribution" as used in AFI 33-360V1 does not mean that distribution of the document is restricted.

1.5.4.1. Distribution Statements. Mark interim and formal TOs, TCTOs, PTOs, source data, and other technical data (see definitions) with proper distribution statements before disseminating them. Apply the single most appropriate distribution statement (A, B, C, D, E, F or X). Use both the letter designator and the verbiage from AFI 61-204, and fill in the reason, the date of determination, and the controlling DoD office (normally the TO Manager office symbol). Other changes to these distribution statements are prohibited.

1.5.4.1.1. If the reason is "Proprietary Data," add a title page statement of government rights to disseminate, use, copy, etc., the data (see TO 00-5-3, *AF Technical Manual Acquisition Procedures*). When creating a technical document containing company proprietary data, in addition to distribution statement (B or E) (reference AFI 61-204), mark each page that contains proprietary information with the word "proprietary" and the name of the company (e.g., "Boeing Proprietary").

1.5.4.1.2. Publish supplements using the distribution statement applicable to supplement contents, not necessarily the parent TO's 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.

1.5.4.1.3. Distribution Statement "A" TOs must be reviewed and assigned a case number by the local PA office prior to release. Add the following statement immediately below the distribution statement wording: "PA Case Number _____. Submit recommended changes or problems with this Technical Order to (TO Manager's office symbol)."

1.5.4.1.4. Do not use the "For Official Use Only (FOUO)" code in JCALS TO Index records, but select the Limited Distribution statement code assigned to the TO.

1.5.4.2. 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. The abbreviated statement can only be used on documents without sufficient title page/label space to include the full statement, such as CD-ROM labels, reduced size TOs, etc.:

"***WARNING:*** This document contains technical data whose export is restricted by the Arms Export Control Act (22 U.S.C. 2751, et seq.) or the Export Administration Act of 1979, as amended (50 U.S.C. 2401, et seq.). Violating these export laws subject you to severe criminal penalties. Disseminate in accordance with the provisions of DODD 5230.25".

Or

"***WARNING:*** Export Controlled".

1.5.4.3. Disclosure Notice. Apply a disclosure notice to all classified and unclassified TOs approved for release to a foreign government, except those assigned Distribution Statement A (MIL-STD-38784, *Standard Practice for Manuals, Technical: General Style and Format Requirements*). The disclosure notice will be on all classified and unclassified nuclear TOs.

1.5.4.4. 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.

1.5.5. **Digital TO Security.** Security issues and procedures are covered in DOD 5200.1-R, AFI31-401, AFI 33-129, *Web Management and Internet Use*, and AFI 61-204 among others. User access to digital TO files and notification methods must provide adequate security for classified and limited-distribution TO files. Classified TO files must be encrypted using a National Security Agency (NSA)-approved encryption algorithm, while limited-distribution files require a National Institute for Standards and Technology (NIST)-approved encryption system prior to being hosted on servers. Except for distribution statement "A" documents, TO files must be hosted on a secure (encrypted) Internet HTTPS or FTP server with user name and password access control (AFI 33-129). ***NOTE:*** For security reasons, Simple Mail Transfer Protocol (SMTP) e-mail is not an acceptable vehicle for transmitting limited-distribution Interim TOs, RACs or notification messages (**paragraphs 2.5.3.3** & **2.7.2**).

1.5.5.1. 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 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 Network Control Center.

1.5.5.2. Password Protection. There are two levels of password protection available; on the server and on individual files. All secure servers must be protected by user name/password access controls. Individual TO files may be password protected as well if not all persons with access to the server need access to all the files.

1.5.5.2.1. The 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 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.

1.5.5.2.2. The TO Manager or TCM assigns passwords to protect TO and RAC files from inadvertent changes. ***EXAMPLE:*** To protect an Adobe® Portable Document Format™ (PDF) file using Adobe® Acrobat Exchange™ 5.0, use the following procedures:

- Go to "File" and click on "Document Security" or press Control+Alt+S. The Security dialog box opens. This box provides options of "No Security," "Acrobat Standard Security" and "Acrobat Self-Sign Security;" and provides a button to "Display Settings".
- When "Acrobat Self-Sign Security" is selected, a Self-Sign Security Log-In box opens, where you can set up or select an existing User Profile and User Password.
- When "Acrobat Standard Security" is selected, a Standard Security dialog box opens. There is "Specify Password" section with entries for "User Password" and "Master Password." While the document may be opened using either password, the owner password temporarily disables the security settings.
- In the Standard Security box "Permissions" section, you can select 40-bit or 128-bit encryption.
- When 40-bit encryption is selected, you can check security setting boxes to specify "No Printing" (not usually used for this application – TODOs may have to print the RAC for paper customers), "No Changing the Document" (no changes of any kind, including creating form fields, allowed), "No Content Copying or Extraction, Disable Accessibility" and "No Adding or Changing Comments and Form Fields" (allows filling in form fields, but not adding or changing the fields).
- When 128-bit encryption is selected, different security boxes are available: "Enable Content Access for the Visually Impaired" (required to support the Accessibility feature) and "Allow Content Copying and Extraction;" and two menus, "Changes Allowed" (five choices) and "Printing" (three choices).
- After selections are made, click "OK" and retype the passwords in the confirmation box, then click "Close" in the Document Security dialog box. ***ATTENTION:*** Passwords are not embedded in the file. If the owner forgets the passwords to a document, the file cannot be recovered. Store passwords in a separate secure location to prevent loss. ***NOTE:*** Instructions on protecting and

encrypting PDF documents in other Acrobat versions are in the Acrobat Help function. Word© files can be protected using the "Tools," "Protect Document" function. Other word processing or publishing applications have similar features for protecting documents created using the application.

1.5.6. **JCALS "Proponent (Sponsor) Approval" TOs.** The TO Manager will use the JCALS "Add a Pub Stock Number" screen to set the proponent (sponsor) approval flag to "Yes" on all TOs for which initial subscription and distribution requests must be reviewed and approved prior to issue. These sponsor approval required TOs include Classified TOs; TOs with no distribution statements or distribution statements "F" and "X;" reason codes "Critical Technology," "Direct Military Support" or "Proprietary;" Export Controlled TOs (DODD 5230.24 & AFI 61-204); specialized publications (e.g., JNWPS, EOD, etc.); and commercial manual TOs with limited reproduction/distribution rights. The TO Manager will determine the need to screen other unclassified TOs. Orders for TO quantities in excess of the "Maximum Issue Quantity" (MIQ) will also require proponent approval.

1.6. Environmental, Safety and Occupational Health (ESOH) Requirements.

1.6.1. **General.** Safety and environmental 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 IMTs 202, **Nonconforming Technical Assistance Request and Reply**, and AFMC IMTs 252, **T.O. Publication Change Request**, etc. Engineers or ESs responsible for TO content will coordinate any new or revised procedures in non-exempt TOs (see bullets below) 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., Center Safety, Bioenvironmental Engineering [BEE], Environmental Management).

1.6.1.1. Center Safety offices must approve new or revised technical procedures affecting the safe operation and maintenance of systems and equipment (AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*). This requirement applies to Ground, Flight, Missile and Explosives safety – for Nuclear Surety, see **paragraph 1.7**.

1.6.1.2. Center Bioenvironmental 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 Center BEE offices may request consultative assistance from: (1) the AF Institute of Operational Health (AFIOH), Brooks City-Base, (DSN 240-8171), (2) the 311th HSW/XPRA - Human Systems Integration office, Brooks City-Base, (DSN 240-4428), and/or (3) HQ AFMC/SGPE - Command Bioenvironmental Engineer (DSN: 986-3634).

1.6.2. **Exemptions.** The following types of TO/TO updates are exempt from ESOH review:

Table 1.1. Exemptions.

Series or Category	TO 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	Air Refueling Procedures Manuals
Category 1, -5 Series	Basic Weight Checklist and Loading Data Manuals
Category 1, -6CF-1 Series	Acceptance and Functional Check Flight Manuals
Category 1, -34 Series	Conventional Munitions Delivery Manuals
(Various)	In-Flight Maintenance Manuals
Category 60	EOD

Table 1.2. Update Types.

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

1.6.3. **Special Review Lists.** The Center Safety Office will coordinate with local program TCMs to identify additional TOs (over and above the ones listed below) 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 Air Force Institute of Operational Health, (AFIOH), Bldg 180, Brooks City-Base TX 78235, (**www.brooks.af.mil/afioh**) for review and coordination:

TO Nbr	Title	Office
1-1-3	Inspection and Repair of Aircraft Integral Tanks and Fuel Cells	AFIOH/RS
1-1-4	Exterior Finishes, Insignia and Markings Applicable to USAF Aircraft	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	Avionic Cleaning and Corrosion Prevention/Control	AFIOH/RS

TO Nbr	Title	Office
1-1-691	Aircraft Weapons Systems--Cleaning and Corrosion Control	AFIOH/RS
33B-1-1, Section 9	Non-Destructive Inspection Methods, Radiation Protection	AFIOH/SDR

1.7. Nuclear Surety Requirements:

1.7.1. **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 [MNCL], **https://wwwmil.nwd.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 to ensure compliance with nuclear Weapon System Safety Rules (WSSR); requirements in 91-100 series 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.

1.7.2. **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. Review safety rules and record review accomplishment as required by AFI 91-102_AFMCSup1, *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).

1.7.3. **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, *Managing Radioactive Materials in the US Air Force*.

1.8. Aircraft Emergency Rescue Data. TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services)*, describes aircraft emergency procedures that must be used by military and civilian fire departments that might have to respond to military aircraft accidents. (The TO title was formerly "*Aircraft Emergency Rescue Information (Fire Protection).*") The TO is available on the Internet at **http://www.robins.af.mil/logistics/lgeda/documents/to00-105E-9.htm**. Coordinate all TO changes that affect the following aircraft subject areas with the Air Force Civil Engineering Support Agency (AFCESA)/CEXF, DSN 523-6150:

- 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.
- Cabin arrangements and personnel locations, or number of personnel on board.

1.9. Budgeting and Funding for TOs (AFI 65-601V1, Budget Guidance and Procedures):

1.9.1. **TO Budgeting and Funding.** Budgeting and funding for TOs will be in accordance with AFI 65-601, Vol 1, Chapter 4, Section E. See also the AFMC Financial Management Reference System (FMRS) homepage at **https://www.afmc-mil.wpafb.af.mil/HQ-AFMC/FM/FMRS/index.htm**.

1.9.1.1. PMs/TO Managers will use the Air Force Knowledge Management (AFKM) Comprehensive Air Force T O Plan (CAFT O P) Community of Practice (CoP) (**https://afkm.wpafb.af.mil/ASPs/CoP/EntryCoP.asp?Filter=OO-EN-MC-TO**) to access the AFMC Financial Management Handbook, Chapter 85, *The Technical Order Requirements Process*. Use Chapter 85 procedures to develop a weapon system/commodity-specific Comprehensive Air Force TO Plan (CAFTOP) Annex for submission to the appropriate Lead Command (AFPD 10-9, *Lead Operating Command Weapon Systems Management*, or AFI 10-901, *Lead Operating Command—Communications and Information Systems Management*) in time to support a budget submission for the current Future Years Defense Plan (FYDP).

1.9.1.2. 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.

1.9.2. **Modifications.** 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) & CAFTOP Annex submitted to the Lead Command for funding. However, TCTO and related new TOs or TO Updates are funded by the specific modification program. ***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.

1.9.2.1. The TO Manager 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.

1.9.2.2. The TO Manager annotates the fund citation or modification number in the print package submitted to the local Defense Automated Printing Service (DAPS). If the

package also contains non-modification-related changes, the annotation will show the related fund citations and the percentage chargeable to each.

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

1.9.3. **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 PGM provides the TO Manager with a printout of the replacement item cost computation. The TO Manager annotates the total dollar requirement for the maintenance of commodity TOs resulting from the acquisition of replacement spare items. The TCM will assist the TO Manager with computing the impact of spares replenishment on weapon systems TOs based on history and known future acquisitions. The TO Manager provides budget requirements by weapon system.

1.9.4. **Calibration TOs.** The Air Force Metrology and Calibration (AFMETCAL) Program, Detachment 1 TO Management Office, ML, submits and manages budget requirements for calibration TOs and updates.

Chapter 2

STANDARD TO PROCEDURES

2.1. TO Management Procedures. The PM/SCM will assign a TO Manager to be responsible for all aspects of TO acquisition and sustainment. The PM/SCM will also assign responsibility for the content of applicable TOs to a TCM (usually the Equipment Specialist [ES] responsible for the equipment being supported by the TOs). For Flight Manual Program (FMP) publications, the TCM function is assigned to a Flight Manual Manager (FMM), who may also perform the TO Manager functions in some cases. The functions (but not the responsibilities) may be delegated to distribution, editorial, and other specialists as required. Chief Engineers or their delegated representatives will coordinate and approve all TO updates which could affect system or commodity Operational Safety, Suitability & Effectiveness (OSS&E) certification (AFI 63-1201). TO Managers will:

2.1.1. **Manage TO Index information.** TO configuration and management information for all TOs/ TO increments will be properly entered into the JCALS TM Index. Digital file versions of formal TOs will be catalogued into an official Air Force repository accessible by managers and users. These digital TO files may also be hosted on LAN file servers accessible to users (**paragraph 1.5.5**). Configuration of digital TO files available to users must always present the same configuration as the physically distributed version (paper, CD ROM, etc.) of the TO, and the JCALS index record must accurately reflect data on the distributed versions.

2.1.2. **Monitor Warehouse Inventories.** Monitor and control TO warehouse inventories through the JCALS System. Develop print/reproduction orders when required, submit paper and digital reproduction masters to DAPS, and monitor expenditure of printing funds. Update the JCALS inventory record of the TO or TCTO when stock is received using the Due-In Receipt function (for Initial Distribution [ID]) or the "Adjust TM Stock Item Quantities" function for replenishment stock. Not applicable when using Print on Demand or Just-in-Time printing instead of physical stockage.

2.1.3. **Request Shipping Label Decks for Initial Distribution (ID) and Requisition (RQN) Shipments.** Use JCALS or another Air Force-sanctioned system to produce ID and RQN shipping labels when required to make initial distribution of a TO/TO Update or to fill one-time requisitions. When the PTOWS or other warehousing/shipping label system will be used, produce JCALS ID and RQN label files for use in printing labels. See **paragraph 2.14**.

2.1.4. **Establish Shipping Priorities.** The TO Manager will direct the TO Warehouse and commercial printers to use classified mailing procedures (DOD 5200.1-R) when distributing classified TOs. Direct use of first-class mail for all emergency requisitions, all distribution of Flight Manual Program (FMP) publications and for ID shipments of TOs and TCTOs to overseas destinations.

2.1.5. **Correct TO Configuration and Management Information Errors.** TO Managers will verify and correct TM Index record errors within 30 calendar days after receiving notification of the error. All JCALS users will correct errors in the data they are authorized to modify, or will contact the responsible data owner to make corrections. The AF TO

Catalog application provides DoD users within the ".mil" domain the capability to report such TM Index data quality errors.

2.1.6. **Establish TO Stock Management Levels.** TO warehouse stock management information is established using the JCALS Publication Stock Number (PSN) functions (see TO 00-5-1 for PSN format). TO Managers will use the JCALS "Manage TM Index, Add Pub Stock Number" screen to:

2.1.6.1. Establish the Reorder Point Quantity ("Reorder Pt. Qty") at a level that allows sufficient time ("Months Lead Time" - normally 60 to 90 days) to receive additional stock without generation of backorders.

2.1.6.2. Establish Maximum Issue Quantities (MIQ) at a level that will be issued to a TODO without additional justification. Requests for a higher quantity will automatically be cancelled, unless Advice Code "2L" is included in the order. The "2L" Advice Code will allow the orders to process, but will require proponent approval (**paragraph 2.1.8**).

2.1.6.3. Establish a Total Minimum Reserve ("Total Min. Reserve") to provide sufficient copies for emergency single issue during out-of-stock periods (depending on reprint turnaround time and TO demand). The TO proponent organization must always retain at least one copy of all active paper TOs and increments for use in reprinting, compiling assembly sheets, etc., until there is a digital reproduction master.

2.1.6.4. TO Reorder Pt. Qty does not apply to TOs with an available digital reproduction master being reproduced based on Just-In-Time (JIT) stock levels and/or using Print on Demand (POD) management. Maximum Issue Quantities do not apply to TOs accessed electronically.

2.1.6.5. TO media code is included in a JCALS PSN based upon the media that is stocked for the TO. PSNs with Digital On Line (11) or printed copy (P) media codes will not carry stock information in JCALS. Users will establish subscriptions for one copy of each digital-only TO required, but will not be able to requisition TO PSNs that include media codes 11 or P.

2.1.7. **Manage Backorders.** Requisitions are backordered when the stock balance reaches the Reorder Pt. Qty, unless the TO is being provided through POD. JCALS generates a "BB" status code (TO 00-5-1) when requisitions submitted from the ATOMS or on line using JCALS order Publication screen are backordered. JCALS will send an internal "Reorder Notification" message to the TO/Distribution Manager when stock is depleted below the Reorder Pt. Qty. The manager must generate a "Backorder Report by Publication" to determine backorder levels. The TO Manager will:

2.1.7.1. Clear the pipeline of requisitions and request the warehouse to perform a physical inventory of remaining stock. Coordinate with all affected agencies to determine future needs for the TO and if there are other special conditions (e.g., an in-work revision). Initiate reprint action as required.

2.1.7.2. Expedite stock replenishment actions to avoid accumulation of backorders. Give priority to reprint action on TOs having backorders. Follow-up on reprint action when backorders are 30-60 days old.

2.1.7.3. When TCTOs are within 150 days of rescission, fill existing backorders for these TCTOs using any Reserve Stock available. Do ***not*** reprint the TCTOs to fill backorders.

2.1.8. **Screen TO Requisitions Requiring "Proponent (sponsor) Approval" (paragraph 1.5.6.).** The responsible TO Manager ("proponent or sponsor") will screen and approve new subscriptions and requisitions in the following instances: (a) the TO is "flagged" for Proponent Approval Required in the PSN screen of the JCALS index record for the TO (indicated separately for TCTO Series Headers since Series Headers do not have PSNs); (b) the TO is classified; (c) requisition quantity exceeds the Maximum Issue Quantity (MIQ) and Advice Code 2L is included in the requisition transaction; or (d) the request came from an account whose TM Account access codes do not equal or exceed the TO publication restriction code assigned to the TO. The TO Manager will obtain concurrence of the Technical Content Manager (TCM) when necessary, before approving the subscription/requisition.

2.1.8.1. Review Label Decks. TO Managers must perform appropriate screening and management control of label decks for classified or restricted TOs, using the "ID Report by Publication," before the deck is generated and sent directly to the distribution source, government or contractor, authorizing shipment. Withdraw labels for TODO TM Accounts not authorized to receive the TO, or cancel any unauthorized requisitions using the "Manage Initial Distribution for a TM; Specify Initial Distribution by Account Profile" screen, or if only a few accounts need to be deleted use the "Manage Initial Distribution for a TM; Specify Account ID for a Publication." TO Managers will withdraw ID shipping labels for Security Assistance Program (SAP) and FMS requisitions (D*xxxx TM Account codes) from label decks when printing contractors will make ID but cannot provide shipment tracking information. The TO warehouse will make SAP/FMS distribution in these cases to ensure shipments are properly tracked.

2.1.8.2. Action to approve an ATOMS requisition for TO requiring "Proponent (sponsor) Approval" will be withheld until receipt of justification letter/e-mail from the requesting TODO TM Account. Justification may be included in the remarks block or the comments section of requisitions submitted using the JCALS Order Publication screen. For requisitions submitted using ATOMS, the TO Manager will disapprove the request if a separate letter of justification is not received within 30 days of receipt of the JCALS Sponsor Approval workflow job. (ATOMS users will be reminded to submit a separate e-mail letter of justification when the TO Request Status is 1S, "Suspended for Sponsor Approval.") When requests are disapproved, JCALS will provide a status report giving the reason for the disapproval. JCALS Sponsor Approval workflow jobs are viewable by the submitting TODO if they are a JCALS user.

2.1.9. **Manage Outside Agency Requests for Air Force TOs.** Process requisitions from other U.S. government agencies, contractors and civilians in accordance with TO 00-5-1 and AFJI 21-301, *Interservicing of Technical Manuals and Related Technology*. Process Freedom of Information Act (FOIA) requests for TO data strictly according to DOD 5400.7-R, AF supplement 1, *DoD Freedom of Information Act Program*, and TO 00-5-1.

2.1.9.1. TOs with Distribution Limitation codes "B" through "X" may be exempt from release under FOIA, according to DODD 5230.25, DOD 5400.7-R/AF Sup 1, and AFI 61-204.

2.1.9.2. 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 TO Manager and TCM). If the responsible office cannot be identified, refer requests for TO release to HQ AFMC/LGYE, e-mail: **AF.TOPP@wpafb.af.mil**, to determine the proper release authority.

2.1.9.3. If the TO or other technical data is not marked, it will handled as Distribution Statement "F," and will be referred to the responsible TCM for assignment of an appropriate Distribution Statement prior to being issued.

2.1.10. **Publish TOs on Digital Media.** The TO Manager for the collection of TOs published on CD-ROM/DVD, with coordination from the PM and Lead Command, is responsible for CD-ROM/ DVD format, numbering, labeling, publication, packaging and distribution. Funding for CD-ROMs/ DVDs is managed the same as funding for individual TOs, through the CAFTOP/TOFB process. The content of TOs on a CD-ROM/DVD must be identical to that of the individual (stand-alone) paper TOs. ***NOTE:*** The same general rules applicable to CD-ROMs used to publish and distribute TOs will apply to Digital Versatile Discs (DVD) used for TO publication/distribution, pending development of a publication specifically addressing DVDs. In this manual, any reference to CD-ROM will also include DVD.

2.1.10.1. The TCM for the CD/DVD, in coordination with the TO Manager and Using Command, is responsible for determining which TO files will be included on the CD/DVD, and for developing the standard files required by MIL-STD-38784, MIL-HDBK-9660, *DoD Produced CD-ROM Products*, and this manual (**paragraph 2.5.5**). Classified and unclassified TOs will not be mixed.

2.1.10.2. The TO Manager will determine routine update intervals, in conjunction with the Lead Command, and the TCMs of the TOs included on the CD/DVD.

2.1.11. **Publish TOs on the Internet (World Wide Web – WWW).** TO listings on the 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 TO Manager or TCM information, is optional. Note the server URL in the Catalog Notes field of the JCALS TM Index record for the TO and provide the URL to the Material Systems Group Technical Data Division (MSG/MMF), e-mail: **topp@wpafb.af.mil**, for posting on the TO System Information Page, so users have a single point for locating Internet TO sites. Ensure the host server has appropriate access controls to protect limited distribution TOs and data (see **1.5.5**). Users may require username and password to connect to the server or to download the TO if the distribution limitation statement for the TO is other than "A".

2.1.12. **Ensure Configuration Control of Multi-Media TOs.** When TOs are published in more than one medium (e.g., in paper and on CD-ROM), information about the configuration of the TO (TO Index data) and all formats must reflect the same content configuration (see TO 00-5-1).

2.2. TO Numbering and Indexing.

2.2.1. **On-Line JCALS TO Numbering Procedures.** TO Managers are responsible for requesting numbers for and indexing assigned TOs, using the JCALS "Manage TM

Numbering; Assign a Publication Number" process, the procedures in the JCALS Desktop Instructions (DI), and the guidance in TO 00-5-18, *USAF Technical Order Numbering System*. TCTO series header numbers are assigned according to TOs 00-5-15, *Air Force Time Compliance Technical Order System*, and 00-5-18.

2.2.1.1. Before a number is requested for TOs covering specific equipment and end items (except for complete aircraft and missiles), the TO Manager, in conjunction with the TCM, must ensure that data on the equipment covered by the TO has been entered into JCALS (see **Attachment 2**). Use either the TO Catalog "TO-Equipment Cross Reference" function or the JCALS "Generate TM Index Report; Interservice Technical Information Exchange System (ITIES) Cross-Reference Report" function to determine if the equipment is already listed in JCALS. If the equipment is not listed, use the "Perform Acquisition; Manage Item Data" process screens to enter data about a new equipment item. The data is used to set up and change the TO number to equipment number cross-reference data in the TO Catalog.

2.2.1.2. TO Managers will develop TO titles in accordance with **Attachment 3**. An accurate title is an essential element in determining the correct TO number.

2.2.1.3. All numbering requests must be reviewed and approved by the numbering specialist responsible for specific categories and types of TOs: for most O&M, general, methods & procedures and time compliance TOs, this is the USAF Numbering Specialist, OC-ALC/LGLUB; for Precision Measuring Equipment (PME), nuclear weapon and EOD TOs, see **paragraph 2.2.1.6**. All requests for publication of new TOs in Category 00 must first be approved by HQ AFMC/ LGYE (TO 00-5-18).

2.2.1.4. Once the USAF TO Numbering Specialist (OC-ALC/LGLUB) reviews and approves the requested TO number, additional information about the TO may be entered into the newly established JCALS TM Index record for the TO. The JCALS DI lists required information that must be added for a new TO Number. The TO Manager must place the TO Archive (OC-ALC/TILUB, TM Account F*10SJ) on ID for all new TO numbers assigned.

2.2.1.5. TO Managers will request OC-ALC/LGLUB to establish a TCTO series header for an aircraft, missile or engine category when a new TO series is established. 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, JCALS will automatically number individual TCTOs in the series. Although JCALS provides the capability to automatically assign TCTO Data Codes when the Index record for a new TCTO is established, the capability allows duplicate Data Code numbers to be assigned across the Air Force JCALS enterprise. Therefore, when a JCALS record for a new TCTO is established, the JCALS-assigned data code must be replaced by the next sequential number from a block of data codes provided by OC-ALC/LGLUB. Contact OC-ALC/LGLUB directly if data codes are needed.

2.2.1.6. Air Force Metrology & Calibration (AFMETCAL) Det 1/ML, numbers calibration TOs for Test Measurement and Diagnostic Equipment (TMDE); the Nuclear

Weapon Logistics Division, AAC/NWLT numbers nuclear TOs listed in TO index 0-1-11N-C; and Det 63 AAC/WMO numbers joint-service nonnuclear EOD TOs.

2.2.2. **Off-Line JCALS TO Numbering Procedures.** TO Managers and contractors who do not have on-line access to JCALS will complete AFMC IMTs 203, **Technical Order Numbering, Indexing, and Control Record** and 204, **Technical Order Numbering, Indexing, and Control Record *(Continuation)*** for numbering actions, as follows:

2.2.2.1. AFMC IMT 203. This IMT is used to request assignment of TO numbers, to submit TO index source data, to set up the TO index record, and to update, change, or cancel these records when appropriate. The IMT is submitted to OC-ALC/LGLUB (or one of the other numbering OPRs, **paragraph 2.2.1.6**) for JCALS TO number assignment.

2.2.2.2. AFMC IMT 204. This IMT is used to provide data about the supported weapon system or equipment for creation of a JCALS record, or to update TO number to equipment number cross-reference data for all equipment covered by a TO (including non-Air Force equipment). The AFMC IMT 204 is submitted concurrently with AFMC IMTs 203 for initial TO number assignment requests, to the ES responsible for the supported equipment and having JCALS access. Equipment data is entered using the JCALS "Perform Acquisition; Manage Item Data" process. The TO-Equipment number cross-reference data reduces the likelihood of procuring duplicate TOs. The AFMC IMT 204 is not required for complete aircraft and missiles, or for TOs that are not equipment-related (such as most MPTOs) and TCTOs. CD-ROMs/DVDs and other media containing multiple TO files are also exempt unless the medium covers only one piece of equipment.

2.2.2.3. Data in blocks 1 through 17 of AFMC IMT 203 are required as source data for a new TO or TCTO. Only blocks 1, 2, 11, 14, 15 and 16 are required to establish a TCTO series. The Next Higher Assembly (NHA—block 4) and National Stock Class (NSC—block 7) for the equipment covered by the TO are mandatory for TO number assignment (except for weapon system or engine TOs, or MPTOs). If the equipment has been assigned a Materiel Management Aggregation Code (MMAC), the code should be included with the NSC in block 7. The identity of the designated equipment repair facility (if known) should be shown on the AFMC IMT 203 in block 17, "Remarks." The nomenclature, NSC and MMAC must be the same on both IMTs. Requests must be submitted as soon as possible, to permit TO indexing and requirements determination. If immediate numbering is urgent, the PM may contact the OC-ALC/LGLU Branch Chief with a telephone request. The request must justify use of emergency procedures and provide complete AFMC IMTs 203 and 204 data elements.

2.2.3. **Assigning Numbers.** OC-ALC/LGLUB (or one of the other numbering specialist organizations, **2.2.1.6**) will assign the TO number according to rules in TO 00-5-18. LGLUB returns a copy of the AFMC IMT 203 to the initiating TO Manager to provide status of the action requested and show the TO number assigned for new TOs.

2.2.4. **Renumbering Technical Orders.** The TO Manager may 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. Renumbering must be approved by OC-ALC/LGLUB just like original TO number assignment.

2.2.4.1. On-line TO Managers submit TO renumbering requests using the appropriate JCALS screens.

2.2.4.2. Off-line TO Managers complete and submit AFMC IMTs 203 and 204 as above to request TO renumbering, input new equipment numbers and related data under the new TO number, and provide justification for the action.

2.2.4.3. When LGLUB 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.

2.2.4.4. When published TOs are renumbered, JCALS will automatically convert all past revisions and changes to the new number, but each supplement is considered a separate TO number and must be individually renumbered.

2.2.4.5. After obtaining a new TO number, but prior to superseding the old number, the TO Manager must transfer TODO subscription requirements to the new TO number (using the JCALS Like Item ID screen).

2.2.4.6. When the TO is renumbered, the manager must enter a note about the replaced number in the JCALS index Catalog Notes field, and issue a TO Change with both the old and new numbers on the title page. The warehouse function must physically re-identify TO stocks to the new TO number and adjust records as appropriate. In either case, the replaced TO number can never be reused.

2.2.5. **Changes to Numbering Policy.** OC-ALC/LGLUB submits requests for changes to numbering policy to HQ AFMC/LGYE for approval. LGLUB provides information copies of the request to all ALCs and PCs for comments and concurrence.

2.2.6. **Indexing.** When OC-ALC/LGLUB approves a new TO number or a TM update is generated, the TO Manager will:

2.2.6.1. Complete JCALS TO Index information using the “Add Pub Stock Number” and “Update an Index Entry” screens. Improper or incomplete index data will prevent cataloguing the TO in the Reference Library, viewing TO index data in the AF TO Catalog application, subscribing to or requisitioning the TO using either JCALS or ATOMS, and printing distribution labels. See DI Table 2 for mandatory index entries. Additional mandatory entries are the assigned Distribution Statement Code (A through F or X) and primary Reason for the code assigned.

2.2.6.1.1. For Preliminary TOs (**paragraph 2.4**) and TO updates, publication (“PUB”) Basic, Revision or Change dates will be entered when the reproduction masters are sent for printing and distribution.

2.2.6.1.2. When indexing unclassified updates to a classified TO, TO Managers must first index the updates in JCALS, which will assign the parent TO classification to the update. Then the TO Manager must change the classification of the

unclassified update only to “Unclassified,” ensure the JCALS indexing fields "PUB TITLE SECURITY" and "PUB SECURITY" indicate “Unclassified,” and verify that both fields match. ***NOTE:*** If the Security fields do not match, the JCALS index record will default to the parent TO classification, which will cause misidentification of an unclassified change as Classified.

2.2.6.1.3. After completing the index update, verify that the Air Force TO Archive (formerly known as the “Repository”), OC-ALC/LGLUB, TODO Code 0086, TM Account F*10SJ, is on subscription for the basic TO/TCTO Header Series. If not, establish a subscription of one (1) copy for the Archive. When the TO is published in both digital and paper copies, send only the digital version to the Archive.

2.2.6.2. Review and index ITOs IAW AFMCI 21-302. Index Interim TOs (ITOs) upon transmittal of the message, using a PSN with media code “P” (Printed Copy). Interim TOs will be marked as available for published index but not available for distribution. This will ensure that users can see information about the ITO but cannot requisition it. Include the ITO message DTG or other identifying information and the TO numbers of any companion TCTOs in the Catalog Notes.

2.2.6.3. Supersede TOs and TO increments when replaced by a revision or new increment in the **same** TO number family. Supersede TOs when replaced by or incorporated into another TO in a **different** number family. ***NOTE:*** Add a “Catalog Note” to the record of any superseded TO replaced by a different TO, similar to “Replaced by TO XXX-XXX-XX.” Add a matching Catalog Note to the replacement TO record, such as “Formerly TO XXX-XXX-XX” or “Includes TOs XXX-XXX-XX.

2.2.6.4. Rescind TOs and TO increments when they are deleted without replacement. Rescind TCTOs when rescission dates are reached (see **2.11**). Rescind TCTO series headers when the entire TO series is deleted.

2.2.6.5. Perform warehouse inventory record and digital repository file maintenance as necessary.

2.2.7. **Indexing TOs Published on the Internet.** TO Managers and TCMs uploading digital TO files onto Web servers will provide the local System Administrator (SA) or Web Master with required TO file information (TO number, date, title, and Change number/date) for the server listing. Additional information, such as the TO Manager and TCM points of contact may also be listed.

2.2.7.1. For the initial publication on the Internet, the TO index record will be updated to add a PSN for the “digital on-line” version. The JCALS TO Index record, Catalog Notes field will be used to document the Internet address of the host server, the digital format and special viewing software required.

2.2.7.2. Notify MSG/MMF of new TO numbers published on the Internet via e-mail to **topp@wpafb.af.mil**. MMF will add the TOs and URLs to the TO System Information Page.

2.2.8. **Numbering and Indexing Digital Media.** Digital media include CD-ROMs, DVDs, and other physical recording media. The media will be numbered, indexed and

managed as discreet TOs in accordance with TO 00-5-18. The only difference between the types of media is the suffix used to indicate media type (e.g., "CD," "DV," etc.).

2.2.8.1. Media containing TO Sets will be assigned TO Numbers in a manner similar to TCTO Series numbers, with the applicable suffix "-XX-#" as part of the number. The medium manager will request a TO number for the disc/tape from OC-ALC/LGLUB, based on the following guidance:

2.2.8.1.1. If multiple categories of TOs are contained on a disc, the lowest TO category number will be used for the disc number.

2.2.8.1.2. If TOs for multiple systems or commodities are included on the medium, use a 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.)

2.2.8.1.3. If multiple TO types are included (i.e., operations, maintenance and inspection), either use the lowest of the included dash (-) numbers for the disc/tape itself, or omit the TO type designator altogether.

2.2.8.2. Title the disc/tape to help users to identify the general nature and coverage of the TOs contained, and include a short description of the specific TOs on the medium (e.g., 00-5, 00-20, & 00-25 Series). The complete title will be listed in the TO index, while an abbreviated version (without listing included TOs) will be used on the medium and sleeve/case labels (e.g., "Methods and Procedures TOs"). Specify the digital format and viewing software required in a separate "Catalog Note." When appropriate, add the word "SET" after "TECHNICAL MANUAL" on the labels.

2.2.8.3. The index record for the medium will list the included TOs using the "Associated Publications" function of the JCALS "Update a TM Index." The TO Managers for each TO contained on the medium will update applicable TO index listings to add a "Catalog Note" listing the TO number of the medium (and if also published on the Internet, the applicable URL) where the TO is published, and the digital format used.

2.2.9. **Unit Price.** Any TOs to be released to an FMS customer must have an estimated average cost entered in the Unit Price field of the JCALS index record. This data is printed on the DD Form 1348-2 and provides customs information to Freight Forwarders. Because this data and the TOs affected varies frequently, HQ AFMC/LGYE will update the Unit Price field quarterly for all TOs managed in JCALS. TO Managers are responsible for adding this data to shipping documents for TOs not managed in JCALS.

2.3. Air Force Technical Order (AFTO) Form Development.

2.3.1. **Development.** The TCM responsible for a TO prescribing use of unique AFTO IMTs will manage the forms according to AFI 33-360V2, *Content Management Program-Information Management Tool (CMP-IMT)*. All AFTO IMTs are published through 88CG/SCQIP, DSN 787-7924, 3810 Communications Blvd, WPAFB OH 45433-5601. The TO Manager must coordinate with the 88CG to release new and revised AFTO IMTs concurrently with the prescribing TO updates.

2.3.2. **AFTO Form Availability.** Most AFTO forms are available electronically ("IMT" versions) on the AF Publishing page (**http://www.e-publishing.af.mil/**) under the link to

"Information Management Tools/Forms," and the subsequent link to "AF Technical Order" (right column). Manifold or card-stock forms are available from the AF Publications Distribution Center (AFPDC) (link to "Physical Products" at top of the Forms page). Forms may be computer-generated ("CG") when specifically authorized in the prescribing TO. When forms are not available electronically, the TO Manager may elect to provide a blank copy of AFTO forms authorized for local reproduction at the back of the prescribing TO.

2.4. Preliminary TOs.

2.4.1. **Management.** JCALS will only manage Preliminary TO (PTO) numbering and indexing. TO Managers must establish procedures to manage and control distribution of PTOs prior to formalization and publication.

2.4.2. **Numbering and Indexing Procedures.** The TO Manager requests a TO number for PTOs using the word "Preliminary" as part of the TO title. The number request must have a temporary Pub Date assigned. OC-ALC/LGLUB enters the approved number in the JCALS Pub Index. The TO Manager will use the "Manage TO Index, Update Issue Data" screens to delete the temporary Pub Date, verify the flags for "Preliminary Publication" and "Available for Published Index" are set to "Yes," and the flag for "Available for Distribution" is set to "No." The warehouse will not stock, store, or issue PTOs.

2.4.3. **Verifying and Formalizing PTOs.** After the PTO has been verified to the maximum extent possible (TO 00-5-3, Air Force Technical Manual Acquisition Procedures), the TO Manager develops a TO update to convert the PTO to a formal TO. Prior to ID label generation for the formal TO update (JCALS Due-In screen), the TO Manager will enter the Pub Date. The Available for Distribution flag in the TO index is automatically set to "Yes" when the TO Manager completes the JCALS Due-in Receipt function to indicate that stock is available to make Initial Distribution. JCALS will automatically enter the ID Ship date when the labels are printed, and this date is copied to the JCALS TM Index record "Distribution Date" field. The date is extracted and presented in the AF TO Catalog application record for the TO.

2.5. TO Updates. TO updates consist of revisions, changes, and several kinds of supplements (see TO 00-5-1). See AFI 11-215 for policies and timelines for updating FMP publications.

2.5.1. **General.**

2.5.1.1. TO Update Categories. 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 non-technical 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 **Figure 3.1**.

2.5.1.2. Preparation. Prepare updates organically whenever possible, or acquire them from the original equipment manufacturer (OEM) or overflow contractors. TO updates will not include instructions for "write-in" changes, except as authorized in TO 00-5-1.

2.5.1.3. TO Updates for Obsolete Systems and Commodities. Obsolete systems and commodities include those still in limited use or scheduled to leave the inventory within two years. Users will submit routine recommended changes for TOs on "obsolete" systems and commodities. However, the TO Manager/TCM will hold routine TO updates in abeyance pending the decision to rescind or update the TO. The TO Manager 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 or TO Page Supplements (TOPS). The TO Manager will make Emergency and Urgent updates as usual.

2.5.2. **TO Change and Revision Practices.** A TO Change and TO Revision are the principal means for routinely updating TOs. The TO Manager will determine whether to issue a revision or a change to the TO.

2.5.2.1. When To Consider a Revision. A revision is a more practical means to update a TO when a large percentage of the TO pages are Change pages. Use the following criteria to determine when to issue a revision:

- When the TO will be accessed and used as a digital file.
- When 70 percent or more of the basic TO (including the current update) has been changed (see **paragraph 2.5.2.2.**).
- When there is a change to equipment configuration, compliance with new military specifications, etc.
- When updating brief TOs (eight 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 and the change is merged with existing warehouse stocks before any subsequent issue.
- 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.

2.5.2.2. When Not To Consider a Revision:

- The TO is usable as is (even if 100% of the pages have changed);
- A revision is not cost-effective (very large TOs or TOs with extensive distribution, IF usability has not been seriously impaired); or
- An extensive delay in publication will result, unless the other factors show that a revision is necessary.

2.5.2.3. New or Revised Technical Manual Specifications & Standards (TMSS) (TO 00-5-3). The TO Manager determines whether or not to issue a TO revision when the governing MILSPEC or MIL-STD used to prepare the TO is revised. The TO Manager 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 direction affecting contract cost must be coordinated with the Procuring Contracting Officer (PCO) before going to the contractor.

2.5.2.4. Numbering Changes and Revisions. The TO Manager assigns an identifying number to each TO change and revision being published, using the JCALS "Manage

TM Index; Update an Index Entry" function. The numbers for changes must be three digits long, prefixed by zeros if necessary. The numbers for revisions must be four digits long, prefixed by zeros if necessary. 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 Supersede Notice. The TO Manager should initially set the JCALS TM Index "Available for Distribution" and "Available for Published Index" flags to "No." When the Revision or TO Change is approved and ready for printing and distribution, the TO Manager must review and complete the update of TM Index information and set the "Available for Published Index" flags to "Yes." Once stock is received to make ID (JCALS "Due In Receipt"), the "Available for Distribution" flag is automatically set to "Yes." ID labels are then generated. The date entered as the "ID Ship Date" will automatically be copied to the TM Index record "Estimated Distribution Date."

2.5.2.5. Verification. All changes to technical data procedures, no matter how they are published (TO Change or Supplement, AFMC IMT 202, etc.), shall be verified by performance or as otherwise specified by TO 00-5-3. Performance verification of TO updates related to a TCTO shall be accomplished concurrently with the TCTO verification.

2.5.2.6. Pre-Publication Reviews. The final draft (reproduction copy or digital file) of TO updates and TCTOs must receive a pre-publication review for technical accuracy, currency and adequacy (depth of coverage); as well as conformance to MILSPEC requirements. The review shall be jointly conducted by the TO Manager (TO Mgr) and the TCM, with the assistance of Subject Matter Experts (SME) as required. The following checklist will be followed:

- Procedures and illustrations for technical accuracy, completeness and readability. (TCM)

- Coordination with affected functional areas–Engineering, Safety, Nuclear Surety, Bio-Environmental Engineering, Foreign Disclosure Office, etc. (TCM)

- Update compliance to MILSPEC format. (TO Mgr)

- Accuracy of Title Page information–dates, supersede notice, distribution limitations, etc. against information about the TO Update in the TM Index record. (TO Mgr) ***NOTE:*** The TO Manager must ensure that the Issue Date in the JCALS TM Index record is the same as the TO or Change Date on the TO title page.

- Accuracy of the List of Effective Pages (LEP). (TO Mgr)

- Changed page numbering and marking. (TO Mgr)

2.5.2.6.1. TO development or support contracts should allow for TO Manager review and approval of draft TOs before delivery of reproducible masters 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. Correct less critical errors through the routine update process.

2.5.2.6.2. For updates published in-house (organically), errors should be corrected prior to submitting the reproduction copy to DAPS. Any new changes developed during the review must be submitted for the next routine TO update, not added to the current increment.

2.5.2.7. Periodic Pre-Publication Review. If publication of routine changes or revisions must be deferred for any reason, the TCM, in coordination with the TO Manager, must review the publication package every 90 days from the date of the deferral decision for possible priority upgrading.

2.5.2.7.1. 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/TO Manager 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.

2.5.2.7.2. 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 TO Manager shall coordinate Interim TOs with the TCM and Lead Command prior to issue.

2.5.2.8. TO Updates Related to TCTOs. The TCM/FMM will update TOs and FMP publications affected by TCTOs, and the TO Manager will release the updates concurrently with the driving TCTO (**Chapter 4**).

2.5.2.9. 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 TO Manager must fully coordinate proposed updates with all affected services prior to publication.

2.5.2.10. Country Standard TO (CSTO) Updates. The equipment contractor normally produces CSTO updates under an FMS contract (TO 00-5-19, *Security Assistance Technical Order Program*).

2.5.3. **Digital TO Formats.** All new and major modification programs must acquire TOs in a digital format compatible with the authoring and managing tools in the TO Management Information System and with current TMSS (TO 00-5-3). Before converting Legacy (existing) TO data to a digital authoring format, use and changeability must be considered (see **Figure 2.1**, TO Digitization Decision Tree).

2.5.3.1. Digital Distribution Media Sustainment. Only Changes and Revisions will be used to update digitally distributed baseline TO files. “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, including TOPS, for updating digital baseline TOs is discouraged and will be severely limited (see TO 00-5-1).

2.5.3.2. The TO change or revision will be merged with or replace the baseline TO file for digital distribution. The standalone digital change or revised TO file will be used to produce a master for printing and distribution of paper copies.

2.5.3.3. For emergency and urgent updates, the TO Manager or TCM will develop digital RACs whenever possible, instead of Interim Operational or Safety Supplements (IOS or ISS – see TO 00-5-1 and AFMCI 21-302). 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 the Internet or downloaded via FTP. Users will be notified of the RAC and how to access/download the updated TO file and RAC using the Interim TO distribution process from AFMCI 21-302. The standalone RAC is distributed to allow local printing of the change for updating paper copies of the TO.

2.5.4. **Supplement Processes.** The TO Manager numbers and indexes a new TO supplements by using the JCALS DI procedure, "Add a Supplement Number to the Index." Supplement sequence numbers are assigned automatically by JCALS, and restart at "1" after each TO revision. The new supplement is then distributed according to AFMCI 21-302 (for interim supplements), or TO 00-5-1 (for formal supplements). For FMP manual supplements, which have sequential supplement numbering for the life of the manual, the FMM will submit a JCALS Incident Report (IR) to request renumbering of the Supplement number proposed by JCALS if required. ***NOTE:*** Do not use the DI "Renumber TM" procedure to renumber FMM Supplements because it also renumbers the supplements for earlier FM Revisions. ***ATTENTION:*** Before assigning a PSN to a new supplement, return to the "Update an Index Entry" screen and select the new supplement TM number. Otherwise, the PSN will be assigned to the basic TO. This is true for changes & revisions as well.

2.5.5. **CD-ROM/DVD Format.** CD-ROMs and DVDs containing digital TO files will be formatted and labeled according to MIL-HDBK-9660 and MIL-STD-38784. The CD/DVD must contain a "content.txt" file containing the information required by MIL-HDBK-9660, 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.

2.5.5.1. Content.txt File. The following information will be included in the required content.txt file included on all TO CD-ROM/DVD publications. Other information is also required in the content.txt file. See MIL-HDBK-9660 for further information:

- 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 numbers] + Index Number [3 numbers]) (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 TO Manager, address, e-mail, & phone)
- ORIGINATOR: (CD/DVD TCM, address, e-mail, & phone)

- TO POCs: (For each TO file included on the CD/DVD, list the TO Manager & TCM names, organizations, e-mail addresses, & DSN phone numbers)

2.5.5.2. Readme.txt file (Optional). Use the same format criteria established by MIL-HDBK-9660 for the content.txt file. 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 ATOMS), 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.

2.5.5.3. Index File. TO.MART (**paragraph 1.2.4**) is the indexing and retrieval software program developed by the Technical Data Division of the Business Information SPO (MSG/MMF) for cataloging and access to locally required digital TO files. The program is available at **https://tech-data.wpafb.af.mil/field/ToolsMenu.htm**.

2.5.5.4. CD-ROM/DVD and Case Labels. Labels are formatted according to MIL-STD-38784.

2.6. TO Updates Due to Equipment Modification or Replenishment Spares Procurement. 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.

2.6.1. **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 TO Manager will identify and advise affected TO Managers, 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 NSC items (e.g., nuts, bolts, resistors, etc.) unless safety, life support, or critical systems or material are involved.

2.6.2. **Processes.** In conjunction with the TO Manager, the TCM will initiate acquisition of new TOs or TO updates for commodities/equipment/end items under TCM control. Notify the TO Manager in writing to rescind obsolete TOs as required. Keep using commands informed of the TO status and anticipated publication date(s). Follow up with the Using Command to ensure TO updates are distributed and support requirements of users have been satisfied.

2.7. TO Update Publication. ***NOTE:*** Perform periodic reviews of change packages IAW **paragraph 2.5.2.7** if publication must be deferred.

2.7.1. **General.** The TO Manager or TCM will use the JCALS "Prepare TM Change Package" process to aggregate all approved Recommended Changes (RCs - see **Chapter 3**) submitted since the last TO update. For each JCALS "Prepare TM Change Package," the TO Manager determines if the updates will be developed organically or through contractor support. ***NOTE:*** The electronic AFMC IMT 252 process may be used when some or all RCs have been submitted outside of JCALS.

2.7.1.1. If a production contract is available for contractor preparation of TO updates, the TO Manager forwards a copy of the JCALS "Prepare TM Change Package" work folder to the responsible procuring agency by JCALS Workflow Manager (WFM) or by using AFMC IMT 252, with a letter of transmittal included in the work folder.

2.7.1.2. If a production contract is NOT available and organic development is not practical, the TO Manager forwards a copy of the JCALS work folder to the responsible contracting office using JCALS WFM or by using AFMC IMT 252, with an included letter of transmittal requesting preparation by overflow contractors or Government Printing Office (GPO)/DAPS assets, as appropriate.

2.7.1.3. MIL-STD-38784 Disposition Notices and Handling and Destruction Notices will be placed on the title or T-2 pages of all unclassified TOs on an attrition basis.

2.7.2. **Creating RACs.** The TCM will develop the RAC content; the TCM, TO Manager 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:

2.7.2.1. The TCM identifies and/or validates an Emergency or Urgent change requirement, and develops corrective action using the JCALS "Recommend a TM Change" process (JCALS DI), obtains coordination and approval, and submits the RC to the TO Manager.

2.7.2.2. The TO Manager assigns a TO change number to the RAC.

2.7.2.2.1. RACs will be identified using the next sequential TO change number. If the next change number has already been assigned to a routine change currently in the publishing cycle "no-change window," then the RAC number will be the next in sequence, and a supersede notice will be added to the Title page to specify RAC effectivity. The "no-change window" is the period after preparation of a reproduction package and before publication and distribution when further changes to the package are no longer cost effective.

2.7.2.2.2. "No-Change Window" Procedures. Emergency RACs will be provided within 48 hours of TO Manager/TCM notification of the problem. The Title page supersede notice will specify that the RAC applies to both the current and immediately subsequent TO Changes. If an in-work Change modifies affected pages or paragraphs, a second RAC may have to be issued concurrently with the in-work update. Urgent RACs will be formatted for and issued concurrently with the in-work Change.

2.7.2.3. The TCM, TO Manager 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:

2.7.2.3.1. For Indexed PDF (IPDF) format TOs (changeable source file not available):

2.7.2.3.1.1. Download a copy of the baseline IPDF TO file from the DLDSS or JCALS Reference Library to a PC.

2.7.2.3.1.2. Copy and paste text from baseline IPDF TO pages affected by the

RAC to a "change file" using a changeable format (e.g., Standard Generalized Markup Language [SGML]-tagged, ATOS, Microsoft® Word©, WordPerfect®, etc.)

2.7.2.3.2. For TO files available in changeable (native) format:

2.7.2.3.2.1. Download the baseline native format TO file to a PC.

2.7.2.3.2.2. Copy and paste pages affected by the RAC from the baseline file to a "change file."

2.7.2.3.3. For Paper/Negative-only TO Masters:

2.7.2.3.3.1. Obtain negative or paper masters of pages affected by the change.

2.7.2.3.3.2. Convert the content of the pages affected by the RAC to a changeable file by electronically scanning the page using Optical Character Recognition (OCR) software, or by retyping the page if necessary.

2.7.2.3.4. Make necessary changes to affected pages according to the approved Recommended Change. 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 supersede notice must identify the change as an EMERGENCY or URGENT RAC and, when necessary, indicate which basic date is affected and which change(s) is superseded.

2.7.2.3.5. Smaller font (9-point minimum) may be used on RAC data pages to accommodate added information on the affected and/or backing pages without impacting subsequent pages. If page integrity cannot be maintained (e.g., if the new information cannot feasibly be incorporated on the affected pages), then additional pages should be added as required according to current procedure. Color pages may be rendered in "gray scale" (black and white). Foldouts to update paper TO copies will be managed on the receiving end by either shrinking them to fit an 11 x 17 page (maximum size most printers and copiers will handle), or printing and copying only the affected section of the foldout and overlaying the section on the original. All deviations will be returned to the parent TO format at the next routine update.

2.7.2.3.6. The TCM and TO Manager review and approve the RAC.

2.7.2.4. Convert the RAC file (Title page, LEP, changed pages and backing pages) to PDF using Adobe® Acrobat Exchange™ or selecting Print when the Acrobat PDF Writer driver is installed on the PC used to prepare the changeable format RAC file. ***OPTION:*** Use other Page Description Language (PDL) software to convert RAC files to an insert file compatible with baseline TO files not maintained in IPDF.

2.7.2.5. The TCM, TO Manager or editor electronically merges the PDF RAC file with the IPDF baseline TO file to create a new baseline TO, and relinks (indexes) the new file using Acrobat Exchange and Info-Linker software. The merged and re-indexed IPDF TO is returned to digital storage as the new baseline digital TO file, along with the stand-alone PDF RAC file. If applicable, both files are uploaded to an Internet web server to replace the previous version TO file provided via WWW, thereby providing access to the digital baseline TO file and RAC. ***OPTION:*** Merge and upload files in another PDL when required for non-IPDF TO files.

2.8. TO Printing/Reprinting.

2.8.1. **General.** TO Managers arrange for reproduction and reprinting of TO stocks through DAPS (DODD 5330.3/AF Sup 1, *Defense Automated Printing Service (DAPS)*). DAPS is the consolidated organization for printing and high-speed, high volume duplicating and is the preferred provider of document conversion and automation services within the Department of Defense. DAPS acquires traditional (offset) printing services through contracts that are awarded and administered by the Government Printing Office (GPO). By public law, any print order for over 25,000 units (# of single-sided 8½x11 pages multiplied by # of copies) must be printed by a GPO approved printer. Smaller print orders may be accomplished through other resources, such as prime or overflow contractors.

2.8.1.1. An MOA between the TO Manager and DAPS may allow for the DAPS office to acquire a direct interface with a selected GPO printer when more cost effective. Original equipment or overflow contractors may perform some PTO printing; see TO 00-5-3 for limitations.

2.8.1.2. The TO Manager determines PTO printing quantities according to TO 00-5-3, and the TO/Distribution Manager determines formal TO printing quantities according to **paragraph 2.14** in this manual.

2.8.1.3. As the numbers of complete digital TO masters grows, there will be increasing use of Just-In-Time (JIT) printing and distribution and Print-On-Demand (POD) production. These processes can eventually reduce or eliminate TO warehouses.

2.8.2. **Notification and Confirmation.** The TO Manager will reprint TOs when the stock balance goes below the "Reorder Pt. Qty." previously established (does not apply to TOs using POD). The JCALS System forwards a "Reorder Notification" message to the TO Manager JCALS In-Box as well as an e-mail notification to the TO Manager designated e-mail account.

2.8.2.1. The TO Manager will request the warehouse to accomplish a physical inventory and report the exact stock status. The TO Manager updates the JCALS TO stock balance if required, using the JCALS "Manage Inventory; Adjust TM Stock Item Quantity" function.

2.8.2.2. TO Managers will use the JCALS TO Stock Management level processes to adjust the reprint levels (**paragraph 2.1.6**) if required.

2.8.2.3. The TO Manager may use JCALS to place a TO in a "dormant" stock status (not requiring reprint) when a revision or rescission is pending. Reprinting may also have to be delayed due to lack of funds.

2.8.3. **Create Print Orders.** A print order consists of information describing printing and distribution services required and specifying the fund cite. Print quantities and handling will be specified. The DD Form 843, **Requisition for Printing and Binding Service** is typically used, but the local DAPS office will specify which form they require. Also included in the print package will be the reproduction medium and AFTO IMTs 30, **Reproduction Assembly Sheets.** When the printing contractor will also ship the TOs, include a shipping label deck and an AFMC IMT 578, **USAF Technical Order Initial Distribution**

Verification, to confirm that shipment was completed. Local electronic procedures may be used instead of the AFMC IMT 578.

2.8.4. **Reprinting Department of the Army (DA) Publications.** When the Army TM manager cannot provide additional backup stock of joint-use DA publications, the affected TO Manager may have to reprint copies for AF use. When DA publication masters are not available, a printed copy of the publication is sent to DAPS 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 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.

2.9. Reproducible Material Procedures.

2.9.1. **Reproducible Material Storage.** The TO Manager stores, contracts for, or delegates storage of reproducible material (negatives, artwork, reproducible copy for TOs, tapes and disks) for assigned TOs, not required by contractors preparing TO updates. The TO Manager publishing a TCTO stores the reproducible material. Digital reproducible master files will be stored by prime contractors or in an approved Air Force repository. Digital Change files will be merged with the TO master file. For hard-copy reproducible masters:

2.9.1.1. The TO Manager maintains a locator file (JCALS/ETIMS, database or AFMC IMT 407, **Technical Order Reproducible Material Record**).

2.9.1.2. Reproducible material will be checked for completeness when returned for storage, and the return date will be entered in the locator file.

2.9.1.3. Locator files are reviewed every 2 months and follow-up action taken on reproducible material on loan for more than 50 days.

2.9.2. **Posting Changes.** When new reproducible material for a TO change is received, insert (post) the changed material into the basic TO reproducible master. The replaced material is removed from the file and archived according to the Air Force Records Disposition Schedule (**https://webrims.amc.af.mil/rds/index.cfm**) (formerly AFMAN 37-139).

2.9.3. **Requesting Reproducible Materiel.** Administrative Contracting Officers (ACOs), TO Managers, and other DoD departments may request reproducible copy IAW TO 00-5-1, AFJI 21-301, and interservice agreements. A letter of transmittal is filed as a shipment record. Classified material is handled according to DOD 5200.1-R.

2.9.4. **Rescinded TO Reproducible Material.** The TO Manager, delegated storage warehouse or contractor storing the material takes the following actions when notified that a TO or TCTO is rescinded:

2.9.4.1. Retain reproducible material for completely rescinded TOs (not required by Air Force, FMS or other DoD departments) for a period of 2 years. Retain TCTO reproducible materials for 6 months after rescission. Dispose of unclassified reproducible material IAW TO 00-5-1; dispose of classified reproducible material according to DOD 5200.1-R/AFI 31-401.

2.9.4.2. If a TO is rescinded for Air Force but retained for FMS or other DoD departments, retain material required for FMS TOs or transfer the reproducible material to the other DoD department still using the TO. Other DoD departments may request rescinded TO reproducible material according to AFJI 21-301. If available, the material will be transferred (not loaned) to them.

2.10. Post-Publication Reviews. Perform post-publication reviews to evaluate and improve formal TOs after delivery to the using command. There are two types of post-publication reviews: command reviews and currency reviews.

2.10.1. **Command Reviews.** Hold command reviews according to TO 00-5-3. Participants include the TO Manager, TCM, and using command representatives.

2.10.2. **Currency Reviews.** The responsible TCM will:

2.10.2.1. Review unclassified TOs that have not been updated for five years for currency.

2.10.2.2. Review classified TOs at every update, but no less than annually, for currency and possible reclassification (see **paragraph 1.4**).

2.11. TO Rescissions. ***NOTE:*** TOs and increments replaced by or combined into new TOs and TO updates will be superseded, not rescinded.

2.11.1. **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 (TCTO rescission is covered in **Chapter 4**):

2.11.1.1. Identify all affected users of the TO by requesting an ID report from the TO Manager.

2.11.1.2. Advise all affected managers (PMs, SAP/FMS, etc.) of the proposed rescission. If the TO is joint-service, follow AFJI 21-301 procedures to notify other DoD activities. Ensure the notification includes, as a minimum, known operational systems, commodities and related TOs involved. Include the part number, type, model and series of items to which the TO proposed for rescission applies, and include information on any replacing data.

2.11.1.3. 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.

2.11.1.4. Route rescission requests on published TOs through JCALS to the responsible TO Manager for action.

2.11.2. **TO Manager Procedures.** If the rescission request is approved, the TO Manager will use the JCALS "Manage TM Numbering, Rescind a TM" function to rescind the TO and update the JCALS Pub Index. The TO record remains in JCALS.

2.11.2.1. If the TO will be rescinded for USAF but retained for FMS support, ensure that warehouse stocks are retained.

2.11.2.2. If the TO is rescinded for both USAF and FMS, dispose of warehouse stocks, retaining only archive copies.

2.11.3. Nuclear Weapons TOs. Send rescission requests for nuclear TOs to the NW Logistics Division, AAC/NWLT, Kirtland AFB NM.

2.12. Reinstatement of TOs. The TO Manager reinstates TOs using the JCALS "Reinstate a Rescinded TM" and "Update TM Index" screens according to the JCALS DI.

2.13. Requisitions Using AFTO IMT 276, Special Requisition for Air Force Technical Order.

2.13.1. **Warehouse "Walk-Through" Requisitions.** ALC personnel may use the AFTO IMT 276 to make walk-through requisitions of TOs from the warehouse. Complete the form as outlined in TO 00-5-1, except for block 1 which will contain only the TO number. Adjust stock inventory levels in JCALS using the "Adjust TM Stock Item Quantities" screen.

2.13.2. **FMS Customer Use.** AFMC personnel must ensure that AFTO IMT 276 requisitions are coordinated through the appropriate local Foreign Disclosure Office (FDO) before the TOs are issued to FMS customers. Bypassing the releasability process could result in foreign customers receiving TOs which may not be releasable to them.

2.14. Printing Quantity and Shipping Label Procedures. JCALS currently requires a four-step process to successfully generate labels:

2.14.1. **Determine Print Quantities.** The TO/Distribution Manager sets total printing quantity for TOs, except TCTOs, by adding the computed backup stock quantity to the ID quantity (backup stock is not applicable for JIT/POD printing).

2.14.1.1. ID Quantities. The TO/Distribution Manager uses the "Manage Initial Distribution for a TM; Generate ID Report by Publication" function to determine ID requirements on record in JCALS. The manager then reviews the report, and adjusts the quantities to include organizations scheduled to be activated, but presently having no requirement set up.

2.14.1.2. Requirements for Additional ID Addressees. When a TO or TCTO must be distributed before all subscription requirements can be submitted in response to a TO index listing, coordinate with using MAJCOMs to determine if additional distribution is required. Add additional activities identified by the MAJCOM, using the JCALS "Specify ID by Like Item" function to develop the Initial Distribution list based upon ID requirements for a similar TO.

2.14.1.2.1. The TO or TCTO series whose ID requirements are being used must be the same or higher classification than the TO or TCTO to be distributed. The ID label

will include only the TO or TCTO number being distributed. Subsequent label requests must use the proper TO number or TCTO series from the TO index.

2.14.1.2.2. ID by Like Item must not be made to SAP/FMS customers (D*xxxx TM Account codes). JCALS will not include labels for SAP/FMS TODOs in the ID by Like Item/Account Profile decks, even if the source TO included SAP/FMS distribution. The TO/Distribution Manager must notify the SATODS office (OC-ALC/LGLUF) that a new TO/TCTO with possible FMS requirements is being distributed.

2.14.1.2.3. 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 the JCALS "Specify ID by Like Item" or "Specify ID by Account Profile" processes to develop a distribution label deck. The Errata Cover Sheet (see Glossary) will provide instructions to insert/replace the pages into the affected TOs. This method will not be used to replace pages when the content of the data must be changed. Print or overstamp the words "MISSING PAGES" in block 27 of the DD Form 1348-2, **Issue Release/Receipt Document With Address Label**. Because errata packages do not change TO data or change numbers, the packages are not numbered and indexed in JCALS. Send sufficient copies of the package to the TO warehouse to update any backup stock.

2.14.1.2.4. Like Item Distribution cannot be used for errata packages sent to SAP/FMS customers, for releasability and billing reasons. Contact the SATOP office (OC-ALC/LGLUF) for assistance in redistributing the missing/reprinted pages to FMS users. LGLUF will work these requirements internally.

2.14.1.2.5. Backup Stock Quantities. The TO/Distribution Manager establishes backup stock printing requirements for use in filling anticipated requisitions (N/A for JIT/POD TOs). In computing printing requirements, the manager considers the life expectancy of the TO based on type, programmed use, and any established change or revision cycle. The manager also evaluates consumption rates using similar TO histories or a previous issue of the same TO, and accounts for present and planned programming of the weapon or space system equipment, or material to which the TO applies.

2.14.1.2.6. TO Change Quantities. The total printing quantity for a TO change is computed by adding the number of copies needed to update TO stock on hand to the ID quantity, plus the number of copies needed to fill requisitions from TODOs who failed to receive supplements or changes distributed under normal system operation. When a TO change will be incorporated into a revision within 90 days, backup stock is reduced accordingly.

2.14.1.2.7. TCTO Quantities. Total printing quantity for TCTOs is computed by adding the computed backup stock quantity and any additional specific requirements for copies to the ID quantity. Enough TCTO stock should be printed to cover anticipated FMS TCTO distribution requirements.

2.14.2. **Generate ID Labels.**

2.14.2.1. Receive Due-In Quantity. The TO/Distribution Manager will use "Manage Inventory; Create Due-In Receipt" to complete the stocking process. The total quantity computed above is the print quantity provided with the print order to DAPS. When the manager is notified that stock is available at the warehouse or when DAPS will also distribute printed TOs, the quantity received or that will be included in the print order will be entered into JCALS using the "Manage Inventory; Create Due-In" screen. Once stock has been entered into JCALS, ID or RQN labels may be generated.

2.14.2.2. The TO/Distribution Manager requests shipping labels using the JCALS "Manage Warehouse; Create Pick Ticket for Initial Distribution" TM Process. (Pick Tickets are identical to the DD Form 1348-2 Shipping Labels.) Using "Pick Ticket" clears the Label file for the next increment. If the TO Manager believes there will be a need for immediate re-issue of the ID label deck (such as for distributing errata sheets), use the "Create File with Ship Label for ID" which does NOT clear the label file. JCALS then produces labels for mailing the reproduced publications. ***NOTE:*** The ID Ship Date entered into the ID Pick Ticket screen will be automatically copied to the Estimated Distribution Date (EDD) field of the TM Index record. Users will know when Initial Distribution is estimated to be complete because this information is available through the Air Force TO Catalog.

2.14.2.3. Establish controls to ensure decks of ID labels will arrive at the printers before completion of printing, when contract printer will make the distribution. Routine label generation should be done within 10 days of submitting the TO print package to the printer. Labels will expire 58 to 60 days from the date the label was prepared. ID decks sent directly to a separate government or contractor activity are authorization for them to distribute the TOs.

2.14.3. **Generate Labels for One Time Requisition.** TO Managers will routinely check JCALS Stock Points to determine how many requisitions are pending for available stock. Run "Back Order Reports" on TO numbers ordered frequently.

2.14.3.1. As with the ID process described previously, the manager must ensure adequate stock is available to prevent requisitions from being backordered. When reprint stock is received, the manager will use the JCALS "Manage Inventory; Adjust TM Stock Item Quantities" screen to record the quantity of TO stock received and available.

2.14.3.2. Managers will use the JCALS "Manage Warehouse; Create File with Pick Ticket (Shipping Label) for One Time Requisition" process to generate RQN labels/files in accordance with the JCALS DI. The file will include RQN shipping labels for requisition transactions listed for each of the JCALS Stock Point Organization Identifiers (Org ID).

2.14.3.3. If stock is not available in JCALS, requisitions will be backordered. Once Stock is received and entered into JCALS, backordered transactions will be released to the appropriate stock point.

2.14.3.4. Setting stock levels to fictitious levels in support of POD processing must be carefully managed. Requisitions will build in the stock point since the JCALS system has determined that stock is available. Transactions status of "BA – Shipped" is returned

to the users when the Requisition transaction is listed in the Stock Point. For this reason, funding must be sufficient to support POD process to prevent requisitions from being in BA – Shipped status for extended periods of time. BA status only indicates that stock is available to ship.

2.14.4. **Shipping/Distribution Records.** An AFMC IMT 578 or letter directing confirmation of distribution and date dispatched will be sent to printing contractors with the ID deck. When ID will be made in-house, an AFMC IMT 145, **TO Receiving/Processing Record**, is sent to the responsible TO warehouse along with the ID deck. When the completed forms are returned, the TO Manager must update the Estimated Distribution Date (EDD) in JCALS with the date ID shipment was completed. Retain the returned AFMC IMT 145, 578 or letter confirming TO distribution until the TO or change is replaced or rescinded.

2.15. TO Warehouses. TO warehouses are normally located at ALCs, but the functions may be carried out by contractors or individual Program Manager (PM) organizations at other locations. Warehouses perform the stock, store and issue functions of the TO system for the local PMs.

2.16. Official Air Force TO Archives (Repository).

2.16.1. **Business Practice.** At least one copy of every TO and TCTO basic, revision, change and supplement must be preserved in the Air Force Official TO Archive to comply with record retention provisions of the Federal Records Act and to ensure preservation for Air Force needs. 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://webrims.amc.af.mil/rds/index.cfm**). When there are both digital and paper copies, only the digital version will be archived.

2.16.1.1. OC-ALC/LGLUB is the custodian of the Air Force Official TO Archive Library. LGLUB Archive personnel will compare issue data on the TOs and updates submitted for filing. A location number will be assigned to the correct and complete JCALS TM record. When discrepancies occur, Archive personnel will notify TO management personnel to update JCALS TM index screens with necessary corrective action.

2.16.1.2. Reproduced copies of inactive TOs required to perform assigned duties are obtained from OC-ALC/LGLUB according to TO 00-5-1 and procedures in **paragraph 2.17** below.

2.16.2. **Rescinded TOs List.** The responsible TO Manager generates and reviews the JCALS "Manage Repository, Review Rescinded TM List," and uses the "Specify Whether to Keep or Dispose Rescinded TM" window to identify any TOs on systems rescinded for over 6 years. Verify there are no further Air Force obligations to other users (Air National Guard, Air Force Reserve, SAP countries, FMS customers, etc.) to determine if there is a continuing need to retain the archive copy of any TOs identified.

2.16.2.1. The reviewer also coordinates with the local office of the Judge Advocate and HQ USAF/JACL/JACP to ensure there are no unsettled claims by or against the US Government, incomplete investigations, litigations, or other actions involving the rescinded TO.

2.16.2.2. The TO Manager uses the JCALS "Specify Whether to Keep or Dispose Rescinded TM" and "Confirm Removal of Repository Publications Marked for Disposal" screens to specify whether to retain or dispose of archived copies of individual TOs.

2.16.3. **Transfer to the USAF Museum.** Semiannually, OC-ALC/LGLUB sends the list of TOs to be deleted from the Archives to the US Air Force Museum, Wright-Patterson AFB OH, to offer the TOs for possible inclusion in the museum historical collection. LGLUB must obtain written permission from the data source to release TOs for museum use if proprietary data is involved, IAW Air Force Records Disposition Schedule (**https://webrims.amc.af.mil/rds/index.cfm**). Any conditions imposed by the contractor will be stipulated in the transfer agreement. Upon receipt of the list of requested TOs, LGLUB forwards them to the museum and disposes the remaining TOs.

2.17. Servicing Requests for Inactive TOs. TCMs, in coordination with TO Managers, determine the releasability of inactive TOs according to DOD 5200.1-R, DODD 5230.24, DODD 5230.25, DOD 5400.7-R/AF Sup, AFI 61-204, TO 00-5-1, and other applicable directives. Requests for inactive TOs are sent to the responsible PM for review, and forwarded to OC-ALC/LGLUB after approval.

2.17.1. **Approving Officials.** Requests must be signed by the person(s) authorized to make emergency requests. Each PM furnishes a list of authorized approving officials to OC-ALC/LGLUB annually. LGLUB cannot accept requests for inactive TOs directly from other requesters.

2.17.2. **Screening Requests.** The PM review includes screening requests for inactive TOs against the JCALS TM Index to ensure that a requested TO is in fact inactive (requests for active TOs must be filled from stock), and using the JCALS "Manage Repository; Repository Status Report" TM process to determine if the requested TO is available in the Archives or has been purged.

2.18. Transfer of TO Management Responsibility.

2.18.1. **Business Practices.** Responsibility for TO program and content management usually transfers to the new PM (JCALS 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, TCTOs and TCTO series headers. The gaining TO Manager coordinates with the gaining TO warehouse function to resolve possible impacts. The losing TO Manager must coordinate proposed transfers to non-AFMC activities with HQ AFMC/LGYE before taking any action. ***NOTE:*** Transfer schedules will be dependent on the monthly cut-off date for submission of proponent changes to the JCALS System Operations Support Center (SOSC, operated by the Computer Sciences Corporation). Contact AFMC/LGYE for further information and guidance.

2.18.2. **Gaining Organization Procedures.** The gaining organization, if **not already established** as a JCALS proponent, will complete the Establish TM Proponent Checklist (**Figure 2.2**) to ensure that all required JCALS system support actions have been

accomplished prior to requesting the database changes. The gaining site JCALS POC shall ensure completion of the checklist if required.

2.18.3. **Losing Organization Procedures.** The losing TO Manager identifies any Work In Progress (WIP) involving the TOs to be transferred, and makes all efforts to close out WIP prior to proponent transfer actions. Examples of WIP are open recommended changes (JCALS workflow jobs), open reproduction order workflows, etc. Minimizing WIP shall be used as one of the factors used in determining the transfer schedule. WIP that cannot be closed out shall be reported to the SOSC and the gaining TO Manager by the losing TO Manager. The SOSC will report the technical impacts of transferring TOs with open WIP. The losing TO Manager provides an Excel spreadsheet to the local JCALS site POC listing the TO Numbers and existing JCALS Proponent ID, Controlling Organization (Inventory Control Point – ICP), Stock Point, JCALS identification ("userid") of the TO Manager, ES and Stock Point Manager for each TO.

2.18.4. **Identify Gaining POCs.** The gaining TO Manager provides an Excel spreadsheet to the local JCALS site POC listing the TO Numbers and new JCALS Proponent ID, Controlling Organization (Inventory Control Point – ICP), Stock Point (Warehouse), and JCALS identification ("userid") of the new TO Manager, ES and Stock Point Manager for each TO.

2.18.5. **JCALS POC Procedures.** The HQ AFMC/LG Proponent Transfer POC will consolidate proponent changes and forward all spreadsheets to the SOSC by the monthly cut-off date. The monthly cut-off allows time to update the JCALS TO Index and SATODS interface files to reflect the database changes needed in time for update of the data in JCALS on the first of the following month. The SOSC shall determine technical impacts due to Proponent ID/database changes, if any, on any of the various interface files.

2.18.6. **Warehouse Coordination.** If the gaining proponent is at a different site, the TO warehouse servicing the losing proponent will ensure that the JCALS requisition buffer for the appropriate stock point is empty prior to the database changes being accomplished. If not done, requisitions in the buffer will transfer to the gaining proponent/stock point, where the physical stock does not yet exist.

2.18.7. **SOSC Actions.** The SOSC will delete the appropriate records in the Global Data Management System (GDMS) database at the losing site, and add them to the GDMS database at the gaining site. The process of changing the data and the resulting checks and validations will take approximately a week. Upon completion, the SOSC shall notify the HQ AFMC/LG POC, who will notify both the gaining and losing sites that the databases have been updated. The gaining TO Manager will check a random sampling of TO numbers and/or execute system reports to validate that the database changes have been made.

2.18.8. **Stock Transfer.** For physical stock transfer, the GDMS database changes should be made *before* any stock is moved, to prevent new requisitions from going to the losing TO warehouse after the physical stock has already left.

2.18.8.1. The gaining TO Manager will provide the shipping address for stock (generally the address of the TO warehouse servicing the gaining proponent location) to the losing warehouse, and pass the list of TO Numbers to the gaining warehouse with

instructions to hold requisitions (DD Forms 1348-2) for the new TOs until receipt from the losing warehouse.

2.18.8.2. The losing TO Manager will pass the list of TO Numbers to the TO warehouse, and monitor actions to ensure stock is packaged and shipped according to the transfer schedule.

2.18.8.3. The gaining TO warehouse performs a 100% inventory of the TOs upon receipt, and adjusts stock balances via the JCALS "Adjust TM Stock Quantities" screen. Upon completion of the inventory, held DD Forms 1348-2 will be released.

2.19. TO Stock Disposal Actions. TO/Distribution Managers will:

2.19.1. Request the warehouse to destroy incomplete sets of basic TOs, TOPS, supplements and changes according to TO 00-5-1 when complete reprints are received.

2.19.2. Use the JCALS "Manage TM Index; Update an Index Entry" process to supersede a TO, TO supplement or TCTO for Air Force and FMS. Use JCALS "Manage TM Numbering; Rescind a TM" to rescind a TO, TO Supplement or TCTO. Notify the warehouse to dispose of existing stocks of the TO/TCTO and associated increments when a TO or TCTO is superseded or rescinded for Air Force and FMS. Direct the warehouse to dispose of supplements only when superseded by incorporation into a TO change. The deleted TO version/increment records will remain in JCALS until archived by the TO Manager.

2.19.3. Notify other service users in accordance with AFJI 21-301 when the Air Force decides to rescind a joint-use publication for which AF is the cognizant activity. Remaining stock will be disposed of according to the previous paragraph.

2.20. TO Management Practices Using JCALS. The TO Manager makes changes to management data about a TO using the appropriate JCALS screens when the correction, addition, or deletion of TO management data elements is required. Use the screen completion procedures described in the DI under JCALS TM Processes for further information.

2.20.1. **System or Equipment Data Related to TO Acquisition (TO 00-5-3).** The TO Manager or TCM uses the "Perform Acquisition; Updating an Acquisition" screens to input or update Weapon Systems, Commercial and Government Entity (CAGE) codes and item part numbers. Other Acquisition sub-types are used to establish acquisition programs, develop Contract Data Requirements Lists (CDRLs) and other related documentation, issue Data Calls, and develop TO pricing data. TO budgets, TO cost elements and Engineering Change Proposal (ECP) costs are managed through the "Manage Program Support" sub-type screens. Various sub-types of the "Manage Quality Assurance" type are used to schedule and control In-Process Reviews (IPRs), Validation, Verification, and other QA type functions.

2.20.2. **Establishing Sponsor Approval (paragraph 2.1.8.).** If a TO Manager desires to review all initial subscription and requisition transactions before they may be processed, the Sponsor Approval flag must be set in the record for the Basic TO increment. All subsequent TO increments established will inherit this Sponsor Approval flag setting. If the Sponsor Approval requirement will be changed for a TO, the JCALS Update TM Index Publication

Stock Number (PSN) screen must be used to make the change for all currently active and available TO increments.

2.20.3. **Processing ID subscription or Requisition Transactions for TOs Requiring Sponsor Approval.** TO Managers will receive notification of a TO request requiring sponsor approval through the JCALS To Do List. When the - work folder containing the request is opened, the TO Manager will "Open" and "Edit" the folder (which opens the "Order Publication" screen), review the information, verify that justification has been received (if required), and approve or disapprove the request.

2.20.4. **Completing Recommended Change (RC–Chapter 3) Evaluation.** TO Managers and TCMs will review and evaluate RCs using the JCALS "Improve TM; View a Recommended TM Change" screens. Once the RC is opened and the review is complete, go to the "Status" screen and select the appropriate status (approved, abeyance, etc.). Then go to the "Disposition" screen and enter any pertinent comments (changes to RC wording, RC type, benefits, etc.) Then go to the "Options" menu and select "Submit." Ensure off-line JCALS submitters and reviewers are notified of any RC status changes.

2.20.5. **TO Numbering (paragraph 2.2).** TO Managers will request TO numbers using the JCALS "Manage TO Numbering; Assign a Publication Number" process. Only OC-ALC/LGLUB personnel (and AFMETCAL personnel for calibration TOs) are authorized to have the JCALS system privilege necessary to assign/approve basic TO and TCTO Series Header numbers. OC-ALC/ LGLUB will determine which TO numbers are appropriate using TO 00-5-18 and other standards. ***NOTE:*** Neither nuclear weapons nor EOD TOs are managed in JCALS. Numbering will be managed by AAC/NWLT and Det 63 AAC/WMO, respectively.

2.20.6. **Manage TM Index (paragraph 2.2).** The TO Manager uses the JCALS "Update an Index Entry" screens, using DI procedures, for changing the TO title, system application, management data, issue data, security classification, joint service use, and PSN. These screens are also used to add (index) TO changes, revisions and supplements, and to mark superseded and rescinded TOs and increments. JCALS TM Index is extracted monthly according to the AFTOX Interface specification. TO Index data extracted from JCALS is presented in the web-based Air Force TO Catalog application. Errors in the accuracy or quality of TO Index data must be corrected in the JCALS TM index record.

2.20.7. **Preparing and Submitting Reproduction Packages (paragraph 2.8).** The TO Manager will prepare and submit reproduction packages using the JCALS "Reproduce TM; Prepare a Reproduction Package, Develop a Reproduction Order" screen to initiate the reproduction process. The normal process is "prepare," "approve," "create DD Form 282, **DoD Printing Requisition/Order**," "send to DAPS for cost estimate," "approve cost estimate," and "complete the order." The TO files are placed in the Reproduction Order - Work folder, and submitted to DAPS. Other sub-processes allow the TO Manager to determine reproduction quantities and media, and specify shipping instructions. ***NOTE:*** If DAPS is not on JCALS, Repro Order - work folders may have to be submitted via e-mail or FTP.

2.20.8. **Managing Due-Ins and Shipping Labels (paragraph 2.14).** TO Managers use the JCALS "Manage Inventory" process to create, change quantities, and receive projected TO stock into the warehouse. Due-Ins must be created before Shipping Labels can be

requested. To generate labels for ID, use the JCALS "Manage Warehouse; Create File with Pick Tickets for Initial Distribution" process. To generate labels for one-time requisitions (including increases in subscription quantities by individual TODO TM accounts), use the JCALS "Manage Warehouse; Create File with Pick Tickets for One Time Requisition" process. In both cases, selecting "Pick Tickets" rather than "Shipping Labels" will save print time and materials.

2.20.9. **Stock Control and the TO Archives (paragraph 2.16).** The TO Manager will use the JCALS processes under "Manage Inventory; Adjust TM Stock Item Quantities" to adjust warehouse stock quantities. Use the "Manage TM Index; Update TM Index" screen to toggle the dormant issue status of TO stocks. OC-ALC/LGLUB will use the JCALS "Manage Repository" functions to add Archive locations and assign, change and checkout TOs to/from those locations. TO Managers will use the sub-type "Review Rescinded TM List, Specify Whether to Keep or Dispose Rescinded TM" window to review and recommend disposal of TOs at the end of the required archive period.

2.20.10. **TCTO Rescission Review (paragraph 4.9).** TCMs will use the JCALS "Perform Post Publication Review" type and sub-type, and select the "Time Compliant Pubs for Rescission" review type to generate a listing of assigned TCTOs approaching rescission dates. 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.

2.20.11. **Reports.** JCALS users can access numerous reports to assist with TO and TODO (TM) Account management. These reports are grouped into Inventory, TM Index, TM Improvement, Quality Assurance, Initial Distribution, One Time requisition and TM Account areas. Procedures for accessing the reports are in the JCALS DI.

2.20.12. **TODO (TM) Accounts.** JCALS TM Account ship-to address codes (or simply TM Accounts) are established during or after the JCALS System Administration establishes and/or approves the JCALS Org Identifier for the organization entity (TODO) where the TM Account will be (or is) established. Once the JCALS Org Id and TM Account ship-to address code is established, TODO personnel (JCALS users) will complete information for the TODO TM account profile using the TM Process "Manage TM Accounts; Request a New TM Account." There are three types of TM Accounts: Standard designation (F*xxxx) for government TODOs; Contractor (E*xxxx) for non-government contractor TODOs and FMS (D*xxxx) for SAP/FMS TM Accounts.

Figure 2.1. Digitization Decision Tree.

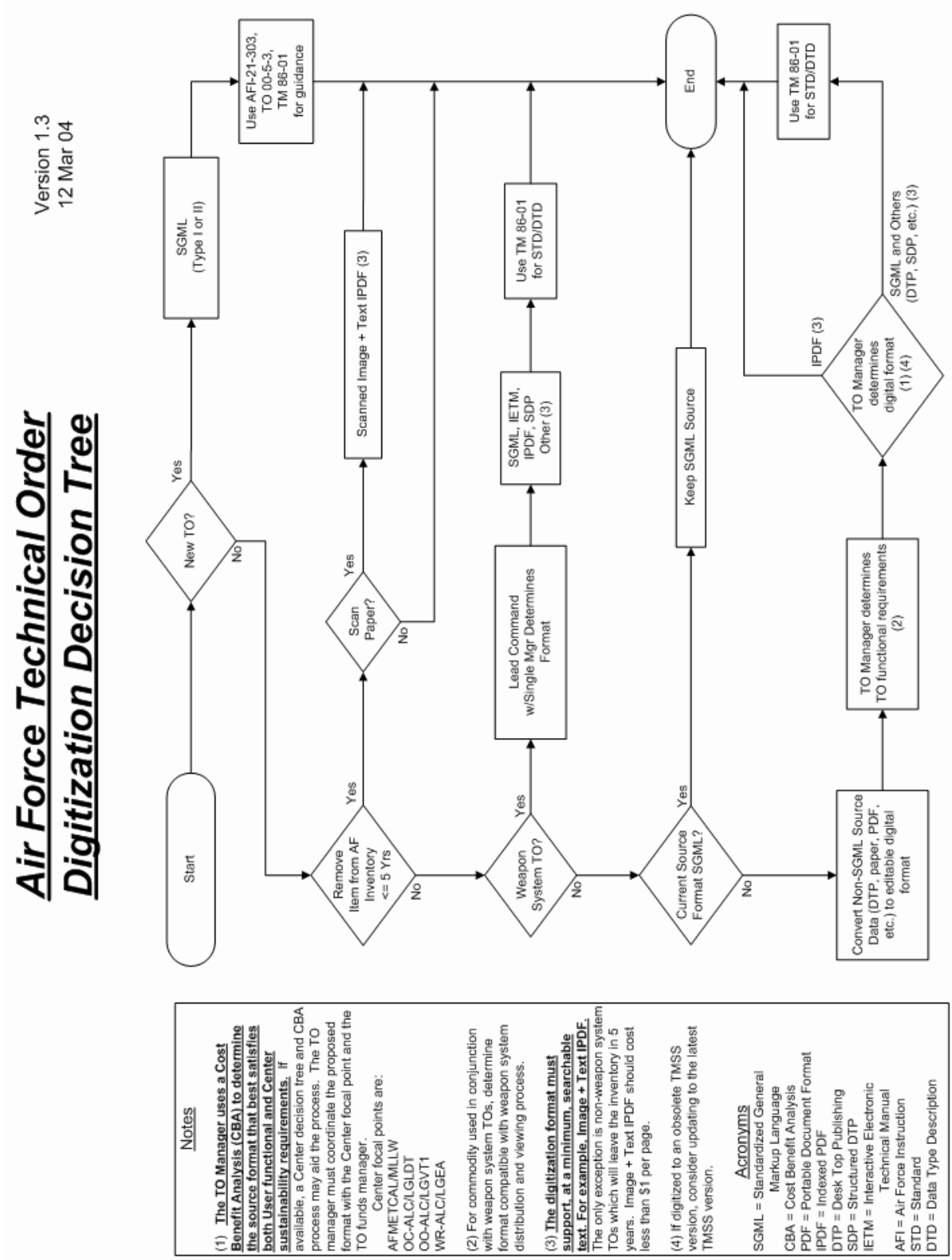

Table 2.1. Establish TM Proponent Checklist.

Is the PM (proponent) organization hierarchy defined and built on the appropriate JCALS system?	YES / NO
Have Organization-Based Access Controls (OBAC) been established properly for each organization hierarchy level?	YES / NO
Have JCALS users been identified and trained?	YES / NO
Do users have access to and know how to use the JCALS Desktop Instructions (DI)?	YES / NO
Has a JCALS system userid been established for all users?	YES / NO
Have users been properly established in the JCALS PERS table?	YES / NO
Have user roles and privileges been properly identified and assigned to users in the system?	YES / NO
Do users have computers that meet or exceed the technical requirements for JCALS access?	YES / NO
Do users have the latest versions of PC Client and X-Emulation software loaded on assigned PCs?	YES / NO
Have users attempted to log-on to the JCALS system at least once?	YES / NO
Has the site SA set up "User Profiles" to allow JCALS e-mail notifications to be sent to each user local e-mail service (e.g., MS Exchange)?	YES / NO
Has an Excel spreadsheet (containing the Proponent ID, Controlling Org (ICP), Stock Point, TO Manager userid, ES userid and Stock Item Manager userid for each assigned TO Number) been provided to the SOSC?	YES / NO
Is the Stock Item Manager for each TO Number properly assigned in the PERS table to the Controlling Organization for that TO Number?	YES / NO
Have system workflow templates been tailored and loaded for the proponent organization?	YES / NO
Have mandatory assignments / personnel on applicable workflow tasks in the system templates been properly filled out?	YES / NO
Has a Return Address Code been established for the proponent (for return address on DD Forms 1348-2 or other shipping labels)?	YES / NO
Has internal proponent routing for Incident Reporting & Tracking System (IRTS) been identified and established?	YES / NO

Chapter 3

TO RECOMMENDED CHANGE PROCESSING

3.1. Forms and Corresponding JCALS/ETIMS Functions. All TO change recommendations and submittal methods are known collectively as "Recommended Changes (RCs)." The JCALS "Recommend a TM Change" function provides system users the capability to document, submit, review, evaluate and track processing of recommended TO changes (discrepancies or improvements). The JCALS Desktop Instructions (DI) contains procedures for initiating and submitting RCs using JCALS. Non-JCALS users will continue to use the AF IMT 847/AFTO IMT 22/AFTO IMT 27 processes for submittal and review. When ETIMS becomes available, the ETIMS Recommended Change function must be used to submit, review, evaluate and provide status of proposed TO changes.

3.1.1. **JCALS Prepare TM Change Package Function.** Approved RCs from all sources (including ETIMS) are aggregated by TO and used by the TCM to develop a TO update package that will document the exact wording of approved changes for publication in the TO update. The JCALS Prepare TM Change Package function or a digital AFMC IMT 252 change package will be used until ETIMS subsumes the JCALS function.

3.1.2. **AFTO IMT 22 or JCALS "Recommend a TM Change" Screens.** TO 00-5-1 contains practices and detailed instructions for initiating, reviewing and evaluating AFTO IMTs 22. Completed forms are submitted via e-mail and, if approved, a JCALS "Recommend a TM Change" (RC) work folder is prepared by the TO Manager or TCM.

3.1.3. **AF IMT 847.** AFI 11-215 contains policy and procedures for use of AF IMTs 847 for submitting changes to Flight Manual Program (FMP) TOs. The JCALS "Recommend a TM Change" process may also be used to recommend changes to flight manual TOs. AF IMTs 847 are not entered or tracked in JCALS.

3.1.4. **AFTO IMT 27, Preliminary Technical Order (PTO) Publication Change Request (PCR)/ TO Verification Record/Approval.** TO 00-5-3 contains policy and procedures for use of AFTO IMTs 27 to report discrepancies or recommend improvements to Preliminary TOs. The forms are not entered or tracked in JCALS. The JCALS "Recommend a TM Change" process will be used to submit proposed changes for preliminary TOs only if so directed by the TO Manager.

3.1.5. **Source, Maintenance and Recoverability (SMR) Code Change Request.** The SMR Code Change Request form was developed and implemented to provide the maintenance technician with a means to recommend routine or priority changes to previously assigned SMR codes or to obtain a waiver from those codes. This form is located at the INFOCEN web page, **https://www.asc.wpafb.af.mil/infocen/**. Click on the SMR info button and this will take the user to the Document Routing Entry And Mail Submitter (DREAMS) SMR web page. This page provides the capability to access the SMR Code Change Request form, provides a DREAMS SMR user manual and other data needed to submit an electronic SMR Code Change Request. All TO users should be using DREAMS to submit their SMR Code changes. Changes can be recommended to any and all of the five positions of the SMR code. The form will not be used to request initial assignment of an SMR code – instead, submit an AFTO IMT 22 in accordance with TO

00-5-1 and TO 00-20-3,. *Maintenance Processing of Reparable Property and The Repair Cycle Asset Control System*, Table 6-1. Once a recommendation for SMR code change is approved, the TCM will enter the relevant data into a JCALS "Recommend a TM Change" screen for updating the TO.

3.1.6. **AFMC IMT 202.** Depot maintenance activities will use the AFMC IMT 202 to request and receive technical data for procedures and repairs beyond existing TO authority, according to **Chapter 5** of this manual. AFMC IMTs 202 are not entered or tracked in JCALS. When the new technical data will be permanent, the data will be included in TOs through use of the JCALS "Recommend a TM Change" process or a digital AFMC IMT 252.

3.1.7. **AFMC IMT 252.** The TO content manager (TCM, FMM, or TO Manager) may use a digital AFMC IMT 252 as an alternative to aggregating approved RCs in JCALS and to document word-for-word changes for the specified TO update.

3.1.8. **ETIMS Technical Order Recommended Change.** ETIMS will provide a single screen format for electronic submission of proposed corrections and enhancements to both flight and non-flight manual TOs. Workflows will route the formats for review and evaluation IAW AFI 11-215 and TO 00-5-1 procedures.

3.2. Process Recommended TM Changes.

3.2.1. **General.** This chapter provides procedures for processing of RCs received on any of the above forms or JCALS functions. The AFTO IMT 22 is used for illustration purposes, but similar procedures may be used with approved changes originally submitted on any of the above forms. Initiators will complete and submit digital forms via e-mail IAW TO 00-5-1, or enter recommended changes directly into a JCALS "Recommend a TM Change" screen. RCs entered directly into JCALS are automatically routed to the TO Manager by the system.

NOTE: Proposed changes to nuclear weapon TOs managed by AAC/NWLT or EOD TOs managed by the Naval EOD Technology Division are submitted only on AFTO IMTs 22 and not entered or tracked in JCALS at this time.

NOTE: Exceptions to processing times are specified in **paragraphs 3.2.2.1.**, **3.2.2.2.**, **3.2.6.1** and **3.2.6.2**.

3.2.2. **TO Manager Procedures.** Upon receipt, the TO Manager will process an RC within the time limits specified in **Figure 3.1**. The TO Manager will establish routine update schedules for all assigned TOs, depending upon data criticality and volatility, and which meet the **Figure 3.1** time limits. Aggregate all routine RCs received after the cut-off date (publication freeze date) of the previous update and prior to the cut-off 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 TO Manager. The periods end when an update is distributed or the RC is disapproved or determined to be a duplicate submission.

3.2.2.1. Exceptions to Evaluation Time. Recommended Changes (RCs) placed in Abeyance, Advisement or Deferred status (TO 00-5-1) are exempt from the time limits specified in **Figure 3.1**.

3.2.2.2. SAP/FMS Procedures. The above policy does not apply to AFTO IMTs 22 received from foreign countries under the Security Assistance Program (including FMS cases) when contractual arrangements (including FMS cases) have been made to maintain the currency of the respective TOs (TO 00-5-19).

3.2.2.3. Enter the "Date Received" at the top of the form. Ensure block 2 of AFTO IMTs 22 has the name and DSN of the initiating MAJCOM Command Control Point (CCP) Point of Contact (POC) entered, and is checked "Approved." (***EXCEPTION:*** If the Initiating MAJCOM is the Lead Command, only block 3 is completed.) Also ensure RCs against weapon system TOs have entries in block 3 for the Lead Command CCP (unless the weapon system TOs have been exempted from Lead Command review by a TO 00-5-1 supplement). Return incomplete and disapproved RCs to the initiator. RCs initiated in JCALS are automatically routed by JCALS locally created workflow templates for base and command review before being submitted to the TO Manager.

3.2.2.4. 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 in accordance with TO 00-5-1. Return a copy of all RCs to the initiator and reviewing agencies to provide status. The JCALS workflow manager (WFM) forwards JCALS RCs automatically.

3.2.2.5. 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 in accordance with TO 00-5-1, Chapter 9 (section on TO Change Procedures), including multiple RCs submitted to correct a single deficiency.

3.2.2.6. Input approved RCs into JCALS by importing (saving) the digital RC file and any attachment files into JCALS as part of the recommended change work folder. TO Managers will transcribe mandatory information for approved RCs from the above forms into a JCALS "Recommend a TM Change" screen, and include digital copies of the saved forms and any attachments (if applicable) into the resulting JCALS - work folder. Complete the following mandatory fields in the "Recommend A TM Change" screen:

- Local Control No**.** Field**:** Enter the Local Control Number from AFTO 22 block 5, or equivalent control numbers from other forms, or for internally prepared RCs, develop a number according to **paragraph 3.2.5.1**.
- Select the correct priority level.
- Use the publication no. chooser button to select the affected TO. ***NOTE:*** The affected TO must have a corresponding JCALS TM Index record.
- Enter information into at least two of the following fields: page no., paragraph no., figure no., table no., function no., and/or line/item/step no. fields.
- Briefly describe the discrepancy in the **SHORT DESCRIPTION OF DEFICIENCY** field. The information entered in this field will be used to assist with identifying the RC, so be as descriptive as possible.

- Either reference the source AFTO 22 files in the deficiency field, or enter a complete description of the discrepancy, and identify the military system or commodity when

not included in the TO number. Identify commodities by Model/Design/Series (MDS) or Type/Model/Series (TMS) and NSN or part number. Omit for general and MPTOs. Include the RC Type ("correction" or "improvement" – AFTO 22 block 7).

- Either reference the source AFTO 22 files in the recommended TM change field, or complete in accordance with instructions for the AFTO IMT 22, block 20 (TO 00-5-1, Chapter 9). Include the estimated savings (blocks 21 & 22), and Innovative Development through Employee Awareness (IDEA) program benefits and amount (block 28). Include IDEA benefits justification in the RC - work folder.

- Select the "Save" option to save the RC to the - Work folder (record the name and JCALS control number for future reference). Use the JCALS "- Work folder Manager" function to import the digital AFTO IMT 22 (or other RC form) file and any attachment files into the RC -.

3.2.2.7. Ensure the TCM has entered ITOs containing permanent TO changes into JCALS RC screens.

3.2.2.8. Determine the copy freeze date for each assigned TO. Aggregate applicable approved RCs into a JCALS TM Change Package, and submit the completed TO package in a - for publication according to the DI. A local workflow will route packages to the appropriate in-house or contract editorial and publishing function. Use the AFMC IMT 252 as an alternative to JCALS in the event that JCALS is not available to the TO Manager, TCM or editorial and publishing function.

3.2.2.9. Provide any special instructions in the change package work folder (e.g., the list of TO increments to be listed in the title page supersede notice). When "Special Handling" AFMC IMTs 252 or RCs (SH252/SHRC) and AFMC IMTs 202 (**Chapter 5**) are incorporated, include the applicable project numbers in the supersede notice.

3.2.3. **TCM RC Procedures.** Evaluate all content RCs received from the TO Manager. Ensure the RC is appropriate and accurate in every respect. Ensure it complies with the applicable specification for depth of coverage and reading grade level (RGL).

3.2.3.1. All RCs which could affect the end item OSS&E **must** be coordinated with the program Chief Engineer or equivalent prior to approval (see **paragraph 1.4.3**).

3.2.3.2. The TCM will initiate a JCALS "Recommend A TM Change" screen (see **3.2.2** and the DI) for emergency RCs (ITO messages) and internally generated RCs. If the TCM is not a JCALS user, responses to an emergency RC will be made using an AFTO IMT 22 (or AF IMT 847 for FMP publications), and internally generated changes will be documented on an AFMC IMT 252. All RCs will have a Local Control Number (LCN).

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

5	1M	OCLAHTA	5	001	
5					Identifies the RC as FMM, TO Manager or TCMgenerated
	1M				Command Designator Code for AFMC
		OCLAHTA			Preparing activity (e.g., 63, HQ, AAC, AG, ASC, ESC, SMC, MSG, OC, OO, WR, etc.) and initiator office symbol (must total 7 characters; use preceding zeros if needed).
			5		Last digit of current calendar year.
				001	Control number; start with 001 each calendar year.

3.2.4. **RC Completion.** Update the recommendation status (TO 00-5-1) on the screen. Complete the "Disposition" field of the RC screen. Use the exact wording which should be included in the TO for the approved recommendation. Other actions include inputting or changing the priority (default is "Routine"), changing the values of tangible benefits and/or changing benefits from tangible to intangible when appropriate.

3.2.4.1. Use the following guidance in conjunction with TO 00-5-1 when assigning Status Codes in JCALS:

- Abeyance: The maximum allowable time is one year after receipt of the RC for evaluation, plus 180 days for publishing and distribution.
- Advisement: The resolution date will be the maximum RC processing time, extended by any advisement periods.
- Duplicate: Enter the previous AFTO IMT 22 or IDEA number, or other source for the original recommended change in the Remarks block. Duplicate status closes the RC.
- Approved: Improvements are considered approved if the intent of the recommendation is incorporated in the TO even if the wording is changed.
- Deferred: Do not defer minor corrections to TOs distributed and used in digital formats. ***NOTE:*** "Deferred" is not a choice in JCALS. If a change managed in JCALS must be deferred, use "Abeyance."

3.2.4.2. JCALS does not support the formerly-used status codes for "Being Evaluated," "Deleted," "Distributed," "Priority Change from," "Publication," "Renumbered TO," "Rescinded," or "Transferred to ALC." The replacement JCALS codes are:

- Saved – Indicates the TO Manager has initiated work on the RC, but is awaiting further information before submitting it to the evaluator (TCM).

- Active – When the RC has been submitted to the TCM for evaluation.

- Interim Reply – Interim status has been provided to the initiator.

- Validated – Optional selection for the TO Manager or TCM, depending on the

extent of the change and if a contractor developed the procedures.

- Verified – Optional selection for the TO Manager or TCM depending on whether the change required verification.

3.2.4.3. For Emergency recommendations, include a copy of the Interim Operational or Safety supplement (IOS or ISS), RAC, or ITCTO (see AFMCI 21-302), or priority downgrade message in the "Recommend a TM Change" - . Coordinate priority downgrades with the initiating MAJCOM CCP. The TO increment or notification message of downgrading, duplicate RC, or RC disapproval is the only reply to initiators required. Submit coordinated and approved priority ITOs and recommendations to the TO Manager for publication of a formal TO update if required.

3.2.4.4. Reply to Initiator. Reply to initiators using the originally submitted RC form attached to an e-mail, or through the JCALS WFM if originally submitted as a JCALS RC. Document approval/disapproval and processing status changes on the originally submitted RC (digital form, **paragraphs 3.1.1** through **3.1.7**). Status of RCs submitted through ETIMS is automatically tracked and reported by the system.

- F IMT 847: complete according to AFI 11-215.
- AFTO IMT 22: complete blocks 23 through 28. Block 24 must include the TCM name, rank, DSN, and e-mail address. When required, block 25 must contain the same information for the TCM supervisor. Use copies of the original RC to make "Interim Replies" as required, when downgrading, changing status to advisement or abeyance, or when limiting factors prevent publishing TM updates immediately. Block 28 does not require completion for interim replies.

3.2.4.4.1. Use AFTO IMT 22 blocks 26 & 27 and the Continuation block to report other actions to the initiator, whether the status is advisement, abeyance, approved, disapproved, or duplicate. Complete block 27, Remarks, explaining all actions taken to the initiator, except for abeyance which requires no comments. Enter justification for downgrading the urgency and/or changing the values entered in blocks 21 & 22. Do not change the AFTO 22 "type" (Improvement or Correction) without the concurrence of the Lead Command or MAJCOM CCP. Include reasons for any modifications to the recommended change and for considering the RC a "duplicate" (if applicable). Also, enter justification for awarding intangible versus tangible IDEA benefits (block 28), or for changing the calculation of tangible benefits for approved "improvement-type" RCs.

3.2.4.4.2. All approved RCs must be coordinated with affected functional OPRs (see **paragraph 3.5.4**) prior to signature and final approval.

3.2.4.4.3. Enter the date the reply is dispatched from the PM/SCM in block 23. Sign block 24 if a supervisor signature is required in block 25. When authorized to release the reply, the TCM may sign block 25 (TO 00-5-1). The electronic copy returned to the submitter and reviewers may have "//SIGNED//" entered in AFTO IMT 22 blocks 24 and 25, while a signed copy is kept on file for two years or until incorporated (whichever is longer) by the TCM. Complete block 28 on all approved "Improvement-type" AFTO IMTs 22.

3.2.4.5. When the TCM has made an interim reply, follow-on replies must be made on or before the specified resolution date. Complete follow-on replies as specified above.

3.2.4.6. Return the annotated copy of the AFTO IMT 22 via e-mail to the addressees in blocks 1, 2, 3, 8 and 9 any time the status changes. A copy of the completed JCALS "Recommend a TM Change" screen may be attached.

3.2.5. **RCs Applicable to Multiple TOs.** Technical data are sometimes contained in or affect related data in multiple TOs whose responsibility belongs to different PM/SCM organizations. The TCM responsible for preparing a change package to any TO must make every effort to identify all affected TOs, and coordinate with and submit corresponding changes to the responsible TCMs.

3.2.6. **RCs Applicable to Depot TOs.** Provide an information copy of RCs affecting depot maintenance TOs to the maintenance directorate for planning purposes.

3.3. Evaluating Recommended Changes (RCs) on Joint Service TMs.

3.3.1. **Air Force-Managed TMs.** Handle proposed changes to Joint Service TMs managed by the Air Force (cognizant activity code F) according to **paragraph 3.2**.

3.3.2. **Other Component-Managed TMs.** The assigned Air Force TO Manager handles receipt and JCALS entry of proposed changes to Joint Service TMs managed by another DoD component the same as for an RC against an Air Force TO.

3.3.3. **Procedures for TMs Managed by Other DoD Components.** The Air Force TCM evaluates the recommended TM improvement and determines required actions. (***NOTE:*** Downgrading RC priority is not appropriate when the TM is the responsibility of another DoD component.) If there is no assigned AF TCM, the TO manager will forward RCs to the managing component for evaluation.

3.3.3.1. For AF-approved RCs, the TO Manager or TCM issues an Air Force-only routine supplement in accordance with TO 00-5-1. The TCM then routes the JCALS "Recommend A TM Change" - or an information copy of the approved AFTO IMT 22/AFMC IMT 252 to the responsible DoD component according to AFJI 21-301.

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

3.3.3.3. When an RC is placed in Abeyance or Advisement status, notification of the responsible DoD component is not required. Process the RCs according to **paragraphs 3.3.3.1** or **3.3.3.2** after approval or disapproval. Do not refer duplicate RCs to the other service. Do not use "Deferred" status for RCs against other service TMs.

3.3.4. Rescind any AF-only supplement if the managing component incorporates the change in the TM.

3.4. Processing Innovative Development through Employee Awareness (IDEA) Program Packages. TO 00-5-1 and AFI 38-401, *The Air Force Innovative Development through Employee Awareness (IDEA) Program*, specify the general policies and procedures for handling IDEA inputs (suggestions) affecting the TO System.

3.4.1. **Stand-Alone Ideas.** Answer a stand-alone idea which causes a TO change using the IDEA Program Data System (IPDS, **https://ipds.mont.disa.mil/IPDS**). Enter

approved changes into JCALS according to **paragraph 3.2.2** and the DI. Retain the JCALS "Recommend a TM Change" - implementing approved changes, including any documentation used to calculate tangible or intangible savings, for two years IAW Air Force Records Disposition Schedule (**https://webrims.amc.af.mil/rds/index.cfm**).

3.4.2. **Confirmatory Ideas.** The Idea Analyst will automatically approve a confirmatory Idea based on an approved "Improvement-type" RC , and base the award on AFI 38-401 and the information provided in the RC. "Correction-type" RCs are not eligible for monetary recognition.

3.4.3. **Disputing Findings.** If the initiator disputes the IDEA 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.

3.5. JCALS "Prepare TM Change Package" Procedures. The "Prepare TM Change Package" function must be completed for all TO update actions, including issuance of RACs and to incorporate (replace) interim safety and operational supplements with a formal TO update. It is not required to issue an IOS or ISS. ***NOTE:*** Recommended changes which have not been entered into the JCALS system will not be available to the "Prepare TM Change Package" function. RCs (and ITOs) to be included in a TO update must be entered in JCALS, or require using an off-line, work-around process (such as the digital AFMC IMT 252 process) to prepare a TO change package.

3.5.1. **TO Manager Procedures.** The responsible TO Manager will consolidate approved TO change packages from all sources affecting the same TO using the JCALS "Prepare TM Change Package" process. Include all approved technical RCs stored in JCALS prior to the time limit specified in **Figure 3.1**. Routine editorial RCs (typos, non-technical 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 (**paragraph 3.2.2**) and user-submitted changes. Complete the JCALS "Prepare TM Change Package" screens in accordance with procedures in the DI. The system will create a - and include the selected RCs and any applicable attachments.

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

3.5.1.2. The TO Manager will prepare an AFTO IMT 124, **Computation of Technical Order Reading Grade Level**, 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 thru 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 according to MIL-HDBK-1221. Do not reject or rewrite the manuals solely for RGL.
- MIL-STD-38784 specifies an RGL of "9" for Air Force TOs. ***NOTE:*** The grade level can be tailored during the contracting process.

3.5.1.3. The TO Manager will obtain (or ensure the TCM has obtained) an Environmental Assessment if there are any environmental impacts (see AFI 32-7061, *The Environmental Impact Analysis Process*).

3.5.1.4. Routing and Coordination. Route the change package (work folder) as follows:

3.5.1.4.1. The Chief Engineer will check technical and procedural changes to verify the system or equipment OSS&E certification (AFI 63-1201) has not been affected. (This step is required even if individual RCs had already been reviewed, because of possible interactions between different proposed changes.)

3.5.1.4.2. Obtain a Nuclear Surety Technical Evaluation (**paragraph 1.7**) on change packages affecting Nuclear Surety Procedures (NSP) or Hardness Critical Items (HCI).

3.5.1.4.3. The applicable Center/Base Safety Offices will coordinate 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.) (See **paragraph 1.6**).

3.5.1.4.4. The specialized functions listed in TO 00-5-1, Table 5-1 (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. ***NOTE:*** ALC organizations designated to provide Level III NDI services may provide NDI coordination, but must provide a copy of the - to the AF NDI POC, AFRL/MLS-OL, 4750 Staff Dr, Tinker AFB OK 73145-3317.

3.5.1.4.5. Coordinate change package (work folders) applicable to military systems or commodities operated by foreign governments (e.g., FMS and European Participating Air Force) with AFSAC. AFSAC Country Managers initiate development of related updates to CSTOs.

3.5.1.4.6. Coordinate change packages with applicable Scientific & Technical Information (STINFO), Security, Legal, FDO and PA offices to validate or change distribution limitations for both the change or revision and the basic TO.

3.5.1.4.7. Obtain a releasability review from the FDO on all TO changes affecting restricted distribution TOs that are issued to foreign customers. If an update does not contain any restricted data, and the TO itself was releasable, the FDO does not need to coordinate on the change package. However, if the update DOES contain restricted data (or the TCM thinks it might be restricted data) then the coordination workflow must include the FDO. The FDO enters applicable country codes or “Not Authorized for Release”. ***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 TO Manager will enter a non-release statement in the Remarks block.

3.5.1.4.8. Coordinate change packages impacting commodity items managed by other Product Groups with the responsible group.

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

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

3.5.1.5.1. AFMC IMTs 252 or JCALS RCs generated from AFTO IMTs 22 initiated by the AF Primary Standards Laboratory (AFPSL), or issued against Test, Measurement & Diagnostic Equipment (TMDE) TOs or ICBM Depot Control Manuals (**paragraph 3.7**), 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.

3.5.1.5.2. AFMC IMTs 252 or JCALS RCs generated from work stoppage or anticipated work stoppage AFMC IMTs 202 submitted by depot maintenance will be stamped or marked "Special Handling" (**see Chapter 5**) prior to depot implementation.

3.5.1.5.3. Updates approved for early implementation in Interactive Electronic Technical Manuals (IETM) will be merged with the IETM data base and published by the TO Manager on a secure server with access by authorized users only.

3.5.1.5.4. All TO updates approved for early implementation must be routed through the TO Manager to the affected TODOs. AFTO IMTs 22 will NOT be authorized for early implementation.

3.6. TM Change Package Processing. The responsible TO Manager will:

3.6.1. **Screen and Submit Change Packages.** Screen all TM Change Packages to ensure required data is current and complete, properly coordinated and includes all RCs specified for the next TO update. Submit approved change packages to the editorial function for publication of the TO update (specifying the update type), and distribute in the next routine update cycle for the TO. A first-level or higher level supervisor must approve urgent or priority publication of TO change packages.

3.6.2. **Record Copy.** Archive a copy of the package in the JCALS - for the TO.

3.6.3. **TO Training Update.** Provide copies of coordinated and approved TM Change Package - work folders on the 00-5-series TOs to 362 TRS/TRR (AETC), 613 10th Ave, Sheppard AFB TX 76311, to facilitate update of TO System training courses.

3.7. RAC Notification, Distribution and Time Limits. A RAC is an interim TO update (Supplement) loosely formatted as a TO Change and distributed like an ITO/ITCTO. It is prepared using PC desktop publishing or word processing software and saved as an Adobe™ portable document format (*.pdf) file.

3.7.1. **Notification.** When a RAC is issued (normally by posting on a web page), notification is sent (E-mail or DMS message) to all affected TODOs as required in AFMCI 21-302.

3.7.1.1. It is crucial that TO Managers or their designees manage assigned Defense Message System (DMS) Address Lists or Personal Distribution Lists (ALs or PDLs)

aggressively in order for the notification process to work effectively. The manager must periodically pull a JCALS publication (TO) ID (subscription) report for managed TOs, to confirm that all TODO TM Accounts are included on the DMS AL or PDL being utilized. OC-ALC/LGLU (the Air Force TO Archive) must be an addressee on all ALs and PDLs. Note that because user names and passwords must be included in notification messages for restricted distribution data, regular non-secure e-mail can only be used for notifications about unclassified, public release T O s and RACs. (***WORKAROUND:*** Send two e-mails: the user name in one e-mail, and the password in another.)

3.7.1.2. The TCM or TO Manager will send a RAC notification message to all affected TODO TM Accounts using any method which will meet the security requirements and time limits listed below. The preferred RAC notification method is to send an encrypted message to each affected base using an AL or PDL. The message will contain the affected TO number and title, the RAC number and date, criticality (Emergency or Urgent), the file names and sizes of the merged TO (if applicable) and RAC files (the size is required to ensure users have enough hard drive space to successfully accomplish the download). The message must also provide either the e-mail transmission date and time (when distributing via e-mail) or the IP address, user name and password for accessing the FTP site where digital RAC files are hosted (when distributing via FTP). When individual TO files are also password protected, the file passwords will be included in the message. Messages must include a point of contact and phone number to call in case of any technical problems.

3.7.2. **Distribution.** Any one of three methods of RAC distribution described below may be used. The Internet method is preferred:

3.7.2.1. Internet. RACs against TOs used digitally will be merged electronically with the affected baseline TO and both the merged file and the stand-alone RAC file will be loaded on a limited-access “https” or “ftps” site. Only the stand-alone RAC will be loaded on the site when the affected TO is paper only. TODOs will be notified of the update by message.

NOTES:

1. Classified TO files must be password protected and encrypted (AFI 33-129), and loaded on an access-controlled (domain or user name and password) https or ftps site.

2. RACs for distribution statement "A" TOs may be hosted on public web sites.

3.7.2.2. E-Mail. For smaller TOs (file size less than 2MB) and a limited user base, the merged TO file and/or stand-alone RAC file could be distributed to TODOs as e-mail or DMS attachments. Set the e-mail options to obtain confirmation of message receipt.

3.7.2.3. Physical Distribution. When one of the above procedures cannot be used, priority mail or package services may be used to deliver paper or digital copies of RACs on computer disks.

3.7.3. **Time Limits.** RAC issue and notification time limits are as follows (TO 00-5-1, Chapter 9):

3.7.3.1. EMERGENCY – issue RAC and notification message within 48 hours after receipt of an emergency report (within 72 hours if report concerns work stoppage).

3.7.3.2. URGENT – issue RAC and notification message within 40 calendar days after receipt of an urgent report.

3.7.3.3. Notification Message Priorities – EMERGENCY RAC notification messages are sent using DMS Immediate precedence, and must be delivered within 2 hours of receipt. URGENT notification messages are sent using Priority precedence, requiring delivery as soon as possible during duty hours.

3.8. 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.

3.8.1. **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.

3.8.2. **Deficiency Reporting.** Deficiencies in CDMs are reported by AFTO IMT 22 or JCALS "Recommend a TM Change" screen against the control manual TO number. Block 19 of the AFTO IMT 22 or the "Deficiency" field of the RC will list the CDM number as well as the deficiency noted and recommended corrective action.

3.8.3. **Processing.** JCALS RC and "Prepare TM Change Package" procedures and workaround described in **paragraph 3.5** apply to control manuals and CDMs.

3.8.3.1. 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.

3.8.3.2. The JCALS RC "Local Control Number" will be listed in the rescission notice of the control manual and CDM changes incorporating it.

3.8.4. **Implementation.** The depot level maintenance activity posts a printout of an "Approved for Implementation/Special Handling" JCALS RC - 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.

Figure 3.1. Recommended Change Processing Time Limits.

Report Category	Function	Time Allotted	Condition and Action
USAF TOs AND JOINT SERVICE TECHNICAL MANUALS MANAGED BY AIR FORCE (Cognizant Activity Code "F")			
Emergency (Issue RAC or ITO within 48 hours)	TO Manager	1 hour	Record receipt and deliver/forward to evaluator.
	TCM	47 hours	APPROVED: Prepare and provide electronic Rapid Action Change (RAC) package via FTP/e-mail and transmit RAC Notification message via DMS, or transmit electronic Interim TCTO. Complete the reply portion of an AFTO IMT 22 or JCALS RC and deliver to the TO Manager with a copy of the RAC/ITCTO issued.
			DISAPPROVED/DOWNGRADE: Transmit a message citing reasons for action to the responsible organization, including as information addressees on the message all information addressees from the original RC. Complete the reply portion of an AFTO IMT 22 and deliver to the TO Manager with a copy of the message form. Continue processing of the downgraded RC in accordance with instructions for the new category.
Sub-Total for ITO/ RAC		48 hours	
(Follow-on formal TO update – 40 days total)	TO Manager	8 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.
	Administration	30 days	Print and distribute the update incorporating an ITO.
Total		40 days	
Urgent (formal update – 40 days)	TO Manager	2 hours	Record receipt and forward to evaluator.
	TCM	10 days	APPROVED: Complete evaluation using reply portion of the AFTO IMT 22 and enter into JCALS "Recommend a TM Change," or complete evaluation of RC submitted in JCALS; and forward to the TO Manager. Forward one copy of the AFTO IMT 22 to each activity shown in Blocks 1, 2 and 3.

Report Category	Function	Time Allotted	Condition and Action
			DISAPPROVED/DUPLICATE/ADVISEMENT/ DOWNGRADE Complete the reply portion of the AFTO IMT 22 or RC; enter reasons for action in Block 27; forward one copy each to activities shown in Blocks 1, 2 and 3, and to the TO Manager. Continue processing of downgraded RCs in accordance with instructions for Routine RCs.
	TO Manager	8 days	Compile approved RCs into draft TO update.
	Administration	22 days	Print and distribute.
Total		40 days	
Routine	TO Manager	1 day	Record receipt and forward to evaluator.
(365 days – includes Advisement/ Abeyance time)	Evaluator	45 days	APPROVED: Complete evaluation using reply portion of the AFTO IMT 22 and enter into JCALS "Recommend a TM Change," or complete evaluation of RC submitted in JCALS; and forward to the TO Manager. Forward one copy of the AFTO IMT 22 to each activity shown in Blocks 1, 2 and 3.
			DISAPPROVED/DUPLICATE/ADVISEMENT: Complete reply portion of the AFTO IMT 22; enter reasons for action in Block 27; forward one copy each to activities shown in Blocks 1, 2 and 3and to the TO Manager.
			ABEYANCE: Complete reply portion of the AFTO IMT 22 and forward one copy each to activities shown in Blocks 1, 2 and 3and to the TO Manager.
	TO Manager	274 days	Combine all approved routine RCs received during the period between the last update and current copy freeze date. Prepare or procure reproducible master for TO update. (***NOTE:*** When an Approved RC is later Deferred, furnish copy of the AFTO IMT 22 with reasons for the action to activities shown in Blocks 1, 2 and 3.)
	Administration	45 days	Print and distribute TO update.
JOINT SERVICE TECHNICAL MANUALS MANAGED BY ANOTHER DOD COMPONENT (Cognizant Activity Code: A - Army; C - Coast Guard; D - Defense Logistics Agency; M - Marine Corps; or N – Navy). Processing will be accomplished as indicated for USAF TOs, with the following additions/exceptions:			

Report Category	Function	Time Allotted	Condition and Action
	Evaluator		APPROVED: The incorporating issue will be an AF supplement to the Joint Service Technical Manual; a copy of the Approved AFTO IMT 22 will be furnished to the responsible DOD component.
			DISAPPROVED: A copy of the disapproved AFTO IMT 22 will be furnished to the responsible DOD component
			DUPLICATE/ADVISEMENT: A copy of the AFTO IMT 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 IMT 22 is not appropriate when the publication is managed by another DOD component.
	TO Manager		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.

Chapter 4

TIME COMPLIANCE TECHNICAL ORDERS (TCTO)

4.1. General. TCTOs provide instructions for modifying military systems or commodities, initiate special "one time" inspections or impose temporary restrictions on systems or equipment within specified time limits. TCTOs for fielded systems and equipment are planned, prepared and issued by the responsible ES/TCM (or modification manager) under the authority of the affected system/equipment PM/SCM. The TO Manager is responsible for assisting an ES/TCM or Modification Manager with the development and publication of TCTOs and related TO Updates. TO 00-5-15 prescribes policies and procedures for modification of systems and equipment during acquisition, and for managing the Air Force TCTO system.

4.1.1. **Approval.** Configuration change TCTOs must be authorized by the PM Configuration Control Board (CCB) in accordance with AFPD 63-11, *Modification System*, and AFI 63-1101, *Modification Management*, based on contractor inputs (through the ECP process), a MAJCOM Program Management Directive (PMD), or from an organic change proposal or Materiel Improvement Project (MIP). TCTOs will be coordinated with all affected using commands and single managers/chief engineers of other affected systems and/or commodities as early in the process as possible.

4.1.2. **Development.** Once the engineering change is approved by the PM CCB, prototype kits and preliminary TCTOs and related TO Updates are developed. Prototype TCTO kits will undergo trial installation. Kits are then prepared and TCTO verification conducted. Following completion of the TCTO/related TO Update verification, TCTO kits are produced and TCTOs and TO Updates are published. Preparation and release of TCTOs concurrently with the release of the TCTO kit is Air Force policy and is the responsibility of the PM. Following completion of the modification program, verified through system configuration management records, the ES/TCM or Production Management Activity (PMA) will notify the TO Manager to rescind the TCTO.

4.1.3. **Inspection TCTOs.** Inspection TCTOs are non-configuration change TCTOs issued to accomplish a one-time inspection, inspection and replacement of hardware with like serviceable items, inspection and repair in accordance with system/equipment repair manuals, or any similar requirement which does not change form, fit, or function. The affected PM Division Chief may authorize non-configuration change TCTOs.

4.1.4. **Forms Used.** There are three important forms that are used to document key information concerning equipment modifications and the TCTO required to implement the inspection or modification. The AFMC IMT 873, Time Compliance Technical Order Requirements, documents the plan and requirements for accomplishing a TCTO. The AFMC IMT 874**, Time Compliance Technical Order Supply Data Requirements**, is used as an assembly document for all supply information required to ensure TCTO/TCTO Kits are available before the TCTO is released. The AFMC IMT 875, **Time Compliance Technical Order Programming Document**, serves as a checklist for the PM to determine when all logistics actions are accomplished to support the completion of a TCTO and related TO Updates.

4.1.5. **Changing TCTO Instructions.** Additional or changed data which supersedes, replaces or supplements instructions in any TCTO must be issued by a formal TCTO supplement or replacing TCTO (interim or formal copy). Technical information will not be issued in letter or message format. See TO 00-5-15 for exceptions.

4.1.6. **Depot Field Team Support.** When a TCTO requires depot support or traveling team accomplishment in accordance with TO 00-25-4, *Depot Maintenance of Aerospace Vehicles and Training Equipment*, the TCM or PMA ensures advance information regarding work requirements is provided to the affected PM depot maintenance activity, to allow planning for the use of internal assets and resources.

4.1.7. **Safety TCTOs.** The corrective actions for safety deficiencies that impose "remove from service" or flight restrictions are issued in a TCTO.

4.1.8. **Coordination.** The PM activity preparing the TCTO for the corrective action coordinates the TCTO with all other PMs involved. Compliance times for TCTOs resulting from permanent modifications are recommended by the PM IAW TO 00-5-15, and coordinated with the MAJCOM as part of the modification certification, coordination and approval CCB process.

4.1.9. **Release Instructions.** Some conditions may require accomplishment of more than one TCTO before lifting of restrictions. When such conditions arise, a TCTO supplement is prepared by the responsible PM giving proper release instructions.

4.1.9.1. Under no circumstances will the PM include releasing statements in the corrective action TCTO. The PM issuing the corrective action TCTO provides the TCTO number to the end item PM as early as possible.

4.1.9.2. TCTOs affecting FMP publications must be coordinated with the Flight Manual Manager. Flight Manuals must be updated concurrently with affected maintenance TOs.

4.1.10. **Updating Affected TOs.** TCTOs must NOT direct write-in changes to related TOs.

4.1.10.1. TO and Flight Manual updates for immediate action TCTOs are provided by RACs, ISSs or IOSs issued concurrently with the Interim TCTO IAW TO 00-5-1 and AFMCI 21-302. Updates supporting urgent action TCTOs may be issued as interim supplements or formal TO updates.

4.1.10.2. If a routine or urgent action TCTO results in changes of TO or Flight Manual procedures, the TO updates are submitted through the JCALS "Recommend a TM Change" and "Prepare TM Change Package" or AFMC IMT 252 functions according to **Chapter 3**, concurrently with the TCTO package (or publication lead time prior to the TCTO submission) to ensure release prior to or concurrently with the TCTO. TO update packages containing both "before" and "after" data may be submitted and published up to 6 months prior to TCTO release.

4.1.10.3. Any time the driving TCTO is changed or placed in Abeyance, updates to the affected TOs must be reviewed and amended if necessary.

4.1.11. **Changing TCTO Urgency.** The urgency of a published TCTO may be changed by issuance of a TCTO supplement or replacement TCTO. The action requires approval at the same level as the original TCTO approval authority.

4.1.12. **TCTO Verification.** Verification of TCTOs and related TO updates, with or without kits, is mandatory. Verification must include checking for possible interaction with other proposed or on-going TCTOs to the same system or end item. Verification will be documented on an AFTO IMT 82, **TCTO Verification Certificate**. All related TO updates will be listed in block 14 of the AFTO IMT 82 with an annotation of acceptability. A waiver of verification by performance must be documented on the AFTO IMT 82 in accordance with TO 00-5-15. TCTO and TO deficiencies noted in block 12 of the AFTO IMT 82 must be corrected prior to release of the TCTO and kits to installing activities.

4.1.13. **Production Management Functions.** Upon receipt of a TCTO or a procurable modification data package from a TCM and a kit assembly package from the Program Manager, the responsible end item or commodity PMA performs the below management functions for permanent modifications:

- Preparing purchase requests for, or initiating action to assemble related kits.

- Preparing required status reporting documentation for the Systems and Equipment Modification Maintenance System (G079) and required funds obligation forms for entry into the Control Procurement Accounting System.

- Ensuring TCTOs are verified, using TCM assistance as required.

- Ensuring the completion of an AFTO IMT 82 and maintaining it in the TCTO file.

- Maintaining kit delivery and distribution schedules.

- Ensuring logistics support (spares, affected TO updates, data and Support Equipment [SE]) is available concurrently with release of the TCTO and kits.

- Managing the accomplishment of the TCTO or modification to the affected military system, commodities and affected spares as required, and tracking compliance.

- Rescinding TCTOs or extending rescission dates as necessary.

- Initiating requests for proper disposition action on any excess kits.

- Ensuring the computer program (software on the appropriate medium, if required) has been prepared by the responsible computer resources activity and sufficient quantities are available for concurrent distribution with the TCTO and any applicable TO updates.

4.1.14. **Single-TCTO Process.** A single TCTO for removal, modification and reinstallation of components and return of end items to serviceable status is authorized for use only as indicated below. For all other systems and commodities, companion TCTOs are issued according to **paragraph 4.1.9**.

4.1.14.1. Managers may issue a single Category 2 (Airborne Engines) TCTO to modify the engine, whether or not installed in the aircraft. The single TCTO method will only be used if it will accommodate all Comprehensive Engine Management System (CEMS) and Core Automated Maintenance System (CAMS) tracking and reporting functions supporting field and depot activities. TCTOs applicable to a commodity installed on the engine will be issued in the appropriate commodity TO category, with a companion TO Category 2 TCTO for removal of the unmodified item and installation of the modified item to provide engine configuration tracking information.

4.1.14.2. A single system or end item TCTO may be issued when no TCTO category exists for the commodity item to be modified.

4.1.15. **Commodity Modifications.** When a commodity is to be modified, the TCM responsible for the item prepares the commodity TCTO and any required companion system TCTOs. When a system modification affects commodities, the TCM responsible for the system prepares both the system TCTO and the required companion commodity TCTOs. The TCM preparing the TCTOs coordinates with all affected TCMs and PMs. Coordination is accomplished on a priority basis consistent with the urgency of the TCTO. The TCM who owns affected equipment for which another TCM is writing a system or companion TCTO must provide all required source data for TCTO development.

4.1.15.1. Production Management and the preparing TCM are responsible for initiating action to include the TCTOs in the Reliability & Maintainability Information System (REMIS), and for performing follow-up.

4.1.15.2. After coordination and approval, the affected TCM obtains the companion TCTO number and data code from the servicing TO Manager, and furnishes the numbers to the PMA managing the modification. When a PMA receives a TCTO and data code for the companion TCTO, the activity, in conjunction with the TCM, accepts responsibility for all areas of TCTO management. The PMA or TCM is responsible for determining all follow-on actions (rescission, supplements, extension, etc.), and recommending the action to the TO Manager.

4.1.15.2.1. If the TCTO is for depot level accomplishment, the TCM writes a field level companion TCTO to remove and ship the commodity to the source of repair and replace it with a modified item. If the depot modification will be done on an attrition basis, no companion TCTO is required. IPBs will be updated to reflect the modified equipment part number used for field-level replacement.

4.1.15.2.2. If the TCTO is field level accomplishment, then a companion TCTO is required only if the item is to be modified before the next scheduled or unscheduled removal for other reasons. The preparing TCM and using command maintenance directorate negotiate an agreement for establishing the compliance period for field level TCTOs.

4.1.15.3. The originator of a commodity TCTO prepares and issues the companion system TCTO, but the affected PM furnishes the inspection or removal and replacement instructions. The originator of the TCTO establishes the time frame for the receipt of the information based on the urgency of the TCTO.

4.1.15.4. In the case of an item being modified, it is preferable to modify the entire inventory through the commodity TCTO and use the companion system TCTO for removal of unmodified and installation of modified items in the end item.

4.1.15.5. When work involved in one TCTO is dependent upon other TCTOs, an appropriate statement based on MIL-PRF-38804, *Time Compliance Technical Orders, Preparation of*, and the AFMC IMT 873, **Time Compliance Technical Order Requirements** shall be included under WHEN TO BE ACCOMPLISHED in all involved TCTOs.

4.1.15.6. The TCM shall ensure TCTO reporting instructions are identified in paragraph 8 of the TCTO. Compliance will be reported using the basic TCTO data code only, according to 00-20-series TOs. Additional work directed by TCTO supplements will be reported using the supplement data code. Enter the TCTO Master Record into REMIS.

4.1.16. **TCTOs on Special Federal Supply Group (FSG) Items.** Proposed modifications to specifications or configuration changes to FSG 59 (electronics piece parts), FSG 60 (fiber optics), or Federal Stock Class (FSC) 6145 (wire and cable) source coded to Defense Logistics Agency (DLA) must have 645 LOG/ES approval on the AF IMT 3525, **CCB Modification Requirements and Approval Document**, prior to CCB approval and subsequent TCTO processing.

4.1.17. **TCTOs on Radar Equipment.** The policy on modification of radar equipment used jointly by the Air Force and the Federal Aviation Administration (FAA) is in the numbered minutes of the Joint Radar Planning Group.

4.1.18. **Modifications to Commercial-Derivative Aircraft.** Modifications to commercial-derivative aircraft that will retain FAA certification must comply with the intent of AFPD 62-4, *Standards of Airworthiness for Passenger-Carrying Commercial Derivative Transport Aircraft*, and AFPD 62-5, *Standards of Airworthiness for Commercial Derivative Hybrid Aircraft*.

4.1.19. **Commercial and Other-DoD-Component Modification Instructions.** Service bulletins, other military service modification instructions, and similar publications prepared by manufacturers or other government agencies are not approved for distribution to Air Force personnel for compliance, except as specified in TOs 00-5-1 or 00-5-15. The TCM, depot engineering or technical support activities and/or FMMs will review the publications. If approved for AF use, the TO Manager assigns TCTO and data code numbers, a compliance period, issue and rescission dates in JCALS, and an authority line to the publication. The publications are distributed through normal Air Force channels. Any activity receiving other than authorized instructions contacts the TCM to obtain authorized versions. (***EXCEPTIONS:*** Contractor or manufacturer-prepared service bulletins to correct deficiencies in general-purpose commercial ground vehicles will be complied with. Programs supported by Contractor Logistics Support [CLS] or using approved commercial manuals in lieu of MILSPEC TOs may use updates provided by the prime contractor.)

4.1.20. **TCTOs Applicable to SAP/FMS.** TCTOs applicable to military systems or commodities used by SAP/FMS require some coordination with the countries involved. Notify the affected country managers of all safety of flight and all releasable (FDO approved) modifications applicable to the SAP/FMS equipment. Send the modification offering (AF IMT 3525) to the country in sufficient time to allow the country to identify kit requirements for participation in a consolidated kit buy. The Air Force Security Assistance Center (AFSAC)/IPS must be advised to assure any required coordination actions are taken. See TO 00-5-19 for additional details.

4.1.21. **Electronic Warfare (EW) Systems.** The responsible PM periodically updates software for EW systems which impact the TOs managed by an aircraft or training device SPD at a different location. Concurrent release of the changed software and updates to all

TOs affected by the software change is required. To facilitate concurrent release, the following procedures apply:

4.1.21.1. The commodity EW TCM ensures current aircraft or training operations TOs (-1 series) and maintenance (-2 series) checkout procedures are available from the responsible SPDs.

4.1.21.2. The commodity EW TCM prepares a draft of the changed checkout procedures and verifies the changes with affected aircraft or training system SPD assistance during verification of the TCTO and affected TO source data. The commodity EW TCM furnishes verified, marked-up copy of source data for all affected TOs to the applicable SPDs.

4.1.21.3. Affected aircraft or training system SPDs ensure initial distribution of formal updates to affected TOs is completed as follows:

4.1.21.3.1. When less than 50 pages of TO data are affected and TO updates are organically prepared, initial distribution will be accomplished within 90 calendar days of receipt of verified source data. The 90 days is divided as: TCM, 30; TO Manager, 45; and Printing and Distribution, 15 days.

4.1.21.3.2. When preparation of TO updates is accomplished by a contractor or when 50 or more TO pages are affected, the EW TO Manager and the TO Managers for the aircraft or training systems will negotiate a mutually agreeable initial distribution date.

4.1.22. **Establishing a JCALS Record.** Records are established in the JCALS Pub Index (and reflected in the TO Catalog) for TCTO Series listings and for individual TCTOs (issued either as a formal publication or as an interim message) using AFMC IMT 203 or appropriate JCALS TM processes. Rescission dates for individual TCTOs will be entered into JCALS.

4.1.22.1. The TO Manager must establish a TCTO Header Series listing before obtaining a number for and publication of the first TCTO in the series. When classified TCTOs will be issued, separate Headers must be established for each different classification of TCTO to be covered under the series. Headers allow TODOs to establish ID requirements before TCTO publication quantities are established and ID labels have to be requested. The TO Manager either initiates a JCALS workflow or submits an AFMC IMT 203 to OC-ALC/LGLUB requesting assignment of a TCTO Header number and a block of Data Codes. ***NOTE:*** A TCTO series listing must be established in the JCALS Pub Index before input of individual TCTO data for indexing.

4.1.22.2. The TO Manager enters TCTO data into the JCALS Pub Index to set up the record for individual TCTOs. The JCALS process for automatically assigning data codes to TCTOs does not ensure that each code is unique across the Air Force; therefore, the manual process of assigning Data Codes from a block provided by OC-ALC/LGLUB will be used. The JCALS automatically-assigned data code is changed in the “Update an Index Entry; Management Information” screen.

4.2. TCTO Kits.

4.2.1. **Identifying Kit Components.** The TCTO kit monitor will research and identify kit items using the AFMC IMT 185, **Request for TCTO Kit Assembly**, in accordance with AFMAN 23-110, Volume 3, Part 1, Chapter 11, *Miscellaneous Materiel Management Procedures*. Where items cannot be readily identified, cataloging personnel may be able to assist. If a requirement exists for non-stocklisted items, initiate action to have "NC," "ND," or "L" numbers assigned, as applicable. Screen all kit components against critical (short supply) lists and investment requirements. Prepare a save list of required components.

4.2.2. **Complete Kit Concept.** If any parts will not be included in a TCTO kit, there must be a waiver from the complete kit concept signed by the affected PM and Lead Command Director of Maintenance. ***EXCEPTIONS:*** For inspection TCTOs, commonly available tools, parts and materiel required for access and button-up of inspection areas (including stocklisted periodic inspection kits) will not be provided in TCTO kits (AFMAN 23-110). TCTOs used to announce software-only changes to baselined computer programs (TOs 00-5-15 & 00-5-17, *Users Manual; USAF Computer Program Identification Numbering (CPIN) System*) are also non-kitted. No waivers are required.

4.2.3. **Computer Programs.** CPIN items required to perform or check compliance of the TCTO are procured from the responsible engineering activity identified in the Computer Program Compendium/ Index and issued in TCTO kits.

4.2.4. **Supply Screening.** AF supply stocks will be screened (AFMC IMT 172, **Coordination of Proposed Technical Orders**) prior to procurement of any modification kit or part to determine if like or similar items in supply can be made available and/or modified for kit assembly. Screening action will be accomplished and documented prior to initiation of procurement action.

4.2.5. **Substitutions.** To avoid delay in assembly and shipment of TCTO kits, substitutions may be made on minor parts without the necessity of changing the TCTO. Parts substituted for items in the TCTO will be tagged to indicate the substitution and the authority. Authority for substitution, when not specified in published stock lists for the commodity class, must be obtained from the applicable PM monitoring the project, and will be listed in the TCTO whenever possible. Any substitutions authorized must not adversely affect the tensile strength, utility, reliability or interchangeability of the assembly as intended by the TCTO.

4.3. TCTO Kit Identification and Data Code Numbers.

4.3.1. **Formats.** TCTO kit identification and data code numbering formats are in TO 00-5-15.

4.3.2. **Data Code Numbers.** OC-ALC/LGLUB provides a block of data code numbers to each ALC TO Manager for assignment to TCTOs as required. The TO Manager maintains a register and controls assignment of the data code numbers. Do not use the data code automatically supplied by JCALS, because duplicates may be issued. Notification of data code number assignment is made during the input of an individual TCTO to the JCALS System. Additional data code numbers may be required for supplemental kit identification. Data codes are indexed in REMIS.

4.4. Preparation, Review, and Control of Formal TCTOs.

4.4.1. **Identifying Requirements and Funding.** Modification proposals are documented on AF IMTs 1067, **Modification Proposal**, and must be technically validated by the responsible PM organization. Validated AF IMTs 1067 are submitted to the Lead Command, where they are prioritized and approved by a Command Configuration Review (CCR) Board. The command will issue a PMD with funding for the approved modification proposal, which is submitted to the PM for action. The PM or prime contractor generates an ECP to document the required configuration changes and the modification implementation approach, and submits the ECP to the PM CCB for approval. Approved ECPs provide the authorization to develop TCTOs and incorporate configuration changes into Technical Orders.

4.4.2. **Organically-Prepared TCTOs.**

4.4.2.1. Modifications driven by contractor ECPs or MAJCOM PMDs will be authorized by the PM CCB in accordance with AFI 63-1101, and documented on an AF IMT 3525. Internal SPO-determined needs for one-time inspections, modifications, or software updates will require assignment of a material improvement project (MIP) number and initiation of an AF IMT 3525 for CCB approval in accordance with AF1 63-1101. ***NOTE:*** For low-cost permanent modifications (under $10M), an AF IMT 1067 may be used in lieu of the AF IMT 3525.

4.4.2.2. The responsible CCB processes the AF IMT 3525 to document approval or disapproval of the modification. If the modification is disapproved, the AF IMT 3525 is returned to the initiator. If the modification is approved, the CCB will determine how it should be performed [ECP, Engineering Order (EO), or TCTO], and the CCB chairperson signs the form. Changes to Computer Resource Configured Items (CRCI) are not controlled by TCTOs, but Computer Program Identification Number (CPIN) software changes can be distributed using a TCTO. Permanent modifications to hardware are processed according to the *Defense Acquisition Guidebook* (**http://akss.dau.mil/dag/**).

4.4.2.3. The TCM initiates AFMC IMTs 873 and 875 for all approved TCTOs (**paragraphs 4.13** and **4.15**).

4.4.2.4. The TO Manager requests a TCTO number through the JCALS "Assign a TCTO Number" function, and the next sequential number in the TCTO Series is automatically assigned by the JCALS System. The TO Manager overrides the system assigned Data Code and assigns new numbers from a block of Data Codes provided to the PM by OC-ALC/LGLUB.

4.4.2.5. When development of the TCTO has progressed to the point where the parts affected and kit requirements can be determined, the TCM preparing the TCTO initiates an AFMC IMT 874 (**paragraph 4.14**). The AFMC IMT 874 is required when TCTO kits or special tools/test equipment are required, when spares are impacted, and/or when parts are added or removed. An AFMC IMT 874 is only required for inspection TCTOs if kits, special tools, etc., not commonly available at the performing units are required..

4.4.2.6. The TCM preparing the TCTO also initiates the JCALS "Recommend a TM Change" and "Prepare TM Change Package" functions (**Chapter 3**) to update each TO

affected by the modification. The recommended change - will identify the TCTO being supported and will specify the distribution date required to ensure concurrent release.

4.4.2.7. After completion of the AFMC IMT 874 (when required), the TCM prepares the body of the TCTO in accordance with MIL-PRF-38804.

4.4.2.8. The PMA will assemble a TCTO history folder containing the below documents. The history folder will be retained by the PMA after completion of the TCTO for the life cycle of the system or commodity affected.

- AF IMTs 1067 or 3525,
- Draft TCTO,
- JCALS "Recommend a TM Change" and "Prepare TM Change Package" screens,
- AFMC IMT 133, Interchangeability and Substitutability Program,
- Print-out of completed web-based form 513, TCTO I&S Notification (see **4.7.6.**),
- AFMC IMTs 873, 874 & 875 (as applicable), and
- AFTO IMT 82.

4.4.2.9. The PMA requests a Pre-Release Review Group (PRRG) meeting (if required) with the TCM, TO Manager and other affected activities to ensure all actions have been completed for concurrent release of the TCTO, any kits involved, and any required TO updates. The TCTO rescission period is determined at the meeting. After the meeting, the PMA or TCM submits the draft TCTO and associated JCALS "Prepare TM Change Package" - work folders to the TO Manager for preparation of formal drafts. The TCM and TO Manager perform a pre-publication quality check of the draft, and submit it for publication and distribution.

4.4.3. **Contractor Prepared TCTOs:**

4.4.3.1. As with locally-prepared TCTOs (**paragraph 4.4.2**), modifications must be approved by the CCB. The TCM initiates the AFMC IMTs 873 and 875. The applicable ALC TO Manager completes the JCALS "Manage TM Numbering; Assign a Publication Number (AF TCTO Publications)" process, and reviews and signs the completed forms.

4.4.3.2. The responsible data manager (DM) forwards an e-mail to all affected organizations (other PMs and affected TO Managers, program engineering, etc.), requesting identification of all data requirements for the TCTO. The DM may request responses on DD Forms 1423, **Contract Data Requirements** List, or AF IMTs 585, **Contract Data Requirements Substantiation**, but usually accepts inputs via e-mail. The DM provides the proper backup material [ECP, purchase request (PR), etc.] when available.

4.4.3.3. In response to the DM-issued data call, affected TO Managers develop the TO data requirements to support the changes to assigned military systems, commodities or embedded items. TO Managers will not prepare TO data requirements for TOs prime at other ALCs and will not prepare TO data requirements for military systems or commodities not submitted through the DM of the center responsible for the items.

4.4.3.3.1. **Example:** I. For an SPD-managed modification involving airborne equipment, SE prime in a collocated PGM division, and other commodities prime at other centers, TO data requirements are generated through three channels:

- From the SPD DM-prepared data call submitted directly to the TO Manager. The TO data requirements support the military system or commodity and the TOs for which the SPD is responsible.
- From the DM in the Product Group responsible for affected SE, who upon receipt of the SPD data call, issued a data call. TO Managers responsible for TOs supporting the affected SE will prepare and submit requirements in response to the data call. The data requirements are screened by the SE PGM DM and forwarded to the SPD DM; and;
- From the non-collocated DMs whose centers are prime on other commodities affected by the TCTO. Upon receipt of the data call, the non-collocated DM also issues a data call to local support organizations and TO Managers. The DM submits the center data requirements to the SPD DM.

II. The SPD DM combines all data requirements, forwarding the combined DD Forms 1423 to the PMA for attachment to the PR. Under emergency conditions, the DM issues the data call and combines the CDRL while the PR is being processed. The DM ensures the CDRL is provided to the buyer.

4.4.3.4. Once the contract for the TCTO is signed, the contractor will complete an AFMC IMT 874 (if required) according to **paragraph 4.14**, based on data on the AFMC IMT 873, and forward the forms to the PMA for coordination and approval.

4.4.3.5. Contractors will submit proposed associated TO Changes according to contract provisions.

4.4.3.6. When a TCTO is contractor-prepared and verification is accomplished elsewhere, the PM will forward a copy of the completed AFTO IMT 82 to the Contracting Officer (CO -- includes either the ACO or PCO) within 30 days. Forward any deficiencies noted during verification through the CO to the contractor so corrective action may be completed prior to TCTO and kit acceptance.

4.5. Coordination of Formal TCTOs.

4.5.1. **PM Coordination.** A TCTO prepared by a PGM or TCM responsible for an imbedded commodity is coordinated with the SPD responsible for the affected aircraft, missile, or C-E end item and vice versa. SPDs control the space within a system or end item allocated for the installation of new components. When more than one PGM desires the use of a specified space within a system or end item, the SPD is the controlling agency and acts as an arbitrator where complications of space usage occur. Two copies of the TCTO draft are forwarded to the SPD engineering activity (D086, Mission Workload Assignments System) for engineering coordination. Exceptions for interim immediate and urgent TCTOs are specified in TO 00-5-15.

4.5.2. **Other Coordination.** One copy of each TCTO is forwarded to the following activities for coordination on the matters indicated:

- MAJCOM/LGM for O- or I-level TCTOs in accordance with TO 00-5-15.
- BEE (at the nearest USAF hospital) when use of the following or similar materials

are specified in the TCTO (see also **paragraph 1.6.**):

- Chemicals.
- Paint solvents and removers.
- Cleaning agents.
- Fuels, hydraulic fluids, and propulsive agents.
- New or proposed synthetic materials and plastics.
- Impregnating materials for cloth, leather, etc.
- Fiberglass and other dust-producing insulating materials.
- Any other known or suspected health hazards.

- AFCESA/CEXF for all requirements related to aircraft fire prevention, egress safety, and emergency rescue (see **paragraph 1.8.**).

- Center/Base Safety Office when publications or procedures expose personnel to hazardous environmental or operational factors which require a review, technical evaluation for ground, weapons, explosive, flying, or system safety, and safety office approval of the proposed TO and updates.

- AAC/NWLT when the TCTO affects radioactive material used in Nuclear Weapons.

- The USAF Radioisotope Committee Secretariat, HQ AFMOA/SGPR, 8901 18th St, Brooks AFB TX 78235-5217 (through HQ AFMC/SGBR), when a TCTO has information or instructions concerning other radioactive materials (e.g., depleted uranium counterweights, luminous exit markers, optical lens coatings containing thorium, or nucleonic fuel indicators). See AFI 40-201.

- The prime ALC NDI manager or other ALC organization designated to provide Level III NDI services, or corrosion control manager when TCTOs have instructions relating to, or a requirement for, NDI or corrosion control treatment. The Air Force OPRs for NDI and corrosion control are AFRL/ MLS-OL (4750 Staff Dr, Tinker AFB OK 73145-3317) and AFRL/MLS-OLR (325 2nd St Bldg 165, Robins AFB GA 31098-1639), respectively.

- Detachment 63, AAC/WMO when the TCTO could modify the below-listed items in ANY way:

- Bombs and warheads.
- Fuzes and fuzing systems.
- Guided and ballistic missiles.
- Missiles, grenades artillery, mortar, rocket, and small arms ammunition.
- Mines, depth charges and torpedoes.
- Demolition charges and pyrotechnics.
- Dispensers and clusters.
- Cartridge and propellant-actuated devices (such as aircraft egress systems).
- Aircraft weapons/munitions delivery systems.
- Any item which contains (high or low) explosives, propellant, or hazardous chemicals which may cause injury/death to personnel or damage to equipment.

- Any affected SAP/FMS program monitors.

- All TCTOs are coordinated with and a copy is provided to the responsible program

configuration management activity for input into the applicable configuration management system.

4.6. Release of TCTO Kits and Technical Data. An AFMC IMT 875 must be completed according to the instructions in **paragraph 4.15** prior to the release of a TCTO, kits, and related TO updates. Release of TCTO concurrently with the release of the TCTO kit is Air Force policy and is the responsibility of the PM.

4.7. Publishing TCTOs.

4.7.1. **AFTO IMT 82.** An AFTO IMT 82 is completed on all TCTOs after verification, listing required corrections. The form is forwarded to the contractor, if the TCTO was contractor-prepared, for incorporation before the prepublication review and publication. For organic TCTOs, the form is sent to the TCM for correction of the draft.

4.7.2. **Pre-Release Review Group (PRRG).** After necessary corrections have been made and it is ready for publication, the PMA requests a PRRG meeting to ensure all requirements for concurrent release of the TCTO, kits, and TO updates have been met prior to submitting the package to the TO Manager for publishing. Each TCTO is reviewed for technical content, accuracy, completeness, practicality, RGL and compliance with the latest version of MIL-PRF-38804. The PRRG, in coordination with the TO Manager, establishes the TCTO rescission date based on risk mitigation analysis. The date will be entered into JCALS using the "Update an Index Entry" process . The package for contractor-developed TCTOs will be submitted when final reproduction masters are ready for delivery. The complete data package has:

4.7.2.1. The digital reproduction master, including all artwork and illustrations. Digital reproduction masters should either be a page image file such as Adobe PDF™ or a protected word processor document, and must be accompanied by a paper copy to verify formatting information.

4.7.2.2. A copy of the AFMC IMT 875 with PM certification.

4.7.2.3. A signed copy of the completed AFMC IMT 873.

4.7.2.4. A signed copy of the completed AFMC IMT 874; required if a TCTO needs kits and/or special tools and test equipment, affects supply spares, adds components to the modified item, or if removed parts and components require disposition instructions. The form is also required for TCTOs which would normally require kits, but which have received a waiver to the complete kit concept, to document supply status and parts usage. An AFMC IMT 874 is only required for inspection TCTOs if kits, special tools/test equipment, etc., not commonly available at the performing units are required. ***NOTE:*** When new AFMC IMTs 873, 874, or 875 are initiated for a TCTO supplement, complete only the blocks changed from the original form.

4.7.2.5. JCALS "Prepare TM Change Package" screens with appropriate TO updates as required.

4.7.2.6. Completed AFTO IMTs 124 for the TCTO and each TO update (if required).

4.7.2.7. A fund citation.

4.7.3. **Illustrations.** When line drawings are unavailable for use in an organically-developed TCTO, the initiator furnishes black and white unscreened glossy photographs for each illustration. Photographs should not be marked or defaced in any manner; required corrections are marked on a copy of the photograph or on an overlay.

4.7.4. **Reproducible Copy.** For organically-developed TCTOs, the TO Manager oversees preparation of the reproducible copy and ensures the TCTO is printed with the priority required by the urgency of the TCTO. Technical changes to TCTO drafts which have been submitted for publication are made only with the consent of the responsible TCM. Any editorial changes must be coordinated with the TCM before printing and distribution of the TCTO.

4.7.5. **Reproduction Quality Check.** The TO Manager will review initial printed copies of TCTOs immediately upon receipt to ensure there are no printing errors.

4.7.6. **"513" Procedures.** When the item being modified requires re-identification, the TCM completes an on-line form 513 concurrently with the distribution of the TCTO to affected activities, in accordance with AFMCMAN 23-3, *Cataloging and Standardization*. The form 513 is available at **https://www.afmc-mil.wpafb.af.mil/HQ-AFMC/LG/lgi-page/lgis/Form513_index.htm**, and will be completed and submitted on line to the AFMC Logistics Information Division, AFMC LSO/ LGISA, Battle-Creek MI. In completing the form, the TCM will:

- Check the "MOD REQUIRED BEFORE ISSUE" block as "NO" if the unmodified and modified items are acceptable for use, pending completion of the TCTO requirements.
- Print "END ITEM MOD" in the shaded area adjacent to the entry of "NSN after modification" if the TCTO requires the end item to be modified to accept the modified item.
- Complete all portions of the form.
- Provide updates when a TCTO is extended or reinstated. ***NOTE:*** In most cases, modified items are not re-identified, but are given new NSNs/part numbers through the "Base 86" process (**paragraph 4.14.3.4.**). If all of the assets are being modified, the pre-modification NSN/part number will be rescinded after modification completion.

4.7.7. **Post-Publication Reviews.** The need for post-publication reviews and the frequency of such reviews is determined by the TCM in conjunction with the TCTO user. Factors to be considered include the type of TCTO (immediate, urgent, routine, record), changes to the system or commodity being modified, and accumulation of problem reports.

4.8. TCTO Control Records.

4.8.1. **Materiel Improvement Project (MIP) Status System (G081).** The ALC preparing the TCTO is responsible for maintaining a complete chronological record using the MIP Status System.

4.8.2. **Schedules.** For contractor-performed TCTOs, the PM managing the TCTO is responsible for maintaining a TCTO completion schedule prepared by the contractor as required by the contract. The schedule also shows the estimated delivery date of TCTO

reproducible master to the Air Force. A copy of the schedule is furnished to the TO Manager.

4.9. TCTO Rescission. See TO 00-5-15 for procedures.

NOTES:

1. AAC/NWLT complies with local operating instructions for Nuclear Weapons TOs.

2. Consortium or other cost sharing agreements may require coordination through the appropriate AFSAC office prior to rescission of TCTOs and the removal of "before" modification data.

4.9.1. **Monitoring Rescission Dates.** TO Managers must periodically use the JCALS "Perform Post Publication Review" function to generate a listing of assigned TCTOs and monitor rescission dates. Any TCTOs within 150 days of rescission will be identified to the TCM and PMA for review. The PMA will recommend that the TO Manager either rescind the TCTO or extend the Rescission Date in the JCALS Pub Index, based on compliance status.

4.9.2. **Initial TO Manager Procedures.** If the TCTO will be rescinded, the TO Manager must take action to prevent any further reprinting action, provide the PM with timely notice for pre-rescission evaluation and processing of required control documentation within the allotted time frames, and alert using commands and SAP countries to review compliance status of TCTOs. The TO Manager notifies the PMA that the TCTO is nearing rescission.

4.9.3. **Production Management.** The PMA will:

4.9.3.1. Review applicable TCTO configuration management data for modification completion status. If the modification is complete, determine the number and location of any excess modification kits, and initiate disposal as prescribed by AFMAN 23-110. If the modification is not complete, obtain the status and commitment for modification completion from each performing organization. Initiate action to extend the rescission date or complete the TCTO within the remaining time.

4.9.3.2. Determine if any TOs or other active TCTOs will be affected by the rescission and initiate appropriate action.

4.9.3.3. When disposition of items in Air Force stock is affected, coordinate with the appropriate PM to ensure that all required actions have been completed. Obtain approval from the PM requirements office for TCTO rescission (supply actions are complete) or a commitment to complete TCTO-directed actions for disposition of items.

4.9.3.4. Determine if the rescission is applicable to both Air Force and SAP countries (see **paragraph 4.9.6.1**).

4.9.3.5. Based on the above data, determine if the TCTO is to be rescinded or the rescission date extended. Rescission date extension requires justification and approval (same approval authority as the basic TCTO). Any decision to extend a TCTO or allow it to rescind must be accompanied by funds to publish either the extension or the related TO update(s) to remove "before" data.

4.9.3.6. If the TCTO is to be rescinded and there are excess modification kits, the PMA will coordinate through program engineering to initiate excess AF property disposal procedures prescribed by AFMAN 23-110, Vol III, Pt One, Chapter 11.

4.9.3.7. Submit the recommended TCTO rescission action to the PM division chief for approval no later than 110 days before the scheduled rescission date.

4.9.3.8. Within 2 workdays after PM division chief approval and not later than 90 days prior to rescission date, the PMA notifies the TO Manager by cover letter and updates the rescission date in REMIS.

4.9.4. **Follow-on TO Manager Procedures.** Upon production management notification, the TO Manager takes action to either rescind the TCTO on the scheduled date or to extend the rescission date in the JCALS Index. If the TCTO will rescind, the TO Manager will verify that "before data" has been removed from all affected TOs, or schedule data removal during the next routine update to affected TOs.

4.9.4.1. To prevent complete rescission of TCTOs still usable by SAP countries, the TO Manager uses the JCALS "Manage TM Numbering; Rescind a TM" process to rescind the TCTO for Air Force units only. OC-ALC/LGLUF will be notified to include the TCTO in the applicable TO 0-1-71 index. The TCTO records are transferred from JCALS to SATODS.

4.9.4.2. An immediate, urgent, or routine action safety TCTO rescinded for USAF use but retained for SAP will not be downgraded in criticality when transferred to the TO 0-1-71 index.

4.9.4.3. A compliance period appropriate for correcting the deficiencies will be assigned. If the compliance period exceeds the limits outlined in TO 00-5-15, Table 2-1, for any reason, the PM or ES will notify the country regarding the status, the reason for the delay, the estimated correction date, and any interim actions the country can take to ensure safe operation of the system or commodity.

4.10. Early Rescission of TCTOs.

4.10.1. **Criteria.** Use the following criteria for deciding to rescind a TCTO before the rescission date:

- The information has been replaced by or included in another TO or TCTO, or

- The TCTO procedure is obsolete, or

- Further compliance with the TCTO is not desirable, or

- Configuration accounting records indicate compliance with the TCTO, or

- The TCM or PMA verifies compliance has been completed on both installed assets and all affected spares, or

- Coordination with the AFSAC office verifies consortium or FMS support agreements have been satisfied, and kits have been delivered or are available.

4.10.2. **Coordination and Approval.** TCTO Manager requests for early rescission are submitted to the proper PM division chief, clearly stating the reasons for rescinding and documenting that all necessary coordination has been completed.

4.10.2.1. The request for TCTO rescission is coordinated with the TCTO kit supply organization. The rescission of a TCTO will not be approved if items requiring compliance before use are in stock, unless a written commitment for completion of TCTO directed actions has been received from the PM activity.

4.10.2.2. After rescission approval by the proper PM division chief, the rescission approval and date are forwarded by letter from the PMA to the TO Manager to take rescission action. The notification indicates if rescission is for Air Force only or includes the SAP.

4.10.3. **Emergency Suspension/Abeyance.** TO 00-5-15 has procedures for emergency suspension when there are serious problems with TCTO compliance. TCTO suspension is called "Abeyance." TCTOs cannot be held in abeyance past the rescission date, and cannot be extended unless the suspension has been lifted. Suspended Interim TCTOs must either be rescinded or released for compliance after 90 days.

4.11. Reinstatement of Rescinded TCTOs.

4.11.1. **Procedures.** Reinstate rescinded TCTOs in accordance with TO 00-5-15, by replacement with a new TCTO. The TCM will determine if there is sufficient justification for reinstatement of the TCTO. If a manageable quantity of found on base assets are unmodified after TCTO rescission, official reinstatement may not be necessary; rather the PMA can authorize the accomplishment of the rescinded TCTO by letter. If a large quantity of assets is involved, issue of a new TCTO is mandatory.

4.11.2. **Approval.** Rescinded configuration change TCTOs may only be reinstated by approval of the responsible CCB, using an AF IMT 3525. Requests for reinstatement are submitted through the CCB executive secretary. Reinstatement of non-configuration change TCTOs is approved by the appropriate PM division chief.

4.11.3. **Reissue.** When reinstatement has been approved, issue the TCTO in accordance with TO 00-5-15. When a TCTO has been reinstated and special management action is required in the supply area, the PMA ensures all affected PMs are notified.

4.12. Extension of Rescission Dates.

4.12.1. **Approval to Rescind.** TCTO rescission dates cannot be extended without prior approval of the responsible PM Division Chief. Requests for extension are submitted by letter no later than 110 days before the scheduled rescission date to allow updating of REMIS and JCALS, and publishing a TCTO supplement if applicable. In all cases, adherence with TO 00-5-15 guidance is mandatory.

4.12.2. **Updating REMIS.** Within 2 workdays after CCB or PM approval, and not later than 90 days prior to the rescission date, the PMA updates REMIS (see TO 00-5-15), and forwards a copy of the CCB or PM approval notice to the TO Manager.

4.12.3. **Updating JCALS.** The TO Manager uses the JCALS "Manage TM Index; Update an Index Entry" process to enter the new TCTO rescission date. If the rescission date will be updated by issuing a TCTO Supplement, the "Manage TM Numbering; Assign a Publication Number (AF TCTO Publication)" process will be used to index the supplement with the new rescission date.

4.13. AFMC IMT 873 Completion and Processing.

4.13.1. **General.** The responsible TCM will complete the AFMC IMT 873. The form documents the plan for accomplishment of the TCTO. ***NOTE:*** When a supplement or change to a TCTO is developed, complete only the AFMC IMT 873 blocks that changed from the original form.

4.13.2. **AFMC IMT 873 Completion.**

4.13.2.1. **Block 1, To.** The organization and address, contractor or organic, which will prepare the TCTO.

4.13.2.2. Date prepared.

4.13.3. **Part I, HEADING INFORMATION.**

4.13.3.1. **Block 3, TCTO Title.** The first two words of a TCTO title must indicate the action required, i.e., "Modification of...," "Replacement of...," "Installation of...," "Rework of...," "Removal of...," "Calibration of...," "Relocation of...," "Inspection of...," or "Issuance of... (software)." The rest of the title will be formatted in accordance with **Attachment 2** and MIL-PRF-38804 and must include both old and new part numbers when a change occurs. Supplements will use the same title as the affected basic TCTO.

4.13.3.2. **Block 4, TCTO/Supplement Number.** Obtain from the TO Manager.

4.13.3.3. **Block 5, Data Code Number.** Obtain from the TO Manager.

4.13.3.4. **Block 6, TCTO Issue Date.** The date should be consistent with the availability of the first shipment of kits (when required) to operational units and publication of related TO updates to ensure concurrent logistics support. If the AFMC IMT 873 is for a contractor-controlled modification, annotate "See remarks" here and add a remark in block 40: "The contractor shall establish the TCTO issue date based upon availability of kits and related TO updates."

4.13.3.5. **Block 7, ECP Number.** When an ECP or EO generated the TCTO.

4.13.3.6. **Block 8, CCB Approval Date.** Obtain from the AF IMT 3525.

4.13.3.7. **Block 9, End Item Number (NSN or CPIN).** The assigned NSN of the item being modified or inspected, or the CPIN of the software being distributed. If an NSN has not been assigned, enter the stock class followed by the manufacturer part number, and enter the manufacturer CAGE code in the remarks block.

4.13.3.8. **Block 10, Replaces/Reinstates TCTO Number.** When applicable.

4.13.3.9. **Block 11, Type/Category of TCTO.** Check one box for the category of the TCTO (TO 00-5-15), and if applicable, the boxes for SAFETY, RECORD and/or SUPPLEMENT.

4.13.3.10. **Block 12, Classification of TCTO.** Check the applicable box.

4.13.3.11. **Block 13, Mod Number.** Obtain from the AF IMT 3525.

4.13.3.12. **Block 14, MIP Number.** Complete according to local operating instructions.

4.13.3.13. **Block 15, FAA Approval Number.** Obtain from the FAA when the modification has a joint FAA/Air Force impact.

4.13.3.14. **Block 16, Safety TCTO Marking Required (Routine Safety TCTO Only).** Check appropriate box.

4.13.3.15. **Block 17, Rescission Period/Date.** When an issue date has been entered in block 6, enter the appropriate rescission date here. If block 6 was annotated "See remarks," enter the rescission period from TO 00-5-15. The PRRG will enter the actual rescission date prior to release of the TCTO.

4.13.4. **Part II, Compliance Information.**

4.13.4.1. **Block 18, Level Of Accomplishment.** Check the applicable boxes. In accordance with TO 00-5-15, TCTOs will normally be accomplished at the O & I level only when the required skills and equipment are available, and not more than 8 clock hours and 25 man-hours are required. All other TCTOs will be depot level. Exceptions may be negotiated between the using commands and the responsible TCM.

4.13.4.2. **Block 19, When To Be Accomplished.** Check the appropriate boxes for the urgency and maintenance level of the TCTO. If “b” for urgent TCTOs is checked, enter the number of “days after.” If “c” for routine TCTOs is checked, and TCTO accomplishment is keyed to an event, enter the event on the blank line. If either “b” or “c” is checked, delete the non-applicable term (“THE TCTO” or “ALL COMPONENTS”) in parentheses.

4.13.4.3. **Block 20.** Check applicable boxes.

4.13.4.4. **Block 21, Work Required By This TCTO Will Be Accomplished.**

4.13.4.4.1. **Block 21a, By (ALC).** Identify the organization which will perform a depot-level TCTO (it is assumed that O/I-level TCTOs will be performed by all units possessing the equipment to be modified/inspected).

4.13.4.4.2. **Block 21b, As Scheduled By.** Enter the organization responsible for scheduling TCTO accomplishment (user, production manager, contractor, etc.).

4.13.4.4.3. **Block 21c.** Mark the appropriate box for “Concurrently With,” “Prior To,” or “Subsequent To” and enter the controlling TCTO number and data code, if applicable.

4.13.4.4.4. **Block 21d, Launch Facilities.** Mark the appropriate box.

4.13.4.4.5. **Block 21e, System.** If alert-committed systems other than launch facilities are affected by the TCTO, enter the system name and mark the appropriate box as above.

4.13.4.5. **Block 22, Distribution Statement.** Enter the applicable AFI 61-204 distribution statement code.

4.13.4.6. **Block 23, Reason.** Enter the reason (justification) for the distribution statement selected.

4.13.4.7. **Block 24, Controlling DoD Office.** Enter the appropriate OPR office symbol.

4.13.4.8. **Block 25, As Of Date.** Enter the effective date of the distribution restriction (normally the publication date of the basic TCTO).

4.13.4.9. **Block 26, Export Controlled.** Check one.

4.13.4.10. **Block 27, Handling & Destruction Notice.** Check one.

4.13.5. **Part III, Supply Information.**

4.13.5.1. **Block 28, AFMC IMT 874 Is Required.** Mark one.

4.13.5.2. **Block 29, Spares Affected.** Check one.

4.13.5.3. **Block 30, Contractor Should Submit AFMC IMT 874 To.** If the Form 874 is to be contractor-prepared, enter the address to which the form must be sent upon completion (normally the responsible program management agency).

4.13.5.4. **Block 31, War Reserve Material (WRM).** Mark the appropriate boxes.

4.13.6. **Part IV, Kit Installation Tools.** Special tools, test equipment, fixtures or software are the items not usually available to the organization performing the TCTO, and which must be obtained or manufactured specifically for the TCTO. Mark the appropriate box. ***NOTE:*** Software will be distributed through the CPIN system. Special equipment will be distributed as specified on the AFMC IMT 874.

4.13.7. **Part V, Man-Hours Required.** Mark the appropriate box, and if known, enter the man-hours total. All unclassified TCTOs will have man-hours given in the expanded breakdown unless only one man and less than one man-hour is required (MIL-PRF-38804). Leave blank for classified TCTOs. ***NOTE:*** TCTOs cannot be supplemented to change man-hours (IAW TO 00-5-15).

4.13.8. **Part VI, Weight And Balance.** For aircraft-related TCTOs, check “Yes” or “No.” For non-aircraft-related commodity TCTOs, check “N/A.”

4.13.9. **Part VII, Form Entry Requirements Prescribed By The 00-20-Series Technical Orders/ TCTO No.** Enter the specific reporting instructions specified by TOs 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*, or 00-20-2, *Maintenance Data Documentation*, in accordance with MIL-PRF-38804. Enter the identification of the system or equipment affected by the TCTO. List the part numbers of commodity items, and the registration or serial numbers of serialized end items to which the TCTO applies. Reporting instructions must also be provided for the spares part numbers. For CAMS, enter "Upon completion of the TCTO, update the applicable maintenance data collection systems according to command directives." Enter the TCTO number in the space provided.

4.13.10. **Part VIII, Functional Check.**

4.13.10.1. **Block 32.** Check the appropriate box.

4.13.10.2. **Block 33.** If block 32 “Required” was checked, mark either “Functional Check Flight (FCF)” or “System Operational Check;” otherwise, mark “N/A.”

4.13.10.3. **Flight Manual Manager Approval.** If the TCTO is aircraft-related or affects flight manuals, obtain the FMM signature. For other TCTOs, mark “N/A.”

4.13.11. **Part IX, Technical Orders Affected.** If no related TO updates are required, check N/A. Otherwise, enter the complete list of TOs affected by the TCTO. If the TCTO is developed by a contractor, enter "As identified in paragraph 7d of the TCTO". ***NOTE:*** The ES/TCM responsible for the TCTO must complete a JCALS "Recommend a TM Change" or an AFMC IMT 252 for each TO listed, and send them to the PMA. The PMA will ensure that the draft TCTO and JCALS RC screens/AFMC IMTs 252 are sent to the TO Manager for publication and concurrent release. The PMA is responsible for overseeing the availability and concurrent release of kits, parts, TCTO and related TO updates. If a contractor is developing the TCTO, the responsibilities may be discharged by the contractor.

4.13.12. **Part X, Verification (TCTO/Kit).**

4.13.12.1. **Block 35.** If "Not Required" is checked, a waiver must be documented in the remarks block.

4.13.12.2. **Verification Site.** Mark the appropriate box. Enter the site location in the remarks block.

4.13.13. **Part XI, Complete Kit.** Block 37. Any deviation from the complete kit concept must be approved in accordance with TO 00-5-15.

4.13.14. **Part XII, Modification Markings.**

4.13.14.1. **Block 38, Required.** Mark the appropriate box.

4.13.14.2. **Block 39, Type And Location.** Indicate the type and location of markings for other than part number changes in accordance with MIL-PRF-38804.

4.13.15. **Part XIII, Remarks.**

4.13.15.1. **Block 40.** Items entered as continuations must indicate the part or block continued. If TCTO and data code numbers are obtained for use by another ALC or PC, identify the center here.

4.13.15.2. **Block 41, Contract No.** Enter if a contractor team is the action agency.

4.13.15.3. **Block 42, CLIN.** Enter the applicable Contract Line Item Number. ***NOTE:*** The Certification block should be signed by the responsible TO Manager. If TOs managed by other PMs are involved, the Center TO Home Office should coordinate in the remarks block.

4.13.16. **Part XIV, CERTIFICATION.** The PMA will return the AFMC IMT 873 to the originator if the required signatures are not present. A copy of the completed AFMC IMT 873 is forwarded to the contractor when applicable. The signed original will be retained by the PMA as part of the modification history file until TCTO completion. The history file will be retained by the PMA for the life cycle of the system or commodity affected.

4.14. AFMC IMT 874 Completion and Processing.

4.14.1. **General.** The AFMC IMT 874 is used to provide supply-related information for the TCTO. The PMA must complete approval and processing of the form within 30 days of receipt from the contractor or other preparing activity. Requirements personnel must coordinate on the form if supply actions are required. The original signed copy of the form will be retained by the PMA as part of the history file of the modification. After completion

of the TCTO, the PMA will maintain the history file for the life cycle of the system or commodity affected.

NOTES:

1. The AFMC IMT 874 has been approved by the Office of Management and Budget (OMB Number 0704-0188) for preparation by Air Force contractors.

2. If a TCTO requiring kits/special tools/test equipment must be released as an ITO, it may be processed and released prior to completion and approval of the AFMC IMT 874. However, the TCM must obtain coordination and approval of the supply information in the draft ITCTO before it is released.

4.14.2. **Explanation of Terms.**

4.14.2.1. Critical Item. As used here, pertains to parts which could cause demodification or create hazardous conditions if reinstalled on modified equipment.

4.14.2.2. Spares. Items in stock affected by the modification or inspection.

4.14.3. **Responsibilities.**

4.14.3.1. TCM (for contractor-prepared AFMC IMTs 874):

4.14.3.1.1. Reviews AFMC IMT 874 within 7 days after receipt from the PMA to determine kit requirements and critical items.

4.14.3.1.2. Ensures the contractor has listed the NSNs for all stocklisted items and the manufacturer part number and CAGE code for non-stocklisted items on the AFMC IMT 874. Include any items which will require re-identification after modification. Work through the PMA to obtain any missing information.

4.14.3.1.3. Ensures the contractor has calculated the number of kits required for installs and spares.

4.14.3.1.4. Returns the form to the PMA after the review.

4.14.3.2. TCM (for organically-prepared AFMC IMTs 874):

4.14.3.2.1. Initiates the form.

4.14.3.2.2. Submits the form to the PMA for coordination of any supply actions.

4.14.3.2.3. Notifies individual Item Managers (IM) and DLA agencies responsible for items affected by the TCTO of potential impacts on assigned equipment.

4.14.3.2.4. Reviews completed form after return from requirements section, and submits to PMA for file.

4.14.3.3. PM. The PM will assign the end item manager to:

4.14.3.3.1. Receive the AFMC IMT 874 from the PMA.

4.14.3.3.2. Decide individual responsibilities and accomplish the coordination of TCTO supply data through use of the AFMC IMT 172 in accordance with AFMAN 23-110.

4.14.3.3.3. Receive the completed AFMC IMT 172 from affected individual component/ piece/part managers, annotate relevant supply requirements on the AFMC IMT 874, obtain branch signature in the block marked "Equipment Manager's Branch," and return the AFMC IMT 874 to the PMA.

4.14.3.4. IMs and DLA Agencies. Individual item managers and DLA agencies responsible for items affected by the TCTO will be notified of the potential impacts on assigned equipment, and kept apprised of any changes to requirements or schedule slippages. IMs and DLA agencies will:

4.14.3.4.1. Annotate the quantities of spares to be modified.

4.14.3.4.2. When the TCTO is specified for accomplishment during programmed depot maintenance (PDM) only, provide specific action required on serviceable items in stock.

4.14.3.4.3. Ensure the only information included in **Part B** is pertinent to spares in stock and does not include action for removed or replaced parts. (Information about removed and replaced parts is included only in **Part D**.)

4.14.3.4.4. Provide disposal instructions for modified critical spares or components of spares with no other equipment application.

4.14.3.4.5. Review and complete **Part H** by assigning proper manager review codes in accordance with AFMAN 23-110 for the items identified as critical in **Part D.**

4.14.3.4.6. Review the AFMC IMT 874 for affected parts added or deleted by the TCTO, and take proper stock balance adjustment action. (Consider reducing projected demand and repair rates, reducing or terminating purchase requests and contracts, establishing order requirements for new components, or making other adjustments as required.)

4.14.3.4.7. Submit all non-NSN (ND, Kits) and NSN requests using the Air Force Federal Logistics Information System (FLIS) Edit and Routing System (D143C) or hard copy AF IMT 86, **Request for Cataloging Data/Action**, in accordance with AFMCMAN 23-3 for cataloging assignment and/or maintenance actions.

4.14.3.4.8. Electronically transmit a digital AFMC IMT 874 as an e-mail attachment to the DLIS/KFG TCTO Focal Point (DLIS/KFGC, 74 Washington Ave N, Ste 7, Battle-Creek MI 49017-3084, DSN 932-5642, e-mail: **KFGC@dlis.dla.mil**).

4.14.3.4.9. Return the AFMC IMT 874 to the end item manager.

4.14.3.4.10. Immediately after all affected equipment has been modified and the TCTO has been rescinded, ensure disposition of excess kits in accordance with AFMAN 23-110.

4.14.3.5. The Cataloging Activity, DLIS/KFG will:

4.14.3.5.1. Receive digital AFMC IMT 874 and perform an Interchangeability and Substitutability (I&S) review. Complete the I&S review and return the form electronically within 10 working days.

4.14.3.5.2. Receive non-NSN or NSN requests (D143C or AF IMT 86) and process as necessary.

4.14.3.6. Production Management Activities will:

4.14.3.6.1. Serve as program monitor for all documentation relating to the TCTO.

4.14.3.6.2. Receive contractor-prepared AFMC IMTs 874 and suspense to affected government coordinating and approval activities.

4.14.3.6.3. Receive organically-prepared AFMC IMTs 874 from TCMs and manage coordination and approval requirements.

4.14.3.6.4. Ensure the responsible PM forwards the Base 86 request to the cataloging activity for input to Battle-Creek for all new provisioned or non-NSN items identified on the AFMC IMT 874.

4.14.3.6.5. Review the AFMC IMT 874 for kit application and ensure the quantity corresponds with to the purchase request for kit procurement.

4.14.3.6.6. Indicate in Part A the Air Force stock record account number (SRAN) from which kits are requisitioned. Omit category "A" distribution except for nuclear ordnance commodities.

4.14.3.6.7. Establish or update records required to perform kit distribution and management.

4.14.3.6.8. Ensure all required signatures have been entered on the AFMC IMT 874. Keep one copy for record purposes and return the original to the originator. For contractor-prepared forms, provide a copy to the TCM.

4.14.4. **Instructions for Completing AFMC IMT 874.**

4.14.4.1. Heading Information:

4.14.4.1.1. **Return To.** The activity preparing the TCTO (TCM or contractor return address).

4.14.4.1.2. **Date.** Form preparation date or (if contractor-prepared) date submitted to the government.

4.14.4.1.3. **Date First Kit Must be Available.** Entered by the government based on modification program requirements.

4.14.4.1.4. **TCTO No. and Data Code Number.** Obtain from AFMC IMT 873.

4.14.4.1.5. **TCTO Title and Application.** Obtain from AFMC IMT 873.

4.14.4.1.6. **Kit Assembly.** Check the appropriate box.

4.14.4.2. **Part A, Kits/Parts Required Per Aerospace Vehicle or Commodity Item.** If kits are NOT required, mark the appropriate box. When kits are required, identify the activity to which kit requisitions are submitted. Indicate the total number of kits required for modification of in-use assets. Indicate if any non-kitted parts and materials are required. Enter kit delivery dates. Enter the first ("A") kit information on the first line of the list, followed by each component part. Then enter data for additional kits (if required) in the same manner. The proper information and requisitioning data are

reflected in the source column. The block must list and code all items for the modification. Items for which no substitutes are authorized must be indicated. When possible, list substitutes for the items with no suitable substitutes in the Air Force Stocklist (limit 5). If more space is needed, separate sheets identifying the TCTO and AFMC IMT 874, Part A, may be attached.

4.14.4.3. **Part B, Action Required On Spares.** Identify all items affected by the modification, including the embedded recoverable items and expendable items used to support and repair components. Show spares, mobile spares kits and WRM affected by the TCTO. Indicate where the items are to be modified and the specific actions required on each. The end item manager will verify and correct the recommended actions as required.

4.14.4.4. **Part C, Kits/Parts Required To Modify Spares.** List kits and parts required to modify spares, if different from the requirements of part A. If there is no difference, check the first box; otherwise, complete using the instructions for part A. Indicate the number of kits required to modify all known spares.

4.14.4.5. **Part D, Disposition of Removed and Replaced Parts.** Complete the section to provide instructions for disposition of removed and replaced parts. The end item manager will verify and correct the recommended disposition instructions if necessary. The instructions must provide for disposition in compliance with all established policies. All items critical to flight safety or which cause demodification if reinstalled on modified equipment will be coded as such on the AFMC IMT 874. Instructions must be provided for mutilation of critical parts NOT usable in other applications. The mutilation instructions and disposal instructions prescribed by AFMAN 23-110 must be a warning note preceding the tabular listing of the item or items in paragraph 5.1.4 of all applicable TCTOs (MIL-PRF-38804).

4.14.4.6. **Part E, Minor Assemblies And Parts.** Identify and list disposal actions for items (bits and pieces, economic order quantity type) which are currently in the supply system and which will become obsolete with the accomplishment of the TCTO.

4.14.4.7. **Part F, Size, Weight And Cost Of Kits.** List the kit identification number, size,weight, and cost.

4.14.4.8. **Part G, Disposition Of Kits.** Provide disposition instructions for excess kits at the time of TCTO rescission.

4.14.4.9. **Part H, Action Required On Supply Records.** Identify action required on supply records and list all critical items. Item manager review codes are listed in AFMAN 23-110. Item manager and depot supply records will be coded immediately upon release of the TCTO.

4.14.4.10. **Part J, Kit Installation Tools.** List all special tools, test equipment or fixtures required for kit installation which are not normally available to the performing activity. The method of obtaining special equipment will be listed in the source column, and the disposition column will provide instructions for disposal after completion of the TCTO.

4.14.4.11. **Part K, Remarks.** Used for any carry-over information (indicate which part/block is being carried over) and to provide further explanation of TCTO requirements.

4.14.4.12. **Part L, Certification.**

4.14.4.12.1. The PMA will not complete processing the AFMC IMT 874 until the required signatures are present.

4.14.4.12.2. For contractor-prepared TCTOs, the contractor will sign the form before returning it to the government for review and approval. After approval, any differences from the contractor-submitted data will be resolved and the approved form will be returned to the contractor to permit initiation of TCTO development.

4.14.4.12.3. Unless otherwise specified on the form by the preparing contractor, government-furnished property (GFP) equipment and supplies required to support TCTO accomplishment will be shipped directly to the contractor facility. GFP which will NOT be included in TCTO kits must be clearly identified.

4.15. AFMC IMT 875 Completion and Processing.

4.15.1. **General.** The AFMC IMT 875 is a programming document to ensure concurrent availability of all support for a TCTO (companion TCTOs, related TO updates, special tools and equipment, and kits). The document is used to identify and coordinate the relevant logistics actions to ensure the maximum effectiveness of TCTO completion.

4.15.1.1. The PM organization which will manage the TCTO initiates the AFMC IMT 875 after CCB approval of the TCTO. The responsible TCM determines which items are applicable based on information provided by the AF IMT 3525 and AFMC IMT 873, and marks the "Action Required" blocks on the AFMC IMT 875. The TCM then signs off any completed actions in the 'Action Required' blocks and forwards the form, accompanied by the AF IMT 3525, to the applicable PMA to guide the management and programming of the TCTO.

4.15.1.2. The PMA will monitor and control the accomplishment of actions, coordination, and approvals required by the tailored AFMC IMT 875. Once all logistics support actions required by the form have been completed, the PMA signs off the completed items in the 'Action Completed" blocks, signs the form and forwards it to the PM for signature authorizing release of the TCTO. After the printed material is ready for distribution, it is forwarded with the rest of the TCTO package to the TO Manager for publishing the TCTO and any required TO updates.

4.15.2. **Form Retention.** Copies of the completed form are provided to the responsible TCM and the kit monitor as authority for release of the TCTO. The PMA maintains a copy of the form in the project folder until completion of the TCTO, after which it will be maintained in a TCTO history folder by the PMA for the life of the system.

4.15.3. **Instructions for Completion of the AFMC IMT 875.**

4.15.3.1. Heading Information.

4.15.3.1.1. **From.** Form initiator.

4.15.3.1.2. **To.** Production management activity.

4.15.3.1.3. **TCTO Number and TCTO Title/Application.** Obtain from AFMC IMT 873.

4.15.3.1.4. **TCTO Is, Type, And Accomplished At.** Check the applicable boxes. If "OTHER" is checked, explain in block 21.

4.15.3.1.5. **Rescission Period/Date, TCTO Issue Date, and Data Code Number.** Obtain from AFMC IMT 873.

4.15.3.1.6. **Material Safety Number.** If applicable, enter the number assigned by the Material Safety Technical Group.

4.15.3.2. **Item 1, TCTO.** Completed by the AFMC IMT 875 initiator, based on the AFMC IMT 873.

4.15.3.3. **Item 2, Technical Orders (TO).** Completed by the responsible TCM, in conjunction with the TO Manager. The section indicates when JCALS RCs or AFMC IMTs 252 are required to update related TOs.

4.15.3.4. **Item 3, Modification Kit.** Requirements personnel responsible for kit development or for monitoring contractor development of kits will complete the section when kits are required. An AFMC IMT 185 may be required.

4.15.3.5. **Item 4, TCTO/Kit Verification.** Ensure coordination and approval of schedules with any affected MAJCOMs and host bases.

4.15.3.6. **Item 5, Supply Records.** If supply records must be updated, ensure responsible item managers are notified.

4.15.3.7. **Item 6, Disposal Action.** Ensure disposal activities have been notified.

4.15.3.8. **Item 7, Shelf Life Control.** Ensure all shelf life items have been identified on the AFMC IMT 874, and are also identified in the TCTO and on any kit parts lists.

4.15.3.9. **Item 8, Configuration Management.** Ensure proper forms are initiated and configuration records are updated.

4.15.3.10. **Item 9, Repair Kit Parts.** Ensure any repair kits containing parts affected by the TCTO are identified.

4.15.3.11. **Item 10, Support Equipment (SE).** Ensure that any SE affected by the TCTO is identified, new requirements are added to allowances, and any affected TOs are updated.

4.15.3.12. **Item 11, Spare Support.** Ensure that new items have been identified for inventory control, provisioning has been accomplished, and spare support is assured.

4.15.3.13. **Item 12, Stock List.** Ensure action has been taken to stock-list new items and Base 86 request has been submitted if required.

4.15.3.14. **Item 13, Interchangeability.** Determine if new or modified items are interchangeable with other stocklisted items, ensure I&S stocklist is updated.

4.15.3.15. **Item 14, Engineering Drawings.** If engineering drawings must be developed or updated, ensure the actions are completed and an AF IMT 3925, Engineering Order (EO), is submitted to the program engineers.

4.15.3.16. **Item 15, Personnel Training.** If additional training will be required by the TCTO, ensure training monitors are informed and training courses are established.

4.15.3.17. **Item 16, Training Equipment.** Identify any training equipment affected by the TCTO, ensure modifications are compatible with operational equipment modifications, and any affected TOs are updated.

4.15.3.18. **Item 17, Other Agencies/Departments.** Identify and notify any other users/owners of the equipment being modified of the TCTO.

4.15.3.19. **Item 18, Preservation & Packaging Data.** Determine if existing procedures require update in affected manuals.

4.15.3.20. **Item 19, Master Material Support Record.** Ensure documentation has been submitted to update data in the records.

4.15.3.21. **Item 20, Other.** Complete as required for any of the actions listed.

4.15.3.22. **Item 21, Additional Remarks.** Use for continuation of other items (specify which items) or to add coordination/actions not listed elsewhere on the form.

4.15.3.23. **Item 22, Certification.** Signatures in the blocks indicate that all required actions, coordination and approval have been accomplished, and the TCTO may be issued.

Chapter 5

ENGINEERING DISPOSITION FOR NONCONFORMING TECHNICAL PROBLEMS BEYOND PUBLISHED AUTHORITY

5.1. General. This chapter prescribes policy and procedures for Air Force depot-level activities to request and furnish technical data for equipment troubleshooting and repair procedures beyond existing TO authority (TO 00-5-1), under work stoppage and anticipated work stoppage conditions (see glossary), at all ALCs, Product Centers, AMARC and AFMETCAL, Det 1. Depot field teams (organic or contractor) may either use the AFMC IMT 202 process or the TO 00-25-107/-108 Maintenance Assistance processes, whichever is more appropriate under the circumstances. The AFMC IMT 202 process will NOT be used instead of the TO 00-25-107/-108 processes to assist field-level activities.

5.1.1. Those weapon system program managers who convert their organizations to an integrated Product Lifecycle Management (PLM) system may use that system in lieu of the AFMC-Form-202, and may require the use of that system by the depot units that maintain that weapon system. The procedures for using that system shall be documented by the using organization, shall accomplish the intent of the AFMC Form 202 process, and shall be approved by the HQ AFMC/A4 Technical Director.

5.2. Forms Used.

5.2.1. AFMC Form 202. Initiate the AFMC Form 202 within a depot-level maintenance activity to request the responsible engineer to develop technical data or determine serviceability when published data is not adequate to complete the task at hand. Also use the AFMC Form 202 to alleviate parts or material shortages by authorizing substitutes determined suitable by the responsible program engineers. Prepare the AFMC Form 202 according to **paragraph 5.7**. **DO NOT** use the AFMC Form 202 to initiate routine corrective updates to TOs (see TO 00-5-1).

5.2.2. **Special Handling 252 (SH252) (AFMC IMT 252 – see Chapter 3).** An AFMC IMT 252, fully-coordinated and approved IAW **Chapter 3**, is issued to provide the corrected or newly developed data necessary to resolve an actual or anticipated work stoppage when the applicable TO is in error or inadequate. Stamp or type "Special Handling" on the top of each AFMC IMT 252 authorized for implementation. An alternative method is to enter "AUTHORIZED FOR SPECIAL HANDLING" in block 17 of the form. The approved SH252 is authorized for use at the depot facility until receipt of a formal TO update incorporating the data. DO NOT issue SH252s to implement routine corrective updates to TOs that do not prevent completion of the task at hand, or when the formal TO update will become available prior to the anticipated work stoppage.

5.2.2.1. The responsible Engineer or Equipment Specialist shall ensure the SH252 is routed to the applicable TO Manager for processing, (see **paragraph 5.5.7**), the SH252 is stamped and/or typed "Special Handling" on the top of the 252 or in block 17/18 and if applicable all attachments, block 5 has a project number assigned (if applicable, project number shall be annotated on all attachments), all required signatures are on the SH252, and if applicable, an approved and completed AFMC Form 202 is attached to the SH252".

5.2.2.2. The responsible Engineer or Equipment Specialist will provide the approved and completed SH252 to any affected areas using approved distribution processes. The responsible planner for the workload will provide a copy of the SH252 to the TODO for posting. Under the Standard Depot Maintenance Process (SDMP) the responsible production support organization will ensure the SH 252 package is provided to the TODO."

5.2.3. **AF IMTs 3925 and 3926 & 3927, Engineering Order (EO) and Engineering Order (Continuation Sheet).** An EO is used to document changes to engineering drawings or to parts (with or without a change to the drawings of the parts). When the solution to the problem reported on an AFMC IMT 202 is an engineering drawing change, complete and expedite processing of the EO according to AFI 21-402, *Engineering Drawing System*, and attach a copy to the AFMC IMT 202 returned to maintenance. An EO is optional when there is no drawing change required, provided an entry is made in the equipment history (AFTO IMT 95 or equivalent).

5.2.4. **AFTO IMTs 22.** These forms shall be used in a depot-level activity to identify TO deficiencies or enhancements that do not prevent completion of the task at hand. They will be submitted IAW TO 00-5-1. They can only be implemented by a published TO update.

5.3. Automated Systems.

5.3.1. **Automated AFMC IMT 202 Applications.** HQ AFMC/LG maintains a list of applications which have been reviewed and found compliant with processes and procedures in this manual. Maintenance organizations may either use the AFMC IMT 202 (see **paragraph 5.7**) or applications from the approved list. The approved applications list and center engineering focal point list are located at **https://techdata.wpafb.af.mil/toprac/interim.htm**. Maintenance organizations making a major change to an approved application or desiring to use an application not on the approved list, should contact their center engineering focal point to arrange for a process compliance review.

5.3.1.1. No new systems shall be developed or deployed. An AFMC standard system will replace all existing **dedicated** 202 systems.

5.3.1.2. Use of an automated system does not eliminate the requirement to accept and process AFMC IMTs 202 submitted using a manual process.

5.3.2. **Joint Computer-Aided Acquisition and Logistics Support (JCALS) System.** JCALS is the automated TO system currently authorized for Air Force-wide use. As such, JCALS RC processes and procedures may be used when they meet or can be adapted to meet the requirements of the SH252 portion of the AFMC IMT 202 process (see below).

5.3.3. JCALS Special Handling Recommended Change (SHRC). The engineer may use a JCALS RC instead of the AFMC Form 252 to develop and provide TO updates in conjunction with an AFMC Form 202. Local, Center-level procedures will be developed to adapt the JCALS process to the AFMC Form 202/SH252 process in this chapter. SHRCs follow the same procedures and have the same authority and restrictions as an SH252. JCALS RCs do not replace the AFMC Form 202 itself.

5.4. Business Practices and Guidance. Engineering instructions provided on or with the AFMC Form 202 must be strictly adhered to, and adherence must be verifiable in process and upon completion of assigned work. AFMC Form s 202 cannot be changed, altered or reinstated once they have been accepted by maintenance. If changes are required, new forms must be initiated. Evaluate the deficiency, develop/revise tech data when required, and coordinate and approve the AFMC Form 202 within 5 workdays after IET/Planner approval (block 3) for a work stoppage condition. Complete the actions within 15 workdays for an anticipated work stoppage condition. If a solution cannot be evaluated and completed within the specified time limits, the requesting facility must be contacted and provided the intended course of action and expected resolution date within the required time limit. The responsible engineer will either attach or reference sketches, drawings and other documents to the AFMC Form 202 when determined appropriate. Annotate the AFMC Form 202 control number in the upper right corner of all physical attachments to maintain package integrity. Include links to information in other databases or forms (drawings, electronic TOs, etc.) in a digital AFMC Form 202, when appropriate. A fully coordinated and approved SH252 or AF Form 3925 will supersede the work stoppage or anticipated work stoppage AFMC Form 202 which generated it. See **Figure 5.1**, AFMC Form 202 Process Flow.

5.4.1. **Restriction.** Use of any informal method to request or receive technical assistance is NOT authorized.

5.4.2. **Purpose.** Use the AFMC IMT 202 to furnish technical data (a) for conditions or procedures beyond published authority under work-stoppage and anticipated work stoppage conditions, and (b) when technical data does not exist and must be developed, approved, and provided to maintenance technicians. Specifically, issue the AFMC IMT 202 to:

- Provide procedures and engineering authorization for restoration of damaged or worn parts and components to serviceable condition through repair or overhaul procedures or processes not covered by applicable TOs, drawings or other technical data. ***NOTE:*** If the AFMC IMT 202 recommends a procedure which is subsequently adopted as a standard practice for system or component repair, the initiator (block 15) may be eligible to submit the procedure as an after-the-fact idea. No other uses of the form are eligible for the IDEA program. The initiator must submit the change and document the expected benefits in the IDEA Program Data System (IPDS). The IDEA submitter will retain a copy of the approved AFMC IMT 202 package as back-up justification material until IDEA disposition. Benefits must be confirmed by the TCM/IDEA evaluator using the IPDS.
- Provide engineering determination of a “Use-as-is” or “Satisfactory-as-is” condition;
- Provide engineering authorization for a one-time substitution of parts, components, or materials determined to be suitable replacements for specified items; and
- Provide engineering authorization for a one-time substitution of SE, special tools, test equipment, fixtures or ground handling equipment determined to be suitable replacements for specified items.

5.4.3. Limitations. AFMC Forms 202 must not degrade reliability, performance, form, fit or function beyond acceptable limits as determined by the Chief Engineer (or designee). The forms will **not** be used:

5.4.3.1. As an interim TO pending receipt of a formal TO;

5.4.3.2. As authorization for part or material substitution unless there is a critical shortage and the item is needed urgently to prevent maintenance or modification work stoppage;

5.4.3.3. As a change to the intent of a TCTO or to extend rescission dates or reinstate rescinded TCTOs;

5.4.3.4. To change nuclear certified equipment, systems or technical data unless authorized by the responsible Chief Engineer (or designee); or

5.4.3.5. To change TMDE requirements specified in TOs 00-20-14 and 33K-1-100.

5.4.4. **Joint Service TMs.** To implement new depot procedures/requirements, provided by other DoD components responsible for Joint Service Technical Manuals, use an SH252 as the cover sheet for the other component's change package.

5.5. Responsibilities. ***NOTE:*** Each Center may designate alternate methods for accomplishing the functions listed in this section, unless specifically assigned to a functional office.

5.5.1. **Maintenance Supervisor.**

5.5.1.1. Review AFMC IMTs 202 initiated by assigned personnel and forward the forms to the Industrial Engineering Technician (IET)/planner for a technical review.

5.5.1.2. Notify maintenance QA when a nonstandard deficient condition is organically caused by maintenance procedures or malpractice.

5.5.1.3. Review disposition instructions and/or procedures provided on approved AFMC IMTs 202/SH252s for any compliance problems, support equipment shortfalls, or personnel training issues; then sign block 28 to indicate concurrence with implementing the proposed procedures.

5.5.1.4. Ensure technicians annotate applicable DD Forms 1574, **Serviceable Tag – Materiel**, with comments required by AFMC IMT 202 Block 25, and forward the data to the records section for annotation on equipment historical documents (AFTO IMTs 95, **Significant Historical Data**, or AFTO IMT 781-series aircraft forms).

5.5.1.5. Notify the IET/planner 5 days before the rescission date (block 23A) of any AFMC IMTs 202 for which a requirement still exists.

5.5.1.6. Report any problems encountered during the accomplishment of the instructions to the responsible IET/Planner.

5.5.2. **Maintenance Quality Assurance (QA) Activity.**

5.5.2.1. Ensure a QA representative is present as required at any subsequent problem review meetings between maintenance personnel and the responsible engineer developing a solution for validated problems.

5.5.2.2. Participate in verification of any new or revised procedures when requested. Periodically, as locally determined, inspect any nonstandard repairs and maintenance procedures.

5.5.2.3. **(DELETED)**.

5.5.3. **Industrial Engineering Technicians (IETs)/Planners.**

5.5.3.1. Review AFMC IMTs 202 to ensure part A is complete and correct, and the conditions cited are valid. Assign control numbers to track valid requests. Return invalid requests (e.g., those for which existing tech data is adequate) to the initiating activity, and assist them with problem resolution.

5.5.3.2. For valid AFMC IMT 202 requests, enter the date in block 3, sign Block 16 and forward the forms to the PM or SCM designated contact point (see **5.5.4**) for delivery of work stoppage requests within two hours of signature; non-work stoppage requests for delivery within five work days.

5.5.3.3. Review the AFMC Form 202 package returned by the PM engineer for completeness (all required part B blocks are filled and/or signed IAW **paragraph 5.7**, and cited attachments are available). Return incomplete forms to the engineer for correction as required.

5.5.3.4. Sign the completed forms in block 27, obtain maintenance supervisor signature, and provide copies to the maintenance supervisor and (if required) to QA activities.

5.5.3.5. The IET/planner will interface between the maintenance function and the PM/SCM engineer to resolve any problems with implementation of AFMC Form 202 or SH252 instructions.

5.5.3.6. Distribute the forms as required by **paragraph 5.6.2**.

5.5.3.6.1. Forward copies of applicable AFMC IMTs 202 to data records section for annotation of historical records.

5.5.3.6.2. Forward copies of AFMC IMTs 202 to any affected depot TODOs for posting in affected TOs if applicable.

5.5.3.6.3. Maintain a file of the completed AFMC IMTs 202 with the master WCD file or in a “planning file”.

5.5.3.7. Forward data on AFMC IMT 202 monthly usage data to the designated Center focal point IAW local policy. This data shall include, as a minimum, the number of AFMC IMTs 202 pending, the number approved and the number associated with work stoppages.

5.5.4. **Program Manager (PM) or Supply Chain Manager (SCM) Designated Contact Point.**

5.5.4.1. Receive and record AFMC Forms 202 sent from the maintenance activity. Immediately notify the responsible engineer of a work stoppage request.

5.5.4.2. Maintain an AFMC IMT 202 control log. Maintain a file copy of AFMC IMTs 202 and attachments for the life of the system or end item. ***NOTE:*** The log may be kept manually or in a computer-based database.

5.5.5. **Responsible Engineer.** ***NOTE:*** While coordination with an Equipment Specialist (ES) is encouraged in the development of TO deviations, only cognizant engineers may approve responses to the AFMC Form 202.

5.5.5.1. Review the problem with maintenance and QA (within 2 hours of receipt for work stoppage or within 5 workdays for anticipated work stoppage), if required.

5.5.5.2. If the request is not warranted (e.g., existing technical data is sufficient to accomplish the task at hand), advise the maintenance supervisor and/or IET/Planner, and provide guidance as necessary to correct the cited condition. Annotate the AFMC IMT 202 "No Action Required," and process the form according to **paragraph 5.6.1.1**.

5.5.5.3. If the request is warranted, develop corrective action, step-by-step instructions, and complete Part B of the AFMC IMT 202, along with any other documents required (AFMC IMTs 252, AF IMTs 3925/3926 & 3927, etc.).

5.5.5.4. Ensure any new or revised procedures are verified as required. Determine if additional review and coordination is required (e.g., Safety, BEE, TO Manager, etc. Review **paragraphs 1.6**, **1.6.1** and **3.5.4** for coordination requirements.) Sign block 26A and obtain other required approval signatures (see **paragraph 5.7.3.10**) before release of AFMC IMTs 202 for PM/SCM engineering approval authority signature.

5.5.5.5. Ensure proper use of warnings and cautions according to MIL-STD-38784 when failure to comply with instructions could result in injury to personnel or damage to equipment.

5.5.6. **PM/SCM Engineering Approval Authority (EAA).**

5.5.6.1. The chief engineer exercises engineering approval authority for the PM/SCM. The chief engineer may delegate engineering approval authority for specific areas of responsibility (in writing) to one or more individuals. The delegated PM EAA signing an AFMC Form 202 must not be the same engineer who developed the procedures on that form.

5.5.6.2. When the maintenance activity is not located at the center having engineering authority, the PM/SCM EAA may delegate authority (in writing) to engineers at the maintenance location to develop Part B instructions.

5.5.6.3. The PM/SCM EAA verifies and approves instructions developed in Part B, verifies that required coordination (e.g., Safety, Bio-Environmental, and TO Manager) has been obtained, and signs block 26E.

5.5.6.4. The PM/SCM EAA shall provide the IET/Planner a copy of the AFMC IMT 202 with applicable attachments.

5.5.6.5. **(DELETED)**.

5.5.7. **TO Manager.**

5.5.7.1. Ensure each SH252 is worked as a priority and incorporated into the affected TO, not to exceed 365 days from the date the Special Handling AFMC Form 252 is received by the TO manager. If an AFMC Form 202 is attached to the SH252 the TO manager will ensure block 24 is marked TO change and then sign block 26D.

5.5.7.2. Incorporate a supersedure notice on the TO title page listing superseded SH252 project/local control numbers incorporated with the recommended change. After approving the SH252, the TO manager will provide a copy of the SH252 and, if applicable, attachments (AFMC Form 202, etc) back to the responsible Engineer for processing to the Depot production area (see **paragraphs 5.2.2.1** and **5.2.2.2**).

5.5.7.3. Ensure each SH252 is incorporated in the next scheduled update to the affected TO, not to exceed 365 days from the date the AFMC IMT 252 is signed. However, the approved SH252 remains valid until receipt of an interim or formal TO update incorporating the data, no matter how long the time period. List any superseded SH252 project/local control numbers on the title page of the formal TO update incorporating the recommended change.

5.5.8. **Center/Base Safety Office and Bio-Environmental Engineering (BEE) Office.** The Center/Base Safety Office at the same center as the PM/SCM EAA will review forwarded AFMC IMTs 202 for safety impacts IAW **paragraph 1.6.1.1**. A qualified -018 or -803 series safety representative will sign Block 26B of these AFMC IMTs 202. The Center/Base BEE office at the same center as the EAA will review forwarded AFMC IMTs 202 when required IAW **paragraph 1.6.1.2**, and sign block 26C.

5.5.9. **TO Distribution Office (TODO).** Receive copies of extended use AFMC IMTs 202 (rescission determined by block 23A) and SH252s and annotate the project/control numbers in the ATOMS records for affected TOs. Reproduce enough copies of the forms to file with each affected TO copy. Remove AFMC IMTs 202 when rescinded or completed. Remove SH252s when a TO update superseding the SH252 is received.

5.5.10. **Center Engineering Offices.** Provide AFMC/LG with focal points to conduct process compliance reviews when center maintenance organizations make major changes to an approved automated AFMC IMT 202 applications or desire to use an application not on the approved list, IAW **paragraph 5.3.1**. Upon successful completion of the review, provide documentation so AFMC/LG can add the application to the approved list.

5.5.10.1. Excluding Maintenance Wing ENs, each Wing EN (or designee) shall review the engineering direction which it provided on AFMC Form 202 requests by using the USI checklists quarterly. The Wing EN shall be responsible for implementing corrective actions for trends found during the review. Each Center EN shall annually review the results of the AFMC Form 202 quarterly reviews performed by the Wing ENs within that Center. The annual review shall be to identify trends within the Wings' quarterly reviews, and to verify that the Wings' quarterly reviews address all USI criteria. Each Maintenance Wing EN shall jointly review the AFMC FORM 202process with its local quality organization on a quarterly basis. All engineering reviews of the AFMC FORM 202process shall be performed in accordance with AFMCI 90-202.

5.5.11. Center Maintenance Wings.

5.5.11.1. Maintenance organizations making a major change to an approved automated AFMC IMT 202 application or desiring to use an application not on the approved list, should contact their center engineering focal point to arrange for a process compliance review IAW **paragraph 5.3.1**.

5.5.11.2. Set local policy and establish a focal point for the collection of monthly AFMC IMT 202 usage data from Center IET/Planner sections. Consolidate and forward quarterly reports to AFMC/LGYE. The quarterly reports shall include, as a minimum, the number of AFMC IMTs 202 pending, the number approved and the number associated with work stoppages.

5.5.11.3. Perform joint Wing-level engineering and quality reviews of the AFMC Form 202 process in accordance with AFMCI 90-202.

5.5.12. HQ AFMC/A4.

5.5.12.1. Maintain a list of approved, automated AFMC IMT 202 applications and center engineering focal points IAW **paragraph 5.2.1**. Add properly documented, approved applications to the approved list (**http://www.ide.wpafb.af.mil/toprac/interim.htm**) upon receipt of review documentation.

5.5.12.2. **(DELETED)**.

5.6. Procedures. (See **Figure 5.1**)

5.6.1. **Development and Approval.**

5.6.1.1. If the responsible engineer determines that the AFMC IMT 202 is not required (**paragraph 5.5.5.2**), mark block 22 on the form "No Action Required," enter "N/A" in block 23 (Rescind On), sign block 26A, and route the form through the EAA (block 26E) to the IET/Planner and Maintenance Supervisor (blocks 27 and 28).

5.6.1.2. AFMC IMT 202 packages must contain orderly, clear, concise and complete step-by-step technical instructions for nonstandard work.

5.6.1.3. The packages must contain warnings, cautions and notes as required by MIL-STD-38784 (format is not a requirement). Use warnings and cautions when failure to comply with instructions could result in injury to personnel or damage to equipment, unless the warnings and cautions are already contained in the attached or referenced TOs and drawings. When referencing warnings and cautions from the source document, the AFMC IMT 202 must cite the specific paragraph(s) referenced.

5.6.1.4. If the solution requires a change to an engineering drawing, complete an AF IMT 3925, obtain a project number and attach a copy of the EO to the AFMC IMT 202 providing the solution. Forward the original EO for processing according to AFI 21-402.

5.6.1.5. If the solution requires a TO change, prepare and coordinate an AFMC IMT 252 according to **Chapter 3**, and print and sign a copy of the approved form. Stamp or print "Special Handling" in bold letters at the top of each printed sheet of the form. Forward the package to the TO Manager for signature of the AFMC IMT 202 and processing the SH252 into a TO update.

5.6.1.6. If TO or drawing changes are not required, the engineer enters the step-by-step procedures, waiver or other instructions in Part B of the AFMC Form 202. If maintenance requested a TO change the engineer will explain why a TO change is not required.

5.6.1.7. Provide instructions in block 25 for documenting significant maintenance actions resulting in conditions that could have a bearing on future maintenance actions, and nonstandard repairs which will be readily apparent to field/owning organizations, instructions (TO 00-20-1). If future actions are required on aircraft, such as inspections or component replacement, an AFTO IMT 781 entry shall be made.

5.6.1.8. All new or changed procedures must be verified prior to use. Verification will be performed in conjunction with maintenance and QA representatives, when their participation is requested.

5.6.2. **Distribution and Posting.** The affected maintenance function supervisor will review the approved procedures for any compliance issues (lack of support equipment, supplies, training and skills of assigned personnel, etc.), and sign block 28 to authorize implementation.

5.6.2.1. The AFMC IMT 202 is only authorized for extended use of a procedure modification or part substitution (also known as "blanket authority") for a maximum period of performance of 120 days from the date approved by the PM Engineering Approval Authority (block 26E). A form written against a specific tail/serial numbered item or implementing a job directed by an AFMC IMT 206, **Temporary Work Request**, is only authorized until the specific task is completed. DO NOT complete both blocks 23A and 23B on an AFMC IMT 202. If the AFMC IMT 202 has a completed, approved SH252 or AF IMT 3925 attached, mark block 23A "N/A."

5.6.2.2. The IET/planner will forward extended use AFMC IMT 202 packages (rescission determined by block 23A), which do not require a TO change (no AFMC IMT 252 involved), to the TODO for reproduction and redistribution as required. The TODO will file these extended use, non-TO change AFMC IMTs 202 behind the related TO, annotate the TO title page with the form control number, and annotate each affected paragraph in the TO as if the form was a routine supplement.

5.6.2.3. Attach a copy of approved "one-time use" AFMC IMTs 202 (rescission determined by completion of the tail/serial/Rqst numbered item listed in block 23B) to the applicable work control documents (WCDs).

5.6.2.4. The requirement to attach the AFMC Form 202 to the applicable WCD is waived when the WCD is maintained in the Inventory Tracking System (ITS), provided the approved forms are available to maintenance technicians in the immediate work area. When "Blanket" AFMC Form 202s and SH252s approve the use of new tooling or equipment without changing maintenance processes, those control numbers will be posted with the technical data and are not required to be attached to the WCD. For cases where a TO is used by both depot and field units, an (Interim Operational Supplement) IOS will be issued instead of a SH252.

5.6.2.5. Upon receipt, the TODO will reproduce enough copies of approved SH252s to allow posting behind every affected TO copy, annotate the SH252 project/local control number on the TO title pages, and annotate each affected paragraph in the TO as if the SH252 was a routine supplement. If attached AFTO IMTs 22 were referenced in an SH252 or a JCALS SHRC was used instead of an SH252, annotate AFTO IMT 22/SHRC procedures to the affected TO paragraphs in the same manner. ***NOTE:*** Posting and annotating forms in digital TO files will be done IAW procedures in TO 00-5-1.

5.6.3. **Rescission and Removal.** The TODO will remove extended-use, non-TO change AFMC IMTs 202 from TOs when the information is no longer required, when the established rescission date is reached, or upon receipt of a replacement form, whichever occurs first. Ensure that TO annotations driven by rescinded AFMC IMTs 202 are completely

erased. The TODO will remove an SH252 from the TO upon receipt of the TO update incorporating the data, or when replaced by a new SH252. Only authorized personnel can remove or add SH252s and AFMC IMTs 202 to depot technical orders.

5.6.4. **Review and Reissue.** If the instructions on an AFMC IMT 202 are still required after the form rescission date, and a TO update or engineering drawing change is not appropriate, a new AFMC IMT 202 may be issued referencing the previous AFMC IMT 202. An AFMC IMT 202 shall not be reissued more than four times without submitting an RC against the affected TO or an EO against the affected drawing.

5.6.5. Standardizing Procedures. When information in an AFMC Form 202 becomes a repeat requirement (for example, substitute equipment becomes standard or extended repair procedures become a repetitive requirement), the responsible engineer shall initiate a TO update or drawing change by submitting an AFMC Form 252 or EO, or by submitting other applicable documentation to permanently update other technical data.

5.6.6. **Documenting Repairs.** Document repairs as required by the AFMC IMT 202, block 25. When the DD Form 1574 on an item being installed lists such deviations, transfer the comments to the end item AFTO IMT 95 (if one exists) or 781-series form to preclude loss of data. After job completion, each applicable 'one-time use' AFMC IMT 202 (along with the WCD) will be filed in affected end item historical files.

5.7. AFMC IMT 202, Completion Instructions. ***NOTE:*** The form is available in both IMT and Word versions (see **http://www.ide.wpafb.af.mil/toprac/to-syste.htm**, "Forms"), and may be computer-generated (CG) in accordance with AFI 33-360V2. Digital copies do not require signatures, but will include the entry "//SIGNED//," along with the responsible individuals" names, office symbols and phone numbers in the signature blocks.

5.7.1. General. Entries must be typed or neatly printed in blue-black ink. The form control number shall be placed in the upper right corner of all attachments (continuation sheets, SH252s, EOs, etc.)

5.7.2. **Part A, Maintenance.**

5.7.2.1. **Block 1, To.** Organization/office symbol of the PM/SCM activity responsible for the system or end item.

5.7.2.2. **Block 2, From.** Organization/office symbol of the maintenance activity submitting the form.

5.7.2.3. **Block 3, Date.** Date the request was approved by the IET/Planner.

5.7.2.4. **Block 4, Control Number.** Enter the next available control number from a log maintained by the IET/Planner for the activity. (The activity establishes requirements for construction of the control number. The log may be kept manually or in a computer database. If an automated AFMC 202 system is used, use the Control Number assigned by the system.)

5.7.2.5. **Block 5, Nomenclature.** Enter the nomenclature of the item experiencing the problem. Use the IPB nomenclature whenever possible. In some cases, the MDS may be required.

5.7.2.6. **Block 6, Part Number.** Enter the item part number.

5.7.2.7. **Block 7, National Stock Number.** Enter the NSN or "NSL" (Not Stock Listed), as appropriate.

5.7.2.8. **Block 8, Serial/Tail/Rqst No.** When applicable, enter the tail number, serial number or AFMC IMT 206 request number of the item involved. For extended use authority for a repair or substitution for a specified period, enter "N/A" (requires a rescission date in block 23A).

5.7.2.9. **Block 9, Location.** Enter the physical location (Resource Control Center [RCC], post/building number, shop, etc.) of the item causing the problem.

5.7.2.10. **Block 10, TO/Dwg Number.** Enter the involved TO number or engineering drawing number.

5.7.2.11. **Block 11, Work Stoppage.** For a "YES" answer, enter the date the work stoppage has or will occur.

5.7.2.12. **Block 12, Organically Caused.** Check the appropriate response to indicate if the problem was or was not caused by organic maintenance action.

5.7.2.13. **Block 13, Quality Assurance (QA) Notified.** When block 12 is checked "yes," enter the QA office symbol and the date and time notified.

5.7.2.14. **Block 14, Deficiency and Recommendations.** Enter a complete, concise description of the problem and any recommended corrective actions.

5.7.2.15. **Block 15, Initiator.** Enter the signature and/or printed name, office symbol and phone number of the person reporting the problem. (Also establishes the ownership of any subsequent after-the-fact Ideas.)

5.7.2.16. **Block 16, Industrial Engineering Technician/Planner.** Enter the signature and/or printed name, office symbol and phone of the IET/Planner or other designated person validating submission of the AFMC IMT 202.

5.7.3. **Part B, PM/SCM Management.**

5.7.3.1. **Block 17, To.** Enter the information from Block 2.

5.7.3.2. **Block 18, From.** Organization/office symbol of the engineering activity responding to the problem.

5.7.3.3. **Block 19, Date Received.** Date the completed form is received by the engineer activity.

5.7.3.4. **Block 20, Engineer.** The name and phone number of the engineer developing the procedures and signing block 26A.

5.7.3.5. **Block 21, Disposition.** Check the appropriate disposition box. For "Other," explain in block 22.

5.7.3.6. **Block 22, Instructions.** If the solution does not require a TO change, enter complete, concise, step-by-step instructions for resolving the problem. If the solution requires a TO or engineering drawing change, attach the SH252 or EO containing the instructions and enter "See Attached" in this block.

5.7.3.7. **Block 23, Rescind On.** When the procedure will be valid to use on the specified task for a period of time, enter the rescission date in "**A. Date___**" (not to exceed 120 calendar days from date shown in block 26E). When the procedures are valid for a specific serial/tail number or Temporary Work Request, enter the serial/tail number or request number in "**B. COMPLETION OF S/N OR AFMC IMT 206 NO. ____**" DO NOT complete both 23A and 23B. If the AFMC IMT 202 has a completed, approved SH252 or AF IMT 3925 attached, mark block 23A "N/A."

5.7.3.8. **Block 24, Requirements.** TO Change / Engineering Drawing Change / Safety Review / Bio-Environmental Review. Check applicable boxes.

5.7.3.9. **Block 25, Equipment Historical Data Form Entry.** Enter "N/A" or the exact wording of the statement to be placed on the applicable form (AFTO Form 95 or 781-series, DD Form 1574, etc.) The statement will include a complete description and location of the nonstandard repair (e.g., fuselage station), the name, office symbol, phone number of the engineer authorizing the repair, and AFMC Form 202 control number.

5.7.3.10. **Block 26, Coordination/Approval.**

5.7.3.10.1. **Block 26a, Engineer.** Signature of the engineer who developed the disposition or repair instructions, and the date signed.

5.7.3.10.2. **Block 26b, Safety.** When "Safety Review" is checked in Block 24, enter the name and signature of the Center Safety personnel who reviewed the instructions, and the date signed.

5.7.3.10.3. **Block 26c, Bio-Environmental Engineering.** When "Bio-Environmental Review" is checked in Block 24, enter the name and signature of the BEE personnel who reviewed the instructions, and the date signed.

5.7.3.10.4. **Block 26d, TO Manager.** When "TO Change" is checked in Block 24, enter the name and signature of the responsible TO manager, and the date signed.

5.7.3.10.5. **Block 26e, PM/SCM Engineering Approval Authority.** Name and signature of the individual responsible for reviewing and approving the instructions and the date signed.

5.7.4. **Part C, Maintenance Approval.**

5.7.4.1. **Block 27, IET/Planner.** Name and signature of the reviewing individual, and the date signed. The signature indicates the form is complete and fully coordinated, prior to issuing it to maintenance. If the form is incomplete in any respect, the IET/Planner will take immediate action to have the discrepancies corrected.

5.7.4.2. **Block 28, Maintenance Supervisor.** To indicate concurrence with the disposition instructions and authorize implementation of the procedures, enter the name and signature of the supervisor of the affected maintenance activity, and the date signed.

Figure 5.1. AFMC Form 202 Process Flow.

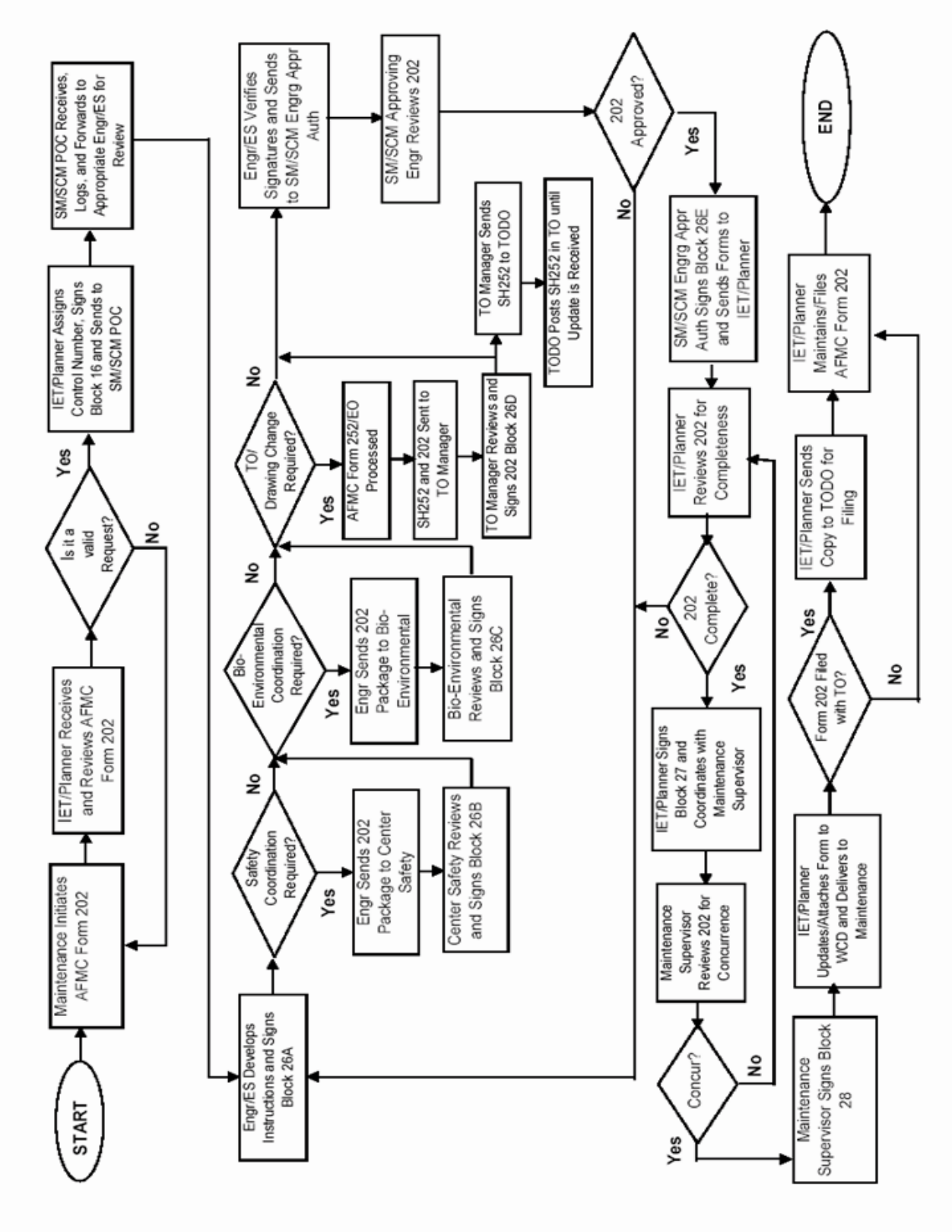

Figure 5.2. AFMC Form 202, Nonconforming Technical Assistance Request and Reply.

NONCONFORMING TECHNICAL ASSISTANCE REQUEST AND REPLY

PART A — MAINTENANCE

1. TO	2. FROM	3. DATE	4. CONTROL NUMBER
5. NOMENCLATURE	6. PART NUMBER	7. NATIONAL STOCK NUMBER	8. SERIAL / TAIL / RQST NO.

9. LOCATION	10. TO / DWG NUMBER	11. WORK STOPPAGE	12. ORGANICALLY	13. QUALITY ASSURANCE (QA) NOTIFIED *(Office Symbol/Date/Time)*
		☐ YES ☐ NO DATE	☐ YES ☐ NO	

14. DEFICIENCY AND RECOMMENDATION

15. INITIATOR *(Signature/Office Symbol/Phone)*	16. INDUSTRIAL ENGRG TECH / PLANNER *(Signature/Office Symbol/Phone)*

PART B — PM/SCM MANAGEMENT

17. TO	18. FROM	19. DATE RECEIVED	20. ENGINEER / ES (Name/Phone)

21. DISPOSITION
☐ REPAIR ☐ REWORK ☐ USE AS IS ☐ CONDEMN ☐ OTHER

22. INSTRUCTIONS

23. RESCIND ON	24. REQUIREMENTS
A. DATE _____	☐ TO CHANGE ☐ SAFETY RVW
B. COMPLETION OF _____	☐ ENGRG DWG CHG ☐ BIO-ENV ENGR
or AFMC FORM 206 NO. _____	

25. EQUIPMENT HISTORICAL DATA FORM ENTRY

26. COORDINATION / APPROVAL

A. ENGINEER / ES	DATE	D. TO MANAGER *(Name/Signature)*	DATE
B. SAFETY *(Name/Signature)*	DATE	E. PM / SCM ENGRG APPROVAL AUTHORITY *(Name/Signature)*	DATE
C. BIOENVIRONMENTAL ENGRG	DATE	F.	DATE

PART C — MAINTENANCE APPROVAL

27. IET / PLANNER	DATE	28. MAINTENANCE SUPERVISOR	DATE

AFMC IMT 202, 20040628, *V4* PREVIOUS EDITION IS OBSOLETE

Chapter 6

CONTRACTOR FURNISHED AERONAUTICAL EQUIPMENT/CONTRACTOR FURNISHED EQUIPMENT (CFAE/CFE) NOTICE PROCESSING AND TRACKING PROCEDURES

6.1. General. CFAE/CFE Notices (often called "CFENs" for short) are submitted by contractors when required by a CDRL item, or by other government agencies developing TOs for the Air Force. 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.

6.1.1. **CFEN Content.** CFEN content is specified by data item description (DID) DI-TMSS-80067. 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. CFENs should be revised and resubmitted or superseded whenever the item represented under- goes significant change or data requirements change.

6.1.2. **National Stock Class (NSC).** The NSC of the equipment covered is listed on the notice. The NSC is used with the D086, Mission Workload Assignments System, to determine which ALC is prime for the management of the commodity and manual involved.

6.1.3. **PM Procedures.** The PM, through the TO Manager or TCM, shall establish a procedure for reviewing and suspensing CFEN inputs. The procedure must stipulate who reviews CFENs for each type of document recommended and who has ultimate approval authority for acceptance and numbering of the recommended documents.

6.1.4. **CFEN Approval.** Upon approval of a CFEN, the TO Manager 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).

6.1.5. **CFEN Disapproval.** If the CFEN is disapproved, full justification must be provided. If the item has been classified as a nonrepairable 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 CFEN preparation rather than unnecessary or unsuitable data, the TO Manager should immediately inform the contractor to allow timely revision and resubmittal of a corrected CFEN to avoid costly delay.

6.2. MILSPEC TOs. 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 TOs for operation and maintenance of the commodity. For new SE, the contractor will submit a Support Equipment Recommendation Document (SERD), accompanied by any required CFENs. 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).

6.2.1. **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 CFENs.

6.2.2. **CFEN Review.** For approved SERDs and end item components, associated CFENs must be reviewed for applicability, need for a stand-alone manual, depth of coverage recommended, etc., and approved separately (TO 00-5-3).

6.3. Contractor Data. In lieu of developing MILSPEC TOs, the contractor may recommend use of in-house contractor-format technical data. The CFENs and the data recommended must be reviewed and approved like commercial manuals (**paragraph 6.4**).

6.4. Commercial Off-The-Shelf (COTS) Manuals. 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 according to MIL-HDBK-1221. CFENs on COTS manuals must include the contractor evaluation of suitability according to MIL-HDBK-1221. See TO 00-5-3 for government data rights requirements.

6.4.1. **COTS Review Copies.** Two copies of the COTS manual and CFEN are normally forwarded by cover letter to the TO Manager for review and evaluation. One copy should be retained in the PM TO library in the event of loss in shipment.

6.4.2. **Reviewers and Suspenses.** Reviewing activities usually include the equipment specialist managing the commodity and the commodity user. A suspense date should be established and follow-up action taken until approval or disapproval is obtained.

6.4.3. **CFEN 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.

6.4.4. **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 may be obtained and the manual returned to the prime ALC for reevaluation. If the required data cannot be obtained from the vendor, a cost estimate for development of the supplemental data should be requested from the prime contractor. Action must be taken to obtain the additional funding required for the supplement, or to reevaluate the support concept for the commodity. After the supplemental data is received, the data and the original manual should be submitted for reevaluation.

6.4.5. **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 ALC, 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.

6.4.6. **Pre-Screening COTS Manuals.** Contractors must review the "TO-Equipment Cross-Reference" function of TO 0-1-CD-1, *USAF Technical Order Catalog*, to prevent resubmission of previously approved COTS manuals.

6.4.7. **Responsibility Transfer.** TO management responsibility for COTS manuals automatically transfers to the equipment SPO TO Manager after signature of the DD Form 250, **Material Inspection and Receiving Report**.

DEBRA K. WALKER, SES, Deputy Director
Directorate of Maintenance

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

Defense Acquisition Guidebook

DOD 5200.1-R, *DoD Information Security Program Regulation*

DODD 5230.24, *Distribution Statements on Technical Documents.*

DODD 5230.25, *Withholding of Unclassified Technical Data From Public Disclosure*

DODD 5330.3/AF Sup, *Defense Automated Printing Service (DAPS)*

DOD 5400.7-R/AF Sup, *DoD Freedom of Information Act Program*

AFPD 10-9, *Lead Operating Command Weapon Systems Management*

AFI 10-901, *Lead Operating Command—Communications and Information Systems Management*

AFI 11-215, *Flight Manuals Programs (FMP)*

AFMAN 16-101, *International Affairs and Security Assistance Management*

AFPD 21-3, *Technical Orders*

AFJI 21-301, *Interservicing of Technical Manuals and Related Technology*

AFI 21-303, *Technical Orders*

AFI 21-402, *Engineering Drawing System*

AFMAN 23-110V3Pt1, *Miscellaneous Materiel Management Procedures*

AFI 31-401, *Managing the Information Security Program*

AFI 32-7061, *The Environmental Impact Analysis Process*

AFI 33-129, *Transmission of Information via the Internet*

AFI 33-360V1, *Air Force Content Management Program-Publications*

AFI 33-360V2, *Content Management Program-Information Management Tool (CMP-IMT)*

AFI 38-401, *The Air Force Innovative Development through Employee Awareness (IDEA) Program*

AFI 40-201, *Managing Radioactive Materials in the USAF*

AFI 61-204, *Disseminating Scientific and Technical Information*

AFPD 62-4, *Standards of Airworthiness for Passenger-Carrying Commercial Derivative Transport Air- craft*

AFPD 62-5, *Standards of Airworthiness for Commercial Derivative Hybrid Aircraft*

AFPD 63-11, *Modification System*

AFI 63- 1101, *Modification Management*

AFI 63-1201, *Assurance of Operational Safety, Suitability, & Effectiveness*

AFI 65-601V1, *Budget Guidance and Procedures*

AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Review and Safety Rules*

AFI 91-103, *Air Force Nuclear Safety Certification Program*

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*

AFOSH STD 91-501, *Air Force Consolidated Occupational Safety Standard*

AFMC 206, *Temporary Work Request.*

AFMCI 21-108, *Maintenance Training & Production Acceptance Certification (PAC) Program*

AFMCI 21-301, *Air Force Technical Order System Implementing Policies*

AFMCI 21-302, *Processing Interim Technical Orders and Rapid Action Changes (RACs)*

AFMCMAN 23-3, *Cataloging and Standardization*

TO 0-1-CD-1, *Air Force TO Catalog (**https://www.toindex-s.wpafb.af.mil/**)*

TO 00-5-1, *Air Force Technical Order System*

TO 00-5-3, *Air Force Technical Manual Acquisition Procedures*

TO 00-5-15, *Air Force Time Compliance Technical Order System*

TO 00-5-17, *Users Manual USAF Computer Program Identification Numbering (CPIN) System*

TO 00-5-18, *USAF Technical Order Numbering System*

TO 00-5-19, *Security Assistance Technical Order Program*

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*

TO 00-20-2, *Maintenance Data Documentation*

TO 00-25-4, *Depot Maintenance of Aerospace Vehicles and Training Equipment*

TO 00-25-195, *Source, Maintainability and Recoverability Coding of AF Weapons, Systems, and Equipment*

TO 00-35D-54, *USAF Deficiency Reporting and Investigating System*

TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services)*

MIL-STD-38784, *Manuals, Technical: General Style and Format Requirements*

MIL-PRF-38804, *Time Compliance Technical Orders, Preparation of*

MIL-HDBK-1221, *Evaluation of Commercial Off-The-Shelf (COTS) Manuals*

MIL-HDBK-9660, *DoD Produced CD-ROM Products* ***NOTE:*** Also used for DVDs.

DI-TMSS-80067, *Technical Manual (TM) Contractor Furnished Aeronautical Equipment or Contractor*

Furnished Equipment (CFAE/CFE) Notices

Forms

AFTO 22, **Technical Manual (TM) Change Recommendation and Reply**

AFTO 27, **Preliminary Technical Order (PTO) Publication Change Request (PCR)/TO VerificationRecord/Approval**

AFTO 82, **TCTO Verification Certificate**

AF 86, **Request for Cataloging Data/Action**

AFTO 95, **Significant Historical Data**

AFTO 124, **Computation of Technical Order Reading Grade Level**

AFMC 133, **Interchangeability and Substitutability Program**

AFMC 145, **Technical Order Receiving /Processing Record**

AFMC 172, **Coordination of Proposed Technical Orders**

AFMC 185, **Request for TCTO Kit Assembly**

AFMC 202, **Nonconforming Technical Assistance Request and Reply**

AFMC 203, **Technical Order Numbering, Indexing and Control Record**

AFMC 204, **Technical Order Numbering, Indexing and Control Record (Continuation Sheet)**

DD 250, **Material Inspection and Receiving Report**

AFMC 252, **T.O. Publication Change Request**

DD 254, **DoD Contract Security Classification Specification**

AFMC 276, **Special Requisition for Air Force Technical Order**

DD 282, **DoD Printing Requisition/Order**

AFMC 407, **Technical Order Reproducible Material Record**

AFMC 578, **USAF TO Initial Distribution Verification**

AF 585, **Contract Data Requirements Substantiation**

AF 847, **Recommendation for Change of Publication**

AFMC 873, **Time Compliance Technical Order Requirements**

AFMC 874, **Time Compliance Technical Order Supply Data Requirements**

AFMC 875, **Time Compliance Technical Order Programming Document**

AF 1067, **Modification Proposal**

DD 1348-2, **Issue Release/Receipt Document With Address Label**

DD 1423, **Contract Data Requirements List (CG)**

DD 1574, **Serviceable Tag - Materiel**

AF 3925 / 3926 & 3927, **Engineering Order / (Continuation Sheet)**

DD 2875, **System Authorization Access Request (SAAR)**

AF 3525, **CCB Modification Requirements and Approval Document**

Abbreviations and Acronyms

ACO—Administrative Contracting Officer

AETC—Air Education & Training Command

AFCESA—Air Force Civil Engineering Support Agency

AFMC—Air Force Materiel Command

AFMCPD / I / MAN—AFMC Policy Directive / Instruction / Manual

AFMETCAL—Air Force Metrology and Calibration (Program) (AFMC)

AFOSH STD—Air Force Occupational Safety and Health Standard

AFPD / I / MAN—Air Force Policy Directive / Instruction / Manual

AFPDC—Air Force Publications Distribution Center

AFPSL—Air Force Primary Standards Laboratory

AFRL—Air Force Research Laboratory (AFMC)

AFSAC—Air Force Security Assistance Center (AFMC)

AFTO—Air Force Technical Order

AL—Address List (DMS)

ALC—Air Logistics Center (AFMC): OC – Oklahoma City; OO – Ogden; WR – Warner Robins

AMARC—Aerospace Maintenance and Regeneration Center (AFMC)

APU—Auxiliary Power Unit

ATOMS—Automated TO Management System

ATOS—Automated Technical Order System

BEE—Bio-Environmental Engineering

BSD—Boeing Space Division

CAFTOP—Comprehensive Air Force TO Plan

CAGE—Commercial and Government Entity (Code)

CAMS—Core Automated Maintenance System

CCB—Configuration Control Board

CCP—Command Control Point

CD—Compact Disk

CDM—Contractor Data Manuals (ICBMs)

CD-ROM—Compact Disk-Read Only Memory

CDRL—Contract Data Requirements List (DD Forms 1423)

CEMS—Comprehensive Engine Management System

CFAE/CFE—Contractor Furnished (Aeronautical) Equipment (Notice)

CFEN—Contractor Furnished Equipment Notice

CG—Computer Generated (forms)

CITOMS—Comprehensive Integrated TO Management System

CLIN—Contract Line Item Number

CLS—Contractor Logistics Support

CPIN—Computer Program Identification Number

CSTO—Country Standard TO

CTOM—Centralized Technical Order Management (Group)

CTOR—Centralized TO Repository (WR-ALC)

DA—Department of the Army

DAPS—Defense Automated Printing Service

DI—Desktop Instructions (JCALS)

DID—Data Item Description

DISA—Defense Information Systems Agency

DLA—Defense Logistics Agency

DLDSS—Digital Legacy Data Storage System

DLIS—Defense Logistics Information Service (DLA)

DM—Data Manager (Engineering, EDM)

DMS—Defense Message System

DoD—Department of Defense

DODAAC—Department of Defense Activity Address Code

DODD / I—Department of Defense Directive / Instruction

DPEM—Depot Programmed Equipment Maintenance

DSN—Defense Switched Network (DoD phone system)

DVD—Digital Versatile Disc

ECP—Engineering Change Proposal

EDD—Estimated Delivery Date

EO—Engineering Order

EOD—Explosive Ordnance Disposal

ES—Equipment Specialist (AFMC)

ESOH—Environmental, Safety and Occupational Health

ETIMS—Enhanced Technical Information Management System

EW—Electronic Warfare

FA—Functional Administrator (ETIMS)

FAA—Federal Aviation Administration

FDO—Foreign Disclosure Office

FLIS—Federal Logistics Information System

FMM—Flight Manual Manager

FMP—Flight Manuals Program (AFI 11-215)

FMRC—Flight Manual Review Conference

FMS—Foreign Military Sales

FOIA—Freedom Of Information Act

FSG—Federal Supply Group

FTP—File Transfer Protocol (Internet)

FYDP—Future Years Defense Plan

GDMS—Global Data Management System

GFP—Government Furnished Property

GPO—Government Printing Office

HCP / HCI—Hardness Critical Procedure / Item

IAW—In Accordance With

I&S—Interchangeability & Substitutability

ICBM—Intercontinental Ballistic Missile

ICP—Inventory Control Point

ID—Initial Distribution

IDEA—Innovative Development through Employee Awareness (Program)

IM—Item Manager (AFMC)

IOS—Interim Operational Supplement

IP—Internet Protocol

IPB—Illustrated Parts Breakdown

IPDF—(Adobe®) Indexed Portable Document Format™

IPDS—IDEA Program Data System

IPR—In-Process Review

IPT—Integrated Process Team

IRTS—Incident Reporting and Tracking System (JCALS)

ISS—Interim Safety Supplement

ITO—Interim Technical Order (includes IOS, ISS, & ITCTO)

ITPS—Identifying Technical Publication Sheet (MIL-HDBK-1221)

ITS—Inventory Tracking System

JCALS—Joint Computer-Aided Acquisition and Logistics Support

JIT—Just In Time (printing)

JNWPS—Joint Nuclear Weapons Publication System

LAN—Local Area Network

LCN—Local Control Number

LEP—List of Effective Pages

LOAP—List of Applicable Publications

MAJCOM—Major Command

MDS—Model, Design, Series

MIL-HDBK—Military Handbook

MIL-PRF—Military Performance Specification

MILSPEC—Military Specification

MIL-STD—Military Standard

MIP—Materiel Improvement Project (AFMC)

MIQ—Maximum Issue Quantity (JCALS)

MMAC—Materiel Management Aggregation Code

MNCL—Master Nuclear Certification List (formerly TO 00-110N-16)

MOA—Memorandum of Agreement

MPTO—Methods and Procedures TO

MSG—Materiel Systems Group (AFMC)

N/A—Not Applicable

NDI—Non-Destructive Inspection

NHA—Next Higher Assembly

NIST—National Institute for Standards and Technology

NSA—National Security Agency

NSC—National Stock Class

NSL—Not Stock Listed

NSN—National Stock Number

NSP—Nuclear Surety Procedure

O&I—Organizational and Intermediate (Levels of Maintenance)

O&M—Operation(s) and Maintenance

OBAC—Organization-Based Access Control (JCALS)

OCR—Optical Character Recognition

OEM—Original Equipment Manufacturer

OMB—Office of Management and Budget (DoD)

OPR—Office of Primary Responsibility

OSS&E—Operational Safety, Suitability & Effectiveness

PC—Product Center (AFMC): AAC – Air Armament Center, ASC – Aerospace Systems Center; ESC – Electronic Systems Center; & (AFSPC) SMC – Space & Missile Systems Center

PCO—Procuring Contracting Officer

PCR—Publication Change Request

PDF—(Adobe®) Portable Document Format™

PDL—Page Description Language **or -**Personal Distribution List (DMS)

PDM—Programmed Depot Maintenance

PGM—Product Group Manager

PIM—Product Improvement Manager

PM—Program Manager (SPD or PGM)

PMD—Program Management Directive

PME—Precision Measuring Equipment

POC—Point of Contact

POD—Print On Demand

PR—Purchase Request

PRRG—Pre-Release Review Group

PSN—Publication Stock Number

PTO—Preliminary Technical Order

PTOWS—Prime TO Warehouse System

QA—Quality Assurance

RAC—Rapid Action Change

RC—Recommended Change

REMIS—Reliability & Maintainability Information System

RGL—Reading Grade Level

SA—Systems Administrator

SAF—Secretary of the Air Force

SAP—Security Assistance Program

SATODS—Security Assistance TO Data System

SCG—Security Classification Guide

SCM—Supply Chain Manager

SE—Support Equipment

SERD—Support Equipment Recommendation Data

SGML—Standard Generalized Markup Language

SH252—Special Handling AFMC IMT 252

SHRC—Special Handling Recommended Change

SME—Subject Matter Expert

SMR—Source, Maintenance and Recoverability (Code)

SOSC—Systems Operations Support Center (JCALS)

SPD—System Program Director

SRAN—Stock Record Account Number

SSL—Secure Socket Layer (Internet)

TCM—Technical Content Manager

TCTO—Time Compliance Technical Order

TM—Technical Manual

TMDE—Test, Measurement & Diagnostic Equipment

TMS—Type, Model, Series

TMSS—Technical Manual Specifications and Standards

TO—Technical Order

TODO—TO Distribution Office

TOFB—TO Financial Brochure

TO.MART—TO Management And Retrieval Tool

TOPS—TO Page Supplement

TOPR—TO Publication Request

TORSN—TO Request Status Notification

TXP—Transaction Processor (JCALS)

URL—Uniform Resource Locator

U.S.—United States

USAF—United States Air Force

WCD—Work Control Document

WFM—Workflow Manager (JCALS or ETIMS)

WIP—Work In Progress

WRM—War Reserve Material

WWW—World Wide Web (Internet)

Terms

Air Logistic Center (ALC)—The AFMC component having responsibility for the sustainment phase of a system or commodity life cycle, including the related TOs. ALCs perform depot-level maintenance on assigned systems and commodities during sustainment. (Some Product Centers have assumed cradle-to-grave life-cycle management of specific weapon systems.)

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 IMTs 22 or other TO change requests when they must be held for evaluation by a regularly constituted work group or committee.

Anticipated Work Stoppage—(See Work Stoppage) Spare assets are available and the discrepancy or deficiency WILL NOT halt production or delay the schedule or delivery of the end item. Anticipated work stoppage situations will become work stoppage when not resolved in time to prevent schedule delays.

Automated Technical Order Management System (ATOMS)—ATOMS is a computer application designed to assist TODOs with account management, TO ordering and record-keeping functions associated with TO distribution. ATOMS software with the User Guide included is available through the TO System Information Page (**http://www.ide.wpafb.af.mil/toprac/to-syste.htm**).

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.

Blanket Authority—Extended use of an AFMC IMT 202 to authorize use of substitute parts, support equipment or procedures on all jobs worked during a specified period of time, not to exceed 120 days per approved AFMC IMT.

Commodity—A designated system, subsystem or item not identified as a weapon or military system. Commodities are grouped into Product Groups possessing similar characteristics and

applications that will benefit from similar developmental, acquisition, and logistics support management processes.

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 magnetic or paper tapes, floppy disks, 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 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, which 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.

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.

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 PDM.

Derived Documents—Documents such as checklists, work cards, and local tech data extracted from a, or compiled from several formal TOs.

Development System Manager (DSM)—The lead individual at a Product Center (PC) when an PM located at an ALC delegates a specific development task to the Product Center. The DSM reports directly to the PM.

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 DODD 5230.24 and AFI 61-204.

Engineering Change Proposal (ECP)—A proposed engineering change and the documentation that describes and suggests it. ECPs are submitted to the PM by contractors or from internal Air Force sources.

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.

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).

Form, Fit and Function—The physical and functional characteristics of an end item, but not the characteristics of any of the item components.

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 in 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 according to a specific format.

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.

Item Manager (IM)—An individual within an organization assigned management responsibility for one or more specific items of hardware.

JCALS Subject Matter Expert (SME)—An individual selected by the MAJCOM or base to receive intensive training on the use of JCALS in the operating environment. The SME provides help and training to other MAJCOM/base JCALS users.

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 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 manual, MAJCOM includes Field Operating Agencies (FOA) and Direct Reporting Units (DRU).

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 and to which IWSM is applicable.

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.

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.

Operating Location—Generally, a physical location where military systems or commodities are assigned, operated, and maintained.

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.

Product Group—Aggregations of multiple products in all life cycle phases characterized by an ongoing development requirement as well as a very large cumulative sustainment requirement. A Product Group consists of commodities that can benefit from common management practices.

Product Group Manager (PGM)—The single manager for a product group. PGMs fulfill the same responsibilities as a System Program Director for their respective products. PGM products are in direct support of one or more SPDs.

Program Manager (PM)—As used in this instruction applies collectively to System Program Director, Product Group Manager, Single 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.

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 TMS, and age determine PDM requirements.

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), Product Center Commander (CC), or appropriate organization for a specific system/subsystem development, modification, acquisition or directed procurement effort.

Rapid Action Changes (RACs)—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.

Software-Only Change (TCTO)—TCTOs transmitting changes to a computer program configuration item (CPCI), which do not affect system or commodity hardware or TO procedures.

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 Program Director (SPD)—The individual in a SPO who is ultimately responsible and accountable for decisions and resources in overall program execution. SPD is the designated title for the single 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 lifecycle processes.

System Program Office (SPO)—The integrated AFMC organization responsible for cradle to grave management of a military system or product group.

System Support Manager (SSM)—The lead individual at an ALC responsible for support when the PM is located at a PC. The SSM reports directly to the PM.

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. TCMs are not generally responsible for style and format or other non-technical aspects of manuals.

Technical Data—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, 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.

TO Manager—The individual who manages TOs and TCTOs related to systems and commodities assigned according to the D086, Mission Workload Assignments System. Management encompasses all activities (except content management) from acquisition through disposal of TOs after the systems or commodities they support exit the Air Force inventory.

Using Command—The MAJCOM(s) responsible for operating a system, subsystem, or commodity end item. Generally, it applies to those commands or organizations designated by the USAF to conduct or participate in operations or operational testing.

Verification—Verification is the process through which Air Force personnel evaluate and prove TOs and TCTOs are accurate, adequate, safe, and usable to support the using command operational and maintenance concepts. To establish validity of TCTO instructions and integrity of any associated kits by installation of the first production kit on an operational CI using the preliminary TCTO instructions. Verification is required by the Department of Defense.

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.

Attachment 2

ADDING EQUIPMENT NUMBERS TO A JCALS TECHNICAL ORDER RECORD

A2.1. Adding New Equipment Part Numbers to JCALS. ***NOTE:*** Before performing the task below the responsible equipment specialist must provide the part number and equipment nomenclature, same format as entered/maintained in the D043, to the TO Manager for adding to the JCALS database.

Table A2.1. Update TO-Equipment Cross Reference.

NT PART NUMBER CROSS REFERENCE REPORT (Version 2.0, 10 Sep 03)		
Step	**Screen**	**Field**
1	JCALS Session Manager	Select TM Tools
2	TM Tools	Select TM Report Generator
3	TM Report Generator Type	Select Generate TM Index Report
4	TM Report Generator Sub-Type	Select Inter-service Technical Information Exchange System (ITIES) Cross Reference Report and Click, OK.
5	Inter- service Technical Information Exchange System Cross Reference Report screen will display. ***NOTE:*** Wildcard searches are permitted.	Enter the equipment part number in the Equipment ID No field.
6	Report results will display in bottom half of the ITIES Report Screen in order by Equipment ID No, Service, Pub Type, Pub Status, Pub No, Pub Date, Prop ID, Cage Code, Nomenclature, FSC, NIIN, CF(A)E, MMAC, and Contract No.	If you would like to save the report click on the Save as File button at the bottom of the screen and save the report to your PC. To exit this screen Click the Close button.
7	Continue next report action from the Choose a Report Type & Subtype Screen	Perform Steps 3 thru 6.

NOTE: You may choose to perform this task before "Adding New Equipment Part Numbers to JCALS" (**A3.2.**) or "Updating Equipment Part Number in the JCALS Index" (**A3.3.**) to ensure the Equipment Part Number has already been established in JCALS.

Table A2.2. Adding New Equipment Part Numbers to JCALS (Version 2.0, 10 Sep 03).

Screen	**Field**
JCALS Session Manager	Select **TM Tools**
TM Tools	Select **TM Processes**

Screen	Field
TM Processes Type	Select **Perform Acquisition**
TM Processes Sub-Type	Select **Manage Item Data** and Click the **OK** button.
The Manage Item Data Screen will display. Go to the bottom half of the screen, right side of Results.	Click the **Add** button
The Add Item Data will display. ***NOTE:*** More than one equipment part number may be added from this screen by Clicking the Apply button instead of Clicking the OK button after the first database entry.	Enter new equipment part number in the Part Number field and the new equipment nomenclature in the Nomenclature field. ***Both entries are required.*** Continue to enter as much known data in remaining fields. When you have completed entering data, ***Click Apply to enter more than one equipment part number or Click OK for one or the last equipment part number entry.*** Repeat Step 6 for more than one equipment part number.
The Manage Item Data Screen will display. Results field will display new entries.	Click the **OK** button.

Table A2.3. Updating Equipment Part Numbers in the JCALS Index (Version 2.0, 10 Sep 03).

Step	Screen	Field
1	JCALS Session Manager	Select TM Tools
2	TM Tools	Select TM Processes
3	TM Processes Type	Select Manage TM Index
4	TM Processes Sub-Type	Select Update TM Index Entry and Click the OK button.
5	The Choose Publication Screen will display. In the Search Criteria section of the screen	Enter publication number in the Publication No field for the equipment P/N you choose to update and Click the Apply button.
6	The following fields will display in the Results section of the Choose Publication Screen; Publication No, Pub Stock No, Media Type, Pub Date, Rev No, Change No, Change Date, and Publication Title.	Highlight the TO version you choose to update and Click the OK button.

Step	Screen	Field
7	The Update TM Index Screen will display	From the Options Menu, Select Update Index Data, Select Update Publication, Management and Stock Data
8	The Update Publication, Management and Stock Data Screen will display	Select the Multiple Items to Pub Assoc Tab
9	The Multiple Items to Pub Assoc Screen will display, Weapon System, Equipment Items, NSN Items, and Publication Index	Click on the Choose button to the right of the Equipment Items field.
10	The Choose Equipment Item Screen will display from the Search Criteria section of the screen. ***NOTE:*** You may use the "%" in your search criteria.	Enter equipment part number in the Equipment/Model No field. Click the OK button.
11	The results will display in the Choose Equipment Item Screen in the Results field. ***NOTE:*** If the part number and nomenclature are not available in the results field CANCEL out of this process and follow the instructions on Page 2 of this document for "Adding New Equipment Part Numbers to JCALS." The Technical Content Manager (TCM)/Equipment Specialist (ES) is normally the source for providing you with the equipment part number and equipment nomenclature, as designated in the D043.	Highlight the Result you want to update the TO Index with and Click the OK button.
12	The Update Publication, Management and Stock Data, Multiple Items to Pub Assoc Screen will display. ***NOTE:*** To add multiple part numbers repeat Steps 9-11.	If you made a selection from the results in the previous screen, then your selection will display. Click the OK button.
13	The Update TM Index Screen will display with the Request field populated.	Highlight the Result. From the Options Menu, select - Approve. To exit this process go to the File Menu and click on Close.

Attachment 3

DEVELOPING TO TITLES

A3.1. General. A TO title relates to the subject and content so users can recognize the applicability of the TO and tell the difference between TOs with similar applications. The TO title is used to determine the TO number Category and assign the last segment of the TO number. TCTO Series Headers use abbreviated titles containing only the Mission/Design/Series (MDS – e.g., “MODEL B-52 SERIES H”) or Type/ Model/ Series (TMS – e.g., “TYPE AN/ARN131”) of the systems or equipment covered. The TO Manager will enter the specific titles of individual TCTOs when requesting TCTO number assignment. When a commercial manual does not include a complete title, prepare an Identifying Technical Publication Sheet (ITPS) according to MIL-HDBK-1221, *Evaluation of Commercial Off-The-Shelf (COTS) Manuals*, identifying the complete, accurate TO title and any supplemental data provided.

A3.2. Rules:

A3.2.1. Do not enter "TECHNICAL MANUAL" as part of the TO title (included automatically byMIL-STD-38784).

A3.2.2. Do not enter the word "PRELIMINARY," for the same reason. Preliminary status is shown by setting JCALS “flags” during indexing.

A3.2.3. Identify supplemental manuals in the first line of the title. Separate from the rest of the title by a space, two dashes, and a space. ***Example:*** SUPPLEMENTAL MANUAL.

A3.2.4. In the next part of the TO title, list the type of TO [e.g., maintenance instructions, flight manual, illustrated parts breakdown (IPB), etc.] to tell what kind of technical data is included in the TO and determine the “Group (segment) Three” (TO type) portion of the TO number. Separate the type of TO or medium from the rest of the TO title by using a space, two dashes, then a space. ***Exception:*** MIL-PRF-83495 TOs will be listed as shown in **paragraph A2.8**, below.

A3.2.4.1. Use only the types of TOs or media listed in TO 00-5-18.

A3.2.4.2. Abbreviations may be used (OPR = Operation; INSTR = Instructions; MAINT = Maintenance; INTMD = Intermediate; INSP = Inspection; etc.), but must be easily translatable.

A3.2.4.3. Include "INSTR" in the title of any instructional TOs. ***Examples:***

- FLIGHT MANUAL
- OPR INSTR
- MAINT INSTR
- JOB GUIDE
- CHECKLIST
- INTMD INSTR
- INSP REQUIREMENTS

A3.2.4.4. If the TO consists of a combination of types, the types are listed in the order listed in TO 00-5-18 (e.g., operating instructions (-1) first, maintenance instructions (-2) next and parts list (PL) or IPB (-4) following).

Examples:

- OPR AND SVC INSTR
- MAINT INSTR WITH IPB
- OVHL INSTR WITH IPB
- OPN AND SVC INSTR WITH PL

A3.2.5. The next part of the title identifies the intended level of maintenance if the TO is restricted for use at a specified level. (Note that "INTMD INSTR" as used in 2.d.(3) above is not restricted to use at the intermediate level.) Separate the intended level of maintenance from the rest of the title by using a comma and one space. ***Examples:***

- MAINT INSTR – DEPOT
- ASSEMBLY, CHECKOUT, AND MAINT INSTR -- ORG AND INTMD
- CHECKLIST -- MAINT INSTR, ORG (FLT LINE)
- MAINT INSTR WITH IPB – INTMD

A3.2.6. For MIL-PRF-83495 organizational maintenance manuals, the type of TO or medium and the intended level of maintenance may be combined, followed by the function. Separate the type of TO and the level of maintenance from the function with a space, two dashes, and a space. Separate the function from the main part of the TO title by using a comma and a space. ***Examples:***

- ORG MAINT -- JOB GUIDE
- ORG MAINT -- FAULT REPORTING
- ORG MAINT -- GENERAL SYSTEM

A3.2.7. Enter the subject or the equipment identification in the main part of the title. List the subject of the TO, or name of the equipment and the type, series, model and part number, in that order, when these elements apply. The NSN may be shown if required. Enter the manufacturer name in parentheses following the equipment number. Do not split a type, series, model or part number between two lines. The words type, series, model or part number are not considered part of the number. ***Examples:***

- IPB -- HOT AIR SHUTOFF VALVE, MODEL CV-2S3.5, PN 105150-2 (STRATOS)
- OVHL INSTR WITH IPB -- POWER SUPPLY, TYPE ECU-45/A, PN 28VS1006 (WAGNER)

A3.2.8. List the TO title classification in parentheses following the main part of the title for classified TOs. ***Examples:***

- MAINT INSTR -- INTMD, COUNTER-MEASURES RECEIVER,
- TYPE R-1854/ALR-46(V), PN 31-032491-02 (ITEK) (TITLE UNCL)

NOTE: The classification of the TO and title is entered into JCALS during the indexing process, and will appear as a "U," "C" or "S" in the TO detail screen of the TO catalog. The Department of Energy classifications for nuclear weapons technical data classified as "Restricted Data" and "Formerly Restricted Data" are not currently supported in JCALS, and must be made part of the TO title when applicable.

A3.2.9. When a proposed TO meets the criteria for a sectionalized manual (that is, it is sufficiently large and has natural divisions in tasks or equipment breakout which make

several smaller manuals more usable and more manageable), each section must be numbered and indexed individually. A separate JCALS "Manage TM Numbering; Assign a Publication Number" request must be submitted for each section. Each submittal lists the individual title and the relationship of each section to the group is set using the "Manage TM Index; Update an Index Entry" process, "Options; Update Index Data; Publication Association" function. The following examples show TO titles for a group of four sections, all having the same basic TO number. ***Examples:***

- IPB -- RECEIVER GP, TYPE OA-2504/ALD-5 (RAYTHEON)
- IPB -- SIGNAL ANALYSIS, PROGRAMMER GP, TYPE OA-2505/ALD-5 (RAYTHEON)
- IPB -- INDICATOR RECORDER GP, TYPE OA-2506/ALD-5 (RAYTHEON)
- IPB -- ANTENNA GP, TYPE OA-2507/ALD-5 (SYLVANIA)

A3.2.10. Various terms are used to describe the test procedures or operator manuals and the reference manuals which describe software-related instructions for embedded computers. These "dash eight" (-8) manuals contain documentation on how to use software programs identified in the CPIN System to check out, test or maintain computer hardware. The initiator ensures the title always identifies the specific function of the software documentation. ***Examples:***

- CHECKOUT TAPE MANUAL -- INDICATOR PANEL, TYPE RU-118, RADAR BOMB DIRECTING CENTRAL TYPE AN/TSQ-96 (REEVES)
- TEST PROCEDURES MANUAL -- CONTROL INTERCOMMUNICATIONS SET, C-9655/A, PN 3397101-102 (HUGHES)

A3.2.11. List any special notations in parentheses, such as (FORMERLY TO 12R2-4-171-2), or (THIS MANUAL INCOMPLETE WITHOUT TO 31M-2TMQ15-2), or (SA-ALC USE ONLY), or (USED WITH TO 36A11-21-2). Only notations of a permanent nature about the TO itself are listed here. See "4" below for other catalog notes. Identify commercial manuals with an entry in parentheses at the end of the title. ***Example:***

- OPR INSTR -- DODGE TRUCKS, MEDIUM AND HEAVY DUTY (COMMERCIAL MANUAL)

A3.2.12. Identify contractor data, as follows. ***Example:***

- CONTRACTOR ACCEPTANCE REQUIREMENTS DOCUMENT AR30873-702

A3.3. System Application. System application data is required both as part of the TO title and in the TO record in the JCALS Pub Index. The data are used to provide Lists of Applicable Publications (LOAPs) and to update USAF TO Catalog TO number to Equipment number cross-reference data . The LOAPs provide an aid for selection of or familiarization with TOs for a specific system and determination of TO file requirements. The Catalog cross-reference provides the capability to determine TO coverage for a specific piece of equipment, and helps to prevent acquiring duplicate tech data between services. The capability to withdraw data by system application requires consistent adherence to the rules below.

A3.3.1. Using the "Manage TM Numbering; Assign a Publication Number" process, enter only applications to prime aircraft, missiles, space launch vehicles, C-E systems, and engines

listed in the D086, *Mission Workload Assignments System* into the "Request Air Force Pub Number" screen, in the "Weapon System Application" field.

A3.3.2. In order to provide a record of application and cross-reference to equipment and commodities, enter the applicable equipment TMS, part number, etc., using the JCALS "Perform Acquisition; Update Equipment Data" process to associate TO numbers with Equipment part numbers.

A3.3.3. Leave system application data blank when establishing a TCTO series and for General and MPTOs. Enter the data when individual TCTOs are indexed.

A3.3.4. Enter system, equipment or commodity numbers as part of the TO title, as follows:

A3.3.4.1. Enter the appropriate system (that is, "B-52A," "F-15A," etc.) Do not split an application title entry between title lines such as "KC" one line and "135" on the next line.

A3.3.4.2. The applicable aircraft or missile series designation must be included (DOD 4120.15-L). When entering applications of several series in the same system, include the complete listing for each series. Use a comma between applications in the same series. ***Example:*** Use "F-111A, F-111B, F-111D," not "F-111A, B, D." For a TO applicable to B52G and H enter "B-52G, B-52H."

A3.3.4.3. Use an asterisk (*) between systems. ***Examples:*** "B-52A, B-52D*KC-135A*F-102A".

A3.3.4.4. When a modified mission is designated, it is considered a separate system for application entry. ***Example:*** Use "F-15A*TF-15A," not "F/TF-15A" nor "F-15A, TF-A".

A3.3.4.5. Include covered equipment and commodity TMS/part number/contractor number information as part of each applicable TO title. ***Examples:*** Use "MA-1A," "MD-3," "PN 324576-4," "Lockheed 458632-15."

A3.4. Catalog Notes. Enter notes of a temporary or explanatory nature using the "Manage TM Index; Update an Index Entry" process, "Options; Update Index Data; Issue Data," in the field called "Catalog Note." These notes will NOT appear on the TO title page but will appear in the web-based Air Force TO Catalog detailed information window for the TO.

A3.4.1. Use a note to enter joint service TM numbers in the TO catalog.

- (TM 9-8212 INCLUDING C1)
- (NAVAIR 16-30APQ126-1-1)

A3.4.2. A note may be used to enter application data for intermediate systems not reportable under paragraph 3.a. Use an application data note only when it contributes to improved TO requirements data. The note entry must be brief. ***Examples:***

- (PO CMD/CONT/COMM SYS)–shows that the TO applies to equipment that is part of (PO) the E-4B Command, Control and Communications System
- (PO AN/ARC-183 SYS)–shows application to the AN/ARC-183 Radio Communication System

A3.4.3. Enter a note explaining where digital copies of the TO may be accessed (Internet) or giving the TO number for the distributed CD ROM collection of TOs that contains the TO file. ***Examples:***

- (Available on the WWW at **http://www.ide.wpafb.af.mil/toprac/to-syste.htm** under the link to "Technical Orders.")
- (Published on CD-ROM TO 42-CD-1)

A3.4.4. In the catalog entry for a CD-ROM, enter information on the software programs required to read digital TO files published on the CD-ROM, and where to get copies of the software. ***Example:*** [Included TO files are in Adobe Acrobat® Indexed Portable Document Format (IPDF)™. Use Adobe® Reader™ -- available at _____]

A3.5. Equipment Identification.

A3.5.1. Nomenclature & Manufacturer:

A3.5.1.1. Enter the name of the equipment with the primary noun first and description following. Military standard abbreviations are permitted. Avoid uncommon abbreviations.

A3.5.1.2. CAGE Code – Enter the CAGE code for the equipment manufacturer (reference Handbook H4/H8).

A3.5.2. Enter all applicable identifying equipment data (i.e., NSC, manufacturers part number, etc.).

A3.5.2.1. Use a separate entry for each equipment item.

A3.5.2.2. NSC – Enter the appropriate supply class

A3.5.2.3. MMAC – Enter the appropriate Materiel Management Aggregation Code (AFMAN 23-110).

A3.5.2.4. Do not preface the number with "Model," "Series," "Type," "TMS," "Part Number," etc.

A3.5.2.5. Do not enter measurements as part of an equipment number. Include them in the equipment nomenclature when essential.

A3.5.2.6. Enter all alpha characters as capital letters.

A3.5.3. Contract Information:

A3.5.3.1. Contract Number – Enter the complete contract number when known.

A3.5.3.2. CFAE/CFE (Contractor Furnished [Aeronautical] Equipment) Notice (CFEN) Number

– Enter the applicable CFEN Number.