

TECHNICAL MANUAL

**AEROSPACE EQUIPMENT MAINTENANCE INSPECTION,
DOCUMENTATION, POLICIES, AND PROCEDURES**

(ATOS)

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CHAPTER 1

GENERAL

1.1 PURPOSE.

1.1.1 This Technical Order (TO) establishes the policies and procedures for use of the 00-20- series TOs and provides weapon system and equipment maintenance inspection and documentation guidance. It also implements the policies of AFI 21-101, Aerospace Equipment Maintenance Management; AFI 21-116, Maintenance Management of Communications-Electronics; and AFI 11-301, Aircrew Life Support (ALS) Program; and AFI 21-102, Depot Maintenance Management.

1.1.2 Unless otherwise specified, the term "AEROSPACE EQUIPMENT" in this technical order refers to weapon systems and equipment such as aerospace vehicles, equipment, missiles, nuclear weapons, Test Measurement and Diagnostic Equipment (TMDE), ground Communications-Electronics (C-E) equipment, trainers, training equipment, engines, life support equipment (LSE), industrial plant equipment, all related support equipment (SE). This technical order is applicable to all organizations maintaining this equipment.

1.1.3 Major commands (MAJCOM) may supplement 00-20-series technical orders as required. For the purpose of the 00-20-series Technical Orders, the term AFMC Single Manager (SM) includes System Program Directors (SPD), Product Group Managers (PGM), Supply Chain Managers (SCM), and Materiel Group Managers (MGM).

1.1.4 Air Force activities will not furnish maintenance data in any form to contractors unless the applicable MAJCOM or Field Operating Agency or Weapon System Manager as appropriate has granted approval. Contractors, Air Logistics Center (ALC), or other government agencies are not authorized to levy additional documentation requirements on operating activities without prior approval of your MAJCOM and HQ USAF/ILMM.

1.1.5 In the 00-20-series TOs, the designation, MXG/CC is used to represent the Maintenance Group Commander, Director of Maintenance, Product Director, Chief of Maintenance (CoM) or Communications Group Commander, as applicable to the organizational structure of the unit. At test sites or activities which do not have a MXG/CC, it will be the responsibility of the Chief of Maintenance, Chief of Test Force Teams, Air Mobility Support Squadron Commander, or Installation Team Chief to ensure that the criteria of this TO is complied with.

1.1.6 Forward requests for permanent or temporary waivers from any provisions of this technical order through command channels to USAF/ILMM for approval. Justify the need for the waiver in each request. Refer to TO 00-20-2 for Maintenance Data Documentation system (MDD) waivers.

1.2 RECOMMENDATIONS FOR TECHNICAL ORDER CHANGES.

All changes to this technical order must be forwarded through your MAJCOM. Submit change requests using AFTO FORM 22, TECHNICAL IMPROVEMENT REPORT, IAW TO 00-5-1, Air Force Technical Order System.

1.3 CONTRACT MAINTENANCE OPERATIONS.

1.3.1 When AEROSPACE EQUIPMENT, including bailed AEROSPACE EQUIPMENT and Government Furnished Property (GFP), are undergoing contract maintenance, the contractor is responsible for conforming to the maintenance requirements and procedures prescribed in the technical orders incorporated in the provisions of the contract.

1.3.2 The contractor will provide the Air Force contract administration office with a list of personnel who are authorized to certify that AEROSPACE EQUIPMENT is safe for flight or use. The listing will specifically identify the personnel who are authorized to:

1.3.2.1 Sign exceptional releases.

1.3.2.2 Downgrade Red X or Red W conditions.

1.3.2.3 Sign off Red X or Red W symbol.

1.3.2.4 Certify operational capability.

1.3.2.5 Perform functional check flights (if applicable).

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1.3.2.6 Update weight and balance records IAW 1-1-B-50, Aircraft Weight and Balance.

1.3.3 To ensure continuity of daily operations, contractors will keep the certification lists of authorized personnel to a minimum consistent with requirements and will immediately notify the contract administration office of any changes.

1.3.4 The contractor will develop and maintain a program to ensure that personnel are trained in the areas specified in the contract. The program will have provisions for contractor certification and at least an annual recertification of personnel authorized to perform the specific functions or to operate various SE.

1.3.5 The contract administration office will ensure that the contractor performs the maintenance management and documentation requirements prescribed in applicable Technical Orders. In addition, the contract administration office will ensure that the applicable TOs are referenced as provisions in the contract.

CHAPTER 2

AEROSPACE VEHICLE INSPECTIONS

2.1 GENERAL.

2.1.1 Inspection intervals required for Air Force aerospace vehicles are prescribed in applicable MDS specific -6 TO maintenance manuals, (derived from commercial, depot engineering data, and user inputs) inspection work cards, or checklists. All requirements pertaining to inspections will normally be accomplished concurrently to avoid complications in scheduling and controlling the required maintenance. The inspection concepts for aerospace vehicles are periodic, phase, isochronal, programmed depot maintenance (PDM), and aerospace vehicle manufacturer maintenance. The MXG/CC establishes the necessary controls to ensure that the periodic, phase, or isochronal inspections are accomplished at or near the scheduled due time as authorized in applicable TOs or approved waivers. The primary responsibility for safe operation of the aerospace vehicles, systems, and components rests with the using activity. MXG/CCs may increase the frequency or scope of scheduled inspections or individual inspection requirements, when required for temporary situations. Scheduling deviations beyond what is authorized in aerospace vehicle specific technical manuals must be approved through the waiver process as defined in para 2.2.5.

2.1.2 All activities are responsible for properly time phasing the accomplishment of new inspection and replacement requirements reflected in changes to the scheduled inspection and maintenance manuals. In general, determine the interval for initial accomplishment of the new requirements by comparing the aerospace vehicles, systems, and components time with the interval prescribed for the new requirement. When age or accrued time of the aerospace vehicles, systems, and components is less than the specified inspection interval, begin accomplishment of the new requirements at the prescribed interval. If the age or time is beyond the specified interval, accomplish initial inspections as soon as practical and regulate subsequent inspections accordingly. When requirements are added or changed for accessory items, determine operating time in accordance with Chapter 6.

2.2 INSPECTION REQUIREMENTS.

2.2.1 Each SM determines minimum scheduled inspection requirements for assigned aerospace vehicles and for ensuring these requirements are maintained current. These requirements are published in the initial MDS specific -6 TO inspection and also in inspection work card decks, (e.g. pre-flight, basic post-flight, thruflight, etc). After the initial publication, the SM may, in coordination with applicable MAJCOMs, delete Section I from the MDS specific -6 TO. Section I contains the same inspection requirements as published in the inspection work card decks.

2.2.2 The basic sub-elements for the periodic, phase, isochronal, programmed depot maintenance (PDM), and aerospace vehicle manufacturer inspection concepts are as follows.

2.2.2.1 PERIODIC CONCEPT:

2.2.2.1.1 Pre-flight (PR).

2.2.2.1.1.1 Pre-Launch Inspection (PLI) or Walk-Around Inspection (WAI)

2.2.2.1.2 End-of-Runway (EOR).

2.2.2.1.3 Thru-flight (TH).

2.2.2.1.3.1 Quick Turn (QT)

2.2.2.1.4 Basic Post-flight (BPO).

2.2.2.1.5 Combined Pre-Flight/Basic Post-Flight (PR/BPO) or Pre-Flight/Thru-flight (PR/TH).

2.2.2.1.6 Hourly Post-flight (HPO).

2.2.2.1.7 Periodic (PE).

2.2.2.2 PHASE CONCEPT:

2.2.2.2.1 Pre-flight (PR).

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2.2.2.2.1.1 Pre-Launch Inspection (PLI) or Walk-Around Inspection (WAI)

2.2.2.2.2 End-of-Runway (EOR).

2.2.2.2.3 Thru-flight (TH).

2.2.2.2.3.1 Quick Turn (QT)

2.2.2.2.4 Basic Post-flight (BPO).

2.2.2.2.5 Combined Pre-flight/Basic Post-flight (PR/BPO) or Pre-flight/Thru-flight (PR/TH).

2.2.2.2.6 Hourly Post-flight (HPO).

2.2.2.2.7 Phase (PH).

2.2.2.3 ISOCHRONAL CONCEPT:

2.2.2.3.1 Pre-flight (PR).

2.2.2.3.2 End-of-Runway (EOR).

2.2.2.3.3 Thru-flight (TH).

2.2.2.3.3.1 Quick Turn (QT)

2.2.2.3.4 Basic Post-flight (BPO).

2.2.2.3.5 Combined Pre-flight/Basic Post-flight (PR/BPO) or Pre-flight/Thru-flight (PR/TH).

2.2.2.3.6 Home Station Check (HSC).

2.2.2.3.7 Minor (MIN).

2.2.2.3.8 Major (MAJ).

2.2.2.4 PROGRAMMED DEPOT MAINTENANCE (PDM).

2.2.2.5 AEROSPACE VEHICLE MANUFACTURER INSPECTION CONCEPT

2.2.2.5.1 A Check.

2.2.2.5.2 B Check.

2.2.2.5.3 C Check.

2.2.2.5.4 D Check.

2.2.3 MAJCOMs may authorize certain aerospace vehicles to use a modified inspection work card deck during contingencies, sortie surge exercises, and increased readiness conditions. The SM designates and publishes work cards in conjunction with the Lead Command for use during these periods. Construct contingency decks to ensure all items impacting aerospace vehicle safety and reducing aerospace vehicle reliability are inspected. Accomplish the normal inspection work card deck upon termination of the contingency, increased readiness or at the expiration of the authorized usage period as directed by the MAJCOM.

2.2.4 Periodic, isochronal, phase HSCs, HPOs, and commercial equivalent inspections are scheduled at equal intervals throughout the total inspection cycle, regardless of when inspections were actually completed. Do not exceed inspection intervals unless authorized by the MDS specific -6 TO, or approved by the MAJCOM and SM to meet mission essential requirements. If the interval is exceeded, use the appropriate Red symbol (specific exceptions will be in the appropriate TOs). Inspection interval extensions without the use of a Red Dash are authorized only for service tests and special projects that are approved by the SM and the MAJCOM. Changes to prescribed inspection intervals, concepts or requirements will normally be made by the SM only after thorough analysis of data obtained from the Maintenance Information System (MIS) and from using appropriate Reliability Centered Maintenance Analysis (RCMA).

2.2.5 Scheduled inspection requirements specified in publications other than the MDS specific -6 TO are not applicable to components in an installed status. Inspection requirements for components not installed are contained in the commodity and equipment manuals. If inspection requirements for installed items are listed in publications other than the -6 (or -2 for missiles) TO, bring them to the attention of the SM, who will take action to integrate them into the applicable -6 (or -2) scheduled inspection and maintenance manuals. Aircrew Life Support Equipment (ALSE) not in an installed status and therefore not listed in the MDS specific -6 TO, as defined in appendix A, is exempt from these requirements.

2.3 SPECIFIED FLYING PERIOD.

2.3.1 The specified flying period begins with the first flight and continues for a period of hours as specified by the owning MAJCOM not to exceed 72 hours.

2.4 PRE-FLIGHT INSPECTIONS (PR).

2.4.1 The pre-flight inspection is a flight preparedness inspection done in accordance with the MDS specific -6 TO or maintenance requirements manual (as applicable). The pre-flight inspection includes visually examining the aerospace vehicle and operationally checking certain systems and components to ensure there are no serious defects or malfunctions.

2.4.2 A preflight will be required prior to the first flight of the flying period, or when the preflight validity period has expired.

2.4.3 MAJCOMs, in conjunction with the aerospace vehicle SM, may select a 24-, 48- or 72- hour pre-flight validity period.

2.4.4 When an aerospace vehicle is mobilizing for deployment, units are authorized to place the aerospace vehicle on alert status. It must be prepared in accordance with established technical orders, accepted by an aircrew, remain under the control of operations, and be monitored by maintenance. When sealing an aerospace vehicle, accomplish a complete pre-flight inspection prior to sealing the aircraft and again before flight after completion of the alert status if the pre-flight validity period has been exceeded. Consequently, further preflight inspection or certification of a pre-flight inspection is not required during the alert period.

2.4.5 When placing an aerospace vehicle on alert status, accomplish a complete pre-flight inspection prior to going on alert and again before flight after completion of the alert period if the pre-flight validity period has been exceeded. Consequently, further preflight inspection or certification of a pre-flight inspection is not required during the alert period. (Placing a unit on alert does not in itself place the unit's aerospace vehicle on alert status).

2.4.6 Pre-Launch Inspection (PLI) or Walk-Around Inspection (WAI). The PLI and WAI are abbreviated pre-flights and will be accomplished as required by Mission Design Series-specific - 6 TO and/or MAJCOM supplement to this TO.

2.5 END-OF-RUNWAY INSPECTION (EOR).

2.5.1 The EOR inspection is a final visual and/or operational check of the aerospace vehicle. The SM in coordination with the MAJCOM will list minimum inspection requirements in the applicable -6 TO and publish in an existing work card deck.

2.5.2 EOR is performed immediately prior to take-off at a designated location usually near the end of the runway.

2.5.3 The purpose of the inspection is to detect critical defects that may have developed or have become apparent during ground operation of the aerospace vehicle.

2.5.4 Perform this inspection, if applicable, when an aerospace vehicle is launched from either home station or a transient base.

2.5.5 Alert aerospace vehicles launched from alert status do not require this inspection. Alert Force Evaluations will not require an EOR inspection and will be treated as Active Air Defense scrambles. Alert aircraft that launch for training missions from Alert status will require an EOR inspection.

2.5.6 If local requirements dictate, publish additional guidance to technical orders for the inspection in accordance with this TO. Wings must ensure standardization, with the same MDS.

2.6 THRU-FLIGHT INSPECTION (TH).

2.6.1 The thru-flight inspection is a “between flights” inspection and will be accomplished after each flight when a turnaround sortie or a continuation flight is scheduled and a basic post-flight inspection is not required. This inspection is applicable when prescribed by the applicable MDS specific -6 TO or maintenance manual. The thru-flight inspection consists of checking the aerospace vehicle for flight continuance by performing visual examination and/or operational checks of certain components, areas, or systems, according to established TOs to ensure that no defects exist which would be detrimental to further flight.

2.6.2 Certain aerospace vehicles have thru-flight inspection requirements identified by asterisks in applicable workcard decks. Other aerospace vehicles have separately published thru- flight inspection work card decks.

2.6.3 Accomplish the thru-flight inspection both between flights and after the flying period or mission. MAJCOMs will determine additional thru-flight requirements if necessary. MAJCOMs may also authorize the use of abbreviated thru-flight (quick turn) checklists for those aerospace vehicles resuming alert after flight or placing aerospace vehicles on alert at site locations.

2.6.3.1 For tanker and airlift aerospace vehicles, a thru-flight inspection is required when scheduled ground time exceeds 12 hours for KC-135 (6 hours for AFRC KC-135, AFSOC C-130 units), and 6 hours for all other tanker/airlift aerospace vehicles.

2.6.3.1.1 If a thru-flight is not required, but the applicable aerospace vehicle’s specific technical data (KC-135 for example) requires a quick-turn (QT) inspection, it will be signed off as “QT” on AFTO FORM 781H, Aerospace Vehicle Flight Status and Maintenance Document, block 5.

2.6.3.1.2 For tactical aerospace vehicles, if a thru-flight inspection is not accomplished, the minimum inspection required will be the QT as authorized by the -6 TO, and signed off as “QT” on AFTO FORM 781H, Aerospace Vehicle Flight Status and Maintenance Document, block 5.

2.6.3.1.3 Tactical aerospace vehicles that are hot refueled and do not shut down engines may resume sortie operations without performing a QT or thru-flight inspection.

2.7 BASIC POST-FLIGHT (BPO) INSPECTION.

2.7.1 The BPO inspection is a more thorough check than the pre-flight or the thru-flight inspections and is accomplished in accordance with the MDS specific -6 TO or maintenance manual for the aerospace vehicle.

2.7.2 This inspection will consist of checking the aerospace vehicle condition by performing visual examination or operational checks of certain components, areas, or systems to assure that no defects exist that would be detrimental to flight.

2.7.3 Maintenance personnel will perform a BPO after the last flight of a specified flying period or a combined pre-flight/BPO prior to the next flying period if the aerospace vehicle has flown.

2.8 COMBINED PRE-FLIGHT/BASIC POST-FLIGHT (PR/BPO) OR PRE-FLIGHT/THRU-FLIGHT (PR/TH) INSPECTION.

2.8.1 This inspection consolidates the requirements of the pre-flight and basic post-flight inspections into a single inspection accomplished at the end of the specified flying period or prior to the first flight of the next specified flying period.

2.8.2 It has the same validity period as the PR.

2.8.3 When published by the SM, work cards for combined PR/BPO inspections may be used.

2.8.4 Aerospace vehicles operating under the isochronal inspection concept that do not have a BPO inspection will have a thru-flight inspection performed. The thru-flight will be accomplished at the end of the specified flying period and may be combined with a PR inspection.

2.9 HOURLY POST-FLIGHT INSPECTION (HPO).

2.9.1 The HPO inspection is accomplished at equally spaced intervals as specified in the applicable MDS specific -6 TO.

2.9.2 Determine the due time for all HPO inspections at the completion of each periodic/PHASE inspection. Early or late accomplishment of any HPO does not normally change the scheduled time for the next HPO.

2.10 PERIODIC INSPECTION (PE).

2.10.1 The periodic inspection is due upon accrual of the number of flying hours, operating hours, or at the expiration of a calendar period specified in the applicable MDS specific -6 TO. The periodic inspection is more extensive in scope than the HPO or BPO inspections. This inspection is a thorough inspection of the entire aerospace vehicle.

2.11 PHASE INSPECTIONS (PH).

2.11.1 Accomplish phase inspections upon accrual of the number of flying hours specified in the applicable MDS specific -6 TO and maintenance manual. The phase inspection concept involves consolidation of the BPO and/or HPO and periodic inspection requirements into work deck(s) having approximately the same work content and approximately the same number of clock hours for accomplishment. The primary objective of the phase inspection concept is to minimize the length of time that an aerospace vehicle is out-of-commission for any given scheduled inspection. The phase inspection concept does not apply to those aerospace vehicle types for which the inspection requirements cannot be divided into reasonably equal work decks.

2.11.2 Schedule phase inspections at equal intervals throughout the total inspection cycle regardless of when the inspections are actually accomplished.

2.11.3 When aerospace vehicles under the phase concept are required for extended missions, phases may be accomplished in advance to cover the period of the extended mission, when authorized by the MAJCOM and SM. Upon completion of the extended mission, normal scheduling of the phase packages will be resumed.

2.12 PERIODIC AND PHASE INSPECTION ADJUSTMENTS.

2.12.1 For the purpose of this section, the term periodic refers to both Periodic and Phase inspections. These inspections are cumulative for the life of an aerospace vehicle. The number of the next due periodic inspection should be the same as the number obtained by dividing the aerospace vehicle hours at which the next PE is due by the hourly inspection interval. The number obtained may vary from the actual PE number due because of transfers and premature or overdue flying hour inspections.

2.13 ISOCHRONAL INSPECTION (ISO).

2.13.1 The isochronal concept translates flying hour utilization rates into calendar periods, usually expressed in days. The SM ensures the calendar period is properly established to meet maintenance and engineering requirements. In the event programmed flying hours are changed, adjust inspection interval as specified in the MDS specific -6 TO and maintenance manual. The SM, in conjunction with the MAJCOM, determines the necessary adjustments.

2.13.2 To manage the isochronal inspection concept properly, schedule inspections as far in advance as possible for each aerospace vehicle.

2.13.3 The isochronal concept allows for the time that an aerospace vehicle is programmed to be in inspection status. The interval time frame is from the completion of the post-dock from the last isochronal inspection to the start of the next isochronal inspection.

2.13.4 MAJCOMs, with SM concurrence, approve deviations to schedules when isochronal inspections cannot be met. Criteria for deviations should be, but are not limited to, aerospace vehicles removed from service for extended periods of time (e.g. depot level maintenance in accordance with TO 00-25-107), extended fuel repair and TCTO kit proofing. The MXG/CC establishes procedures to ensure these aircraft are placed in storage in accordance with TO 1-1-17, when required.

2.13.4.1 Send requests for isochronal inspection (and home station check for AMC and AFRC) schedule deviations to your MAJCOM functional manager. Units will not request an ISO deviation unless the deviation exceeds the overfly authorized by the MDS-specific -6 TO (if applicable). Provide the following information when requesting ISO deviations:

2.13.4.1.1 MDS

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2.13.4.1.2 Serial Number

2.13.4.1.3 Reason for Request

2.13.4.1.4 Type of Inspection (e.g., #4 Major, #1 Minor)

2.13.4.1.5 Actual Inspection Due Date

2.13.4.1.6 Requested Inspection Date

2.13.4.1.7 Completion Date of the post-dock for the last Isochronal Inspection

2.13.4.1.8 Number of PDM Days Since Last Inspection

2.13.4.1.9 Total days in unscheduled depot level maintenance (UDLM)

2.13.4.1.10 Special Inspections Due

2.13.4.1.11 Time Change Items Due (Item, Date Due/Time Remaining)

2.13.4.1.12 Outstanding TCTOs (only those affected by the extension)

2.13.4.1.13 Airframe Hours Since Last Inspection

2.13.4.1.14 Flying hours since last major (i.e. ISO) inspection

2.13.5 Aerospace vehicles in Possessed Purpose Code “DJ” as determined by Air Force Data Dictionary, ADE AE-710, awaiting depot input, or undergoing UDLM, do not accrue -6 inspection days during these periods. Stopping the ISO clock applies to UDLM maintenance and other unscheduled/scheduled depot level maintenance only. Refer to the MDS-specific -6 TO (if applicable) for stipulations as to when the ISO clock stops.

2.13.6 Isochronal inspections for ground launched missiles and their trainers, SE and ground C-E equipment will be due at equal intervals throughout the total inspection cycle, regardless of when the inspections were actually accomplished. Isochronal inspections are based on calendar intervals using the following due periods:

TYPE	INTERVAL	DUE PERIOD
Major	Semi-annual or greater	Within due month, “By the end of the month”
Minor	Semi-monthly, bi-monthly, Quarterly to, but not including semiannual	Within due week
Minor	Weekly	Due date +/- one work day
Minor	Daily	On due date

* Weekly intervals will begin on Sunday and semi-monthly intervals will begin on the first and sixteenth of each month.

NOTE

ICBM units will use an isochronal inspection system in accordance with the applicable -6 technical orders.

2.14 HOME STATION CHECK (HSC) INSPECTION.

2.14.1 The HSC is an inspection arranged and designed for accomplishment upon expiration of a specified short-term calendar interval. This inspection is due at the calendar interval specified in the MDS specific -6 TO or maintenance manual. Since the HSC is an integral part of the isochronal concept, compute this date from the completion of the last HSC/isochronal inspection. Accomplish the inspection in conjunction with minor and major inspections. When HSCs become due, refer to para 4.3.1.

2.15 MINOR (MIN) ISO.

2.15.1 The minor inspection is due upon accrual of the number of calendar days established as the inspection interval in the applicable -6 TO.

2.15.2 Compute this date from the post dock of the last isochronal inspection.

2.15.3 The minor inspection consists of checking certain components, areas, or systems of the aerospace vehicle to determine if conditions exist which, if uncorrected, could result in failure or malfunction of a component prior to the next scheduled inspection.

2.16 MAJOR (MAJ) ISO.

2.16.1 The major inspection is due upon accrual of the number of calendar days established as the inspection interval in the applicable -6 TO.

2.16.2 Compute this date from the post dock of the last isochronal inspection.

2.16.3 The major inspection is a thorough inspection of the entire aerospace vehicle, and individual requirements may be more extensive in scope than previous inspection items.

2.16.4 The major inspection consists of checking certain components, areas, and systems of the aerospace vehicle to determine if conditions exist which, if uncorrected, could result in failure or malfunction of a component prior to the next scheduled inspection.

2.17 PROGRAMMED DEPOT MAINTENANCE (PDM).

2.17.1 The SM will, in coordination with the using agency, schedule the PDM inspection at, or prior to, the scheduled due time.

2.17.2 PDM is an inspection requiring skills, equipment, and/or facilities not normally possessed by operating locations. Individual areas, components and systems are inspected to a degree beyond MDS specific -6 TO inspection requirements. Field level tasks may be accomplished at PDM if their accomplishment is economically feasible.

2.17.3 Aerospace vehicles under the isochronal concept do not accrue MDS specific -6 TO inspection days towards the next isochronal inspection during PDM. This includes aerospace vehicle input to a depot for an Analytical Condition Inspection (ACI). When an aerospace vehicle exceeds the PDM cycle, annotate a Red Dash on the prescribed forms. If an aerospace vehicle exceeds the PDM cycle by 90 days, the Red Dash will be upgraded to a Red X unless the SM grants an extension.

2.18 AEROSPACE VEHICLE MANUFACTURER INSPECTIONS.

2.18.1 Letter checks consist of A through D. "A/B" checks are considered minor inspections and usually performed at home station. "C/D" checks are considered major inspections and are usually performed at a Heavy Maintenance/Depot facility.

2.18.2 The letter check concept is specified in either flying hours or calendar days. The SM ensures the inspection period is properly established to meet maintenance and engineering requirements.

2.18.3 MAJCOMs, with SM concurrence, approve deviations to schedules if letter check inspections cannot be met IAW MDS-specific -6 TO requirements.

2.18.4 Accrual of inspection days while an aerospace vehicle is in DJ status awaiting depot input, or undergoing UDLM, is dependent on the MDS specific -6 TO or maintenance planning document criteria for the specified airframe.

2.19 NO-FLY CALENDAR INSPECTIONS.

2.19.1 Thirty (30)-Day Inspection. When an aerospace vehicle does not fly for more than 30 consecutive days, it requires a BPO before the aerospace vehicle is returned to operational status in addition to any -6 or -2 TO requirements that exist. This paragraph does not apply to aerospace vehicles that are on ground alert where recurring visual inspections and operational checks are accomplished.

2.19.1.1 If no BPO inspection exists, perform a pre-flight or equivalent inspection. This will be construed as a minimum 30-day calendar inspection and the MXG/CC will determine whether additional inspection or maintenance work is required.

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2.19.1.2 Aerospace vehicles that have completed a phase or ISO inspection during the 30-day period will use the phase/ISO post-dock date to start the 30-day no-fly clock.

2.19.2 Ninety (90)-Day Inspection. When an aerospace vehicle does not fly for 90 consecutive days (does not apply to ground training aerospace vehicle where recurring visual inspections and operational checks are accomplished), accomplish the following before the aerospace vehicle is returned to operational status if no -6 or -2 TO requirements exist:

2.19.2.1 Perform a BPO or equivalent inspection.

2.19.2.2 Perform an operational check of all functional aerospace vehicle systems except landing gear retraction, unless specified in the MDS-specific -6 or -2 TO.

2.19.2.3 Accomplish all lubrication requirements.

2.19.2.4 Perform any additional inspection or maintenance requirements determined by the MXG/CC.

2.19.2.5 Accomplish recurring inspection items for inspection intervals up to 90 days identified in the -6 and -2 TOs or maintenance manuals (as applicable). Under the phase inspection concept, accomplish recurring inspection items (required items at each inspection) as a minimum requirement for the 90-day calendar inspection.

2.19.2.6 Aerospace vehicles in PDM do not require the 90-day inspection requirements listed above to be re-accomplished if they were accomplished and documented as a part of the PDM package and 90 days have not elapsed since their accomplishment.

2.20 TRANSFER INSPECTIONS.

See Chapter 9.

2.21 ACCEPTANCE INSPECTIONS.

2.21.1 The gaining MAJCOM/unit will perform an acceptance inspection on all newly assigned aerospace vehicles and engines prior to placement into service and on all received from organic or contract depot maintenance prior to being placed in service. The gaining MAJCOM/unit may perform this inspection at the depot or an alternate location. These inspections will be of sufficient depth to determine the ability of the item to perform its designed function. Check to ensure the completeness of historical documents. Record this inspection on the appropriate documents and the appropriate MIS. The discrepancies will also be entered into the Deficiency Reporting System IAW TO 00-35D-54, USAF Deficiency Reporting and Investigating System.

2.21.2 For aerospace vehicles with installed or pre-positioned ALSE, the equipment must be inspected and repacked by the gaining MAJCOM/unit. The gaining MAJCOM/unit may perform this inspection at the depot or an alternate location.

2.21.2.1 If maintenance workload prevents accomplishment, as determined by the MXG/CC, the equipment will be scheduled as soon as possible for the required inspection/repack, not to exceed 30 days. After the expiration of 30 days since arrival at home station and the inspection/repack has not been accomplished by gaining unit personnel, the equipment must be removed from service and placed on a Red X until accomplished.

2.21.2.2 EXCEPTION: The B-1 personnel parachutes, C-17A aircraft installed ALSE (life rafts, survival kits, and age limited kits; these items be managed IAW 1C-17A-6 time change requirements), F-22 drogue chutes, F-117 drogue chutes, and T-6 manufacturer-sealed ejection seat parachutes, are exempt from re-inspection and repack as part of acceptance inspection.

2.21.3 Installed ALSE on aerospace vehicles returning from Depot Contract Field Teams or from Depot "Speed Lines," where the ALSE had no maintenance other than "safing," the inspection and repack is a MAJCOM option.

2.22 UNSAFE CONDITIONS OR MATERIEL FAILURE INSPECTIONS.

2.22.1 When an unsafe condition or materiel failure is discovered on AEROSPACE EQUIPMENT and the potential exists that this condition may exist on other AEROSPACE EQUIPMENT the following action will be taken by the MXG/CC or higher authority:

2.22.2 Immediately inspect a representative number of systems of units of the same mission and design to determine if the condition exists on other AEROSPACE EQUIPMENT.

2.22.3 When warranted, restrict similar systems or units from further flight or use, and submit a Deficiency Report (DR) in accordance with TO 00-35D-54.

2.22.4 The AEROSPACE EQUIPMENT having the deficiency will remain restricted from use until corrective action is taken or instructions are received from the SM and/or the MAJCOM.

2.22.5 One time inspections are initiated by MAJCOM, NAFs, or units. Refer to AFI 21-101 for procedures.

2.23 AEROSPACE VEHICLES IN STORAGE.

2.23.1 Storage time will be accrued in accordance with TO 1-1-17 and applicable MDS- specific TOs. For aerospace vehicles in storage exceeding 15 calendar days, time in storage is not charged against the calendar time for the next scheduled home station check, minor or major inspection. However, the calendar days prior to storage are included in accrued inspection time after release from storage.

2.24 INSPECTION WORK CARDS.

2.24.1 The SM, in collaboration with the lead commands, will prepare and update the inspection work cards. The MDS specific -6 TO inspection work cards may include varying calendar inspection periods (7-day, 15-day, etc.) as determined by the weapon system SM and MAJCOM. (TO 00-5-1 classifies work cards as technical publications. Requisitions and distribution of work cards will be in accordance with TO 00-5-2).

2.24.2 Inspection work cards outline the minimum inspection requirements and provide each technician with a standardized inspection guide. They list the requirements to be performed and reflect the most logical sequence for accomplishment. Each work card also contains other pertinent information to suggest when the work is scheduled, estimated time for accomplishment, identification of the work area, the recommended type of technician required, and electrical power requirements. Cards are grouped by the recommended type of technician required to accomplish the inspection so that all requirements listed on any particular card can normally be accomplished by one individual. This arrangement of the work cards permits the supervisor to assign a technician to a certain work area to do a specific task or series of tasks.

2.24.3 When the arrangement of published work cards is not entirely compatible with the technician manning or scheduled sequence preferred by the concerned activity, using activities may transfer individual inspection requirements from one card to another with MXG/CC approval. Do not make minor changes of this nature if specifically prohibited by MAJCOM directives.

2.24.4 When inspection requirements pertain to systems or components that are not installed on locally maintained equipment, quality assurance (QA) may line out the nonapplicable requirements and enter "NA" in the margin. Adjust "CARD TIME" block as necessary when such changes are made. When entire cards do not pertain to locally maintained equipment, QA may authorize the deletion of non-applicable work cards from all sub-accounts as long as these cards are maintained.

2.24.5 Develop locally prepared inspection work cards in accordance with TOs 00-5-1 and 00- 5-2 for additional inspection requirements necessary due to local conditions, such as types of missions, special utilization, or geographic locations.

2.24.5.1 AFTO FORM 26, AEROSPACE VEHICLE INSPECTION WORK CARD; and 26D, INSPECTION WORK CARD (Figure 6-1) are available through normal publication channels to permit local preparation of replacement work cards for those that become unserviceable. Local reproduction of the forms is authorized. The AFTO FORM 26 is intended to be a 5 by 8 inch document, printing two to a page. This document should be trimmed to appropriate size to fit the needs of the user. These forms are also provided to permit the preparation of additional work cards for special installed equipment not covered by the published card set. These forms also aid in preparation of complete inspection work card sets for equipment of nonstandard configuration, or which are in service in limited quantities, and do not have published inspection work card sets. Activities possessing equipment or the categories mentioned above must contact the SM to determine whether published work card sets will or will not be provided before any action is taken to prepare complete inspection work card sets locally.

2.25 INSPECTION RESPONSIBILITY FOR WORK ACCOMPLISHED BY DEPOT OR CONTRACTOR FIELD TEAMS (DFT/CFT).

2.25.1 When modifications are accomplished on AEROSPACE EQUIPMENT by depot or contractor field teams, the following policies apply to inspection of work accomplished:

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2.25.2 The owning ALC is responsible for inspecting the work of their DFT/CFT. If depot QA personnel do not accompany DFT/CFT, the ALC negotiates with the owning MAJCOM to perform QA inspections and will include this in the workload agreement.

2.25.3 Inspection and acceptance of DFT/CFT work by base maintenance personnel is in accordance with agreements made between the ALC and the using MAJCOM representatives during the pre-contract conference (AFI 21-102, Depot Maintenance Management). When the base does not have the capability to perform QA and acceptance of DFT/CFT work, the ALC will provide support.

CHAPTER 3

AEROSPACE EQUIPMENT FORMS DOCUMENTATION

3.1 GENERAL.

3.1.1 This chapter prescribes general requirements and procedures for AEROSPACE EQUIPMENT forms documentation. It specifies filing, disposition, and general documentation requirements. Specific instructions pertaining to form entries, are covered in Chapter 5. For the purposes of the 00-20-series TOs, the term "Documentation" may refer to hard copy forms, computer equivalent produced hard copy, or Air Force approved electronic databases available for general use.

3.1.1.1 ASSOCIATED FORMS: File and dispose of all forms in accordance with (IAW) AFMAN 37-139, Records Disposition Schedule.

3.1.1.2 AFTO FORM 46, PREPOSITIONED LIFE SUPPORT EQUIPMENT.

3.1.1.3 AFTO FORM 95, SIGNIFICANT HISTORICAL DATA.

3.1.1.4 AFTO FORM 244/245, INDUSTRIAL SUPPORT EQUIPMENT RECORD.

3.1.1.5 AFTO FORM 349, MAINTENANCE DATA COLLECTION RECORD.

3.1.1.6 AFTO FORM 427 or 428, AEROSPACE VEHICLE INTEGRAL FUEL TANK REPAIR HISTORICAL DATA.

3.1.1.7 AFTO FORM 781, AFORMS AIRCREW MISSION FLIGHT DATA DOCUMENT.

3.1.1.8 AFTO FORM 781A, MAINTENANCE DISCREPANCY AND WORK DOCUMENT.

3.1.1.9 AFTO FORM 781B, COMMUNICATIONS SECURITY (COMSEC) EQUIPMENT RECORD.

3.1.1.10 AFTO FORM 781C, AVIONICS CONFIGURATION AND LOAD STATUS DOCUMENT.

3.1.1.11 AFTO FORM 781D, CALENDAR AND HOURLY ITEM INSPECTION DOCUMENT.

3.1.1.12 AFTO FORM 781E, ACCESSORY REPLACEMENT DOCUMENT.

3.1.1.13 AFTO FORM 781F, AEROSPACE VEHICLE FLIGHT REPORT AND MAINTENANCE DOCUMENT.

3.1.1.14 AFTO FORM 781G, GENERAL MISSION CLASSIFICATIONS-MISSION SYMBOLS.

3.1.1.15 AFTO FORM 781H, AEROSPACE VEHICLE STATUS AND MAINTENANCE DOCUMENT.

3.1.1.16 AFTO FORM 781J, AEROSPACE VEHICLE-ENGINE FLIGHT DOCUMENT.

3.1.1.17 AFTO FORM 781K, AEROSPACE VEHICLE INSPECTION, ENGINE DATA, CALENDAR ITEM INSPECTION, AND DELAYED DISCREPANCY DOCUMENT.

3.1.1.18 AFTO FORM 781L, RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI).

3.1.1.19 AFTO FORM 781M, STATUS SYMBOLS AND FUNCTIONAL SYSTEM CODES.

3.1.1.20 AFTO FORM 781N, J-79 ENGINE RUNUP RECORD.

3.1.1.21 DD FORM 1896, DOD JET FUEL IDENTAPLATE.

3.1.1.22 DD FORM 2026, OIL ANALYSIS RECORD.

3.1.1.23 AFMC FORM 305, PLANT MANAGER WORKORDER.

3.1.1.24 AFMC FORM 306, PREVENTATIVE MAINTENANCE INSTRUCTION.

3.1.1.25 AFMC FORM 388, HISTORICAL MAINTENANCE.

3.2 MAINTENANCE INFORMATION SYSTEMS (MIS).

MIS refers to the automated maintenance information systems including Core Automated Maintenance System (CAMS), Reliability and Maintainability Information System (REMIS), and G081 (CAMS for Mobility), Comprehensive Engine Management System (CEMS), and PMEL Automated Management System (PAMS). If a unit desires to use a system other than the authorized standard MIS, whether commercial off-the-shelf (COTS), government off-the-shelf (GOTS) or locally generated, the unit must submit a request for permission to their MAJCOM LGM. After consideration, MAJCOM LGMs/LGQs must forward any requests they support for implementation to AF/ILMM Information Systems Branch for final consideration/approval.

3.3 AUTOMATED FORMS.

3.3.1 When MIS are available, the automated forms module will be used (See Chapter 7 for Support Equipment). As a minimum, AFTO FORMs 781A, 781J, 781K, and 95 generated by the MIS will constitute fully automated AEROSPACE EQUIPMENT forms. Other automated products may be used for process controls and/or AFTO FORM 244/245 documentation tracking with specific written approval from the responsible MAJCOM Functional Manager (e.g. Process Control Automated Management System (PCAMS), Facilities Equipment Maintenance System (FEMS), etc.). Manual forms produced by a computer program such as PerForm (ICS viewer) or JetForm do not meet the intent of the automated forms module. Permanently grounded Ground Instructional Training Aircraft (GITA) are not required to use automated forms.

3.3.2 Local overprint of forms prescribed in this TO are authorized.

3.4 STANDARD DATE FORMAT.

Manually record all dates on the forms prescribed in the 00-20-series Technical Orders by eight digits in the order of year, month, and day. Example: YYYYMMDD, 20021208 for 8 Dec 2002. Approved automated forms in information systems will follow the format of the MIS.

3.5 MINIMUM SIGNATURE.

3.5.1 Manual forms entries require a minimum signature for maintenance personnel certifying entries on forms governed by this TO. Electronic signatures may be used in lieu of these requirements.

3.5.2 The minimum signature for maintenance document purposes required by the 00-20- series technical orders consists of the written first name initial, last name, and employee number or equivalent/FAA certification number.

3.5.3 Contractors will use their FAA certification number or equivalent. Contractors/ALCs may use a production stamp in place of the employee number.

3.5.4 Minimum signature for aircrews consists of the written first name initial and last name.

3.6 ELECTRONIC SIGNATURE.

Electronic signatures to sign off maintenance documentation are approved for maintenance automated systems where the records are protected with passwords and IDs, and authorization is password limited to those individuals as outlined in the 00-20-series TOs or other directives.

3.7 USE OF PRINTED CHARACTERS.

3.7.1 Entries on maintenance and historical documents will be typed or printed except when maintenance and historical documents specifically require a minimum signature or signatures. Documentation will be legible, complete, and correct. Signatures will also be typed or printed if copied by an individual other than the original signer. The handwritten entries on maintenance documents will be made in black (pencil or ball point pen), unless otherwise specified. AFMC Air Logistics Centers may use a production stamp in place of the employee number.

3.7.2 Electronic signatures and personal stamps may be used in lieu of the above requirements.

3.7.3 Abbreviations may be used for any word or term frequently used in making entries on documents.

3.8 INFORMATIONAL NOTES.

Informational notes are informative in nature and do not affect the safety or reliability of the AEROSPACE EQUIPMENT, therefore these entries do not require symbols, when discovered codes or job control numbers. Informational notes will not include non-value added entries (such as statements that inform aircrews of crew chief names, where trash bags are located, statements asking the aircrew to keep the AEROSPACE EQUIPMENT clean, etc.). For each entry, write the words "INFO NOTE" in the "DISCREPANCY" block of the AFTO FORM 781A or AFTO FORM 244/245 followed by the applicable information. Use informational notes to annotate munitions types and quantities loaded, annotate multiple entries in the same discrepancy block (e.g. impulse carts installed, chaff and flare loaded, decoy loaded, ammo installed). When any of the information becomes invalid, line through the invalid information only. When using automated forms, the automated system will assign an event ID number. Wings will standardize informational notes that specify a particular common note affecting all locally assigned MDS aerospace vehicles. Informational notes will be transcribed in the same manner as all other discrepancies.

3.9 TRANSFER OF DOCUMENTS.

When aerospace vehicles, equipment, or SE is transferred to another organization, the responsible maintenance or supply supervisor, as applicable, will ensure that all current and historical maintenance documents or computer generated equivalents accompany the equipment or are forwarded to the new activity not later than the same day that the transfer is affected. Waterproof envelopes will be securely attached to the item in a location that will provide the best protection from exposure to the elements and prevent loss during handling. Digital transfer is preferred.

3.10 MISSING DOCUMENTS.

When equipment is received and the historical documents are missing or contain incomplete information, the receiving organization will immediately notify the shipping/losing organization. The shipping/losing organization will promptly forward the missing documents or provide all available information for completion of the documents or for initiation of new documents. When the documents cannot be located, contact the applicable ALC SM for disposition instructions with an information copy to MAJCOM.

3.11 FILING.

3.11.1 Establish and maintain an individual historical file, in accordance with AFMAN 37- 139, for each aerospace vehicle or designated equipment. Centrally locate historical document files in the documentation activity of the unit possessing the AEROSPACE EQUIPMENT. MIS are considered centrally located files in the 00-20 series TOs. The MXG/CC may authorize decentralized files. When files are decentralized, the documentation activity will provide assistance to the work centers as prescribed in MAJCOM 21-XXX series instructions.

3.11.2 Include hard copy or electronic historical document files for subsystems and components in equipment end item files, or maintain them in a separate file. Consolidate files for powered/non-powered AGE, configuration-managed training equipment, and non-complex items into a single folder or a series of folders. Each individual file will contain historical documents, operational data, maintenance status documents, and reports that reflect current status.

3.11.3 Computer generated forms in these files may contain a difference in format, but must contain all required information.

3.11.4 Examples of documents in a historical file are, but not limited to:

3.11.4.1 AFTO FORMS 781 series.

3.11.4.2 AFTO FORMS 95, 244, 245, 349, and 427 or 428.

3.11.4.3 Non-destructive inspection (NDI) documents or resume reports that are current, and X- ray films, if applicable.

3.11.4.4 Functional check flight checklist/worksheets.

3.11.4.5 MIS products.

3.12 DISPOSITION OF DOCUMENTS.

3.12.1 Dispose of maintenance documents according to AFMAN 37-139, Records Disposition Schedule, and this technical order.

3.12.2 Disposal of documents for aerospace vehicle or missiles that are involved in accidents or incidents which result in damage to private property, loss of life, or serious injury to personnel as defined in AFI 51-503, Aircraft, Missile, Nuclear and Space Accident Investigations, is directed in AFMAN 37-139.

3.12.3 When a ground launched missile is expended or destroyed, forward status and historical documents prescribed by the 00-20-series technical order to the SM within 10 working days after the occurrence. Send status and historical documents for reentry vehicles or systems to the Directorate of Nuclear Weapons, Kirtland AFB. In the event an accident investigation board, not related to AFI 51-503, impounds documents of a ground launched missile, forward the documents to the SM within 10 working days after release from the board. This paragraph does not apply to expended drones.

3.12.4 To support preparation of Deficiency Reports (DR), use TO 00-35D-54 and the DD Form 1574, Serviceable Tag-Materiel to identify and report items having a high early age failure rate IAW AFMAN 37-139. Establish local procedures for the selection of the items and for the location, filing, and maintenance of supporting documents.

3.13 MAINTENANCE OF DOCUMENTS DURING EXTENDED STORAGE.

3.13.1 Maintain the documents with the equipment or in the appropriate documentation activity or system. Prepare up-to-date maintenance and historical files for each aerospace vehicle, piece of equipment, or SE being returned to service.

3.13.2 While aerospace vehicles, equipment, or SE are in extended storage, the responsible activity will record all applicable time compliance technical orders, special inspections, etc. released during the storage period. Engine or equipment containers need not be opened solely to make entries on the maintenance or historical documents.

3.13.2.1 For stored engines, all applicable Engine Configuration Management System (ECMS)/TCTO data will be tracked via the Comprehensive Engine Management System (CEMS) for subsequent review, or transfer to the maintenance and historical documents as required. Forward the appropriate ECMS/TCTO data reflecting current applicability.

3.13.2.2 For other packaged equipment, post these entries on the applicable condition tag, or attach label to the item or container for subsequent transfer to the maintenance and historical files. Forward the ECMS/TCTO data reflecting current applicability.

3.13.3 When aerospace vehicles, equipment, or SE are removed from storage, the removing organization will review MIS/CEMS/ECMS TCTO data, or the maintenance and historical documents. This is required to ensure they are current and accurate, and all outstanding TCTOs, special inspections, etc. are recorded on the applicable forms.

3.13.4 When aerospace vehicles, equipment, or SE are maintained in extended storage at an organization or activity, in accordance with TO 1-1-17 or other directives, the MXG/CC may request a waiver from the TCTO manager on a case-by-case basis. Maintain all waivers in the aerospace vehicle or equipment's historical documents.

3.14 SAFEGUARDING/DOCUMENTING CLASSIFIED EQUIPMENT.

3.14.1 Commanders will take the necessary security steps to protect classified equipment on aerospace vehicles at installations under their jurisdiction.

3.14.2 The aircraft commander (A/C) will safeguard classified documents and equipment, while the affected aerospace vehicle is at a non-Air Force installation.

3.14.3 When an aerospace vehicle has equipment or documents classified confidential or higher, installed or carried aboard, insert AFTO FORM 781B bearing the appropriate information and insert in the front side of the front cover of the AFTO FORMS 781 binder. The information on this form identifies the assigned security classification and the equipment or documents by their title or nomenclature unless this information is classified. (e.g. confidential documents for the AN/APX-P6 carried in the aerospace vehicle). If the equipment or documents are not keyed and do not maintain a Cryptographic Controlled Item (CCI) classification status, the form will not be displayed on the front side of the front cover of the binder. It will be maintained in the backside of the front cover of AFTO FORMS 781 binder when classified equipment is not installed and for future classifying purposes.

3.14.3.1 In lieu of using AFTO FORM 781B this information may be electronically formatted on the AFTO FORM 781F. This form must be removed and replaced when the classified equipment is no longer installed.

3.14.3.2 Stamp or mark this form in any easy to see manner, such as a red border, to ensure that the form and the classification are immediately apparent to anyone who may handle the binder.

3.14.3.3 This form will not indicate or in any way divulge the reason the aerospace vehicle is classified. Further, safeguard all maintenance documents pertaining to such aerospace vehicle as necessary in accordance with existing security directives. Normally, the directives that require such classified installations specify the classification required for the aerospace vehicle.

3.14.4 When aerospace vehicle are loaded with special weapons, a classified data form is not required in the AFTO FORMS 781 binder.

3.15 FUEL IDENTIPLATE.

3.15.1 Each USAF aerospace vehicle will carry a DD FORM 1896, "Jet Fuel Identiplate," for presentation to refueling personnel before fuel servicing can begin. The owning organization ensures the aerospace vehicle has a valid identiplate on board. Maintenance and fuels personnel share responsibility for ensuring the identiplate are returned to a specified location on the aerospace vehicles after fuel servicing.

3.15.2 If not previously determined, the MXG/CC selects a suitable location aboard each type aerospace vehicles assigned for storing the identiplate. Once the location has been established, all aerospace vehicle will carry the identiplate in the same location.

3.15.3 If a USAF transient aerospace vehicle requires fuel servicing and does not have an identiplate, the AFTO FORM 781F will be given to fuel servicing personnel for manually preparing the fuel issue document.

3.15.4 If the identiplate is missing at home station, maintenance personnel will take the aerospace vehicle AFTO FORM 781F to the Fuels Management Flight (FMF) to obtain a new identiplate. The home station maintenance section, with the assistance of the FMF, will conduct an investigation. As a minimum the investigation will consist of a review of the procedures for assuring return of the identiplate to an aerospace vehicle after refueling.

3.16 USE OF USAF AEROSPACE VEHICLE BY BAILMENT CONTRACTORS AND AIR CARRIER CONTRACT OPERATORS.

3.16.1 Bailment contractors and air carrier contract operators utilizing USAF aerospace vehicle will maintain the AFTO FORM 781J and AFTO FORM 95 historical documents.

3.16.2 With MAJCOM consent, use of other AFTO FORM 781 series forms is not required provided substitute forms or documents are utilized to accomplish the intent of these forms.

3.16.3 When an aerospace vehicle is returned to an Air Force installation, the bailment contractor or air carrier contract operator will return the forms and make the final entries on the AFTO FORM 781 series forms and AFTO FORMS 95 in accordance with this TO and TO 00-20-2.

3.16.4 Since all Air Force information may not be available to the contractors; the Air Force organization receiving the aerospace vehicle will take necessary action to complete the documents or initiate new forms.

3.17 PROCESSING OF DOCUMENTS DURING DEPOT MAINTENANCE.

3.17.1 When a depot receives an aerospace vehicle, the depot will:

3.17.1.1 Debrief the aerospace vehicle into depot using AFTO FORM 781 series forms. Enter discrepancies from debrief in the AFTO FORM 781A and carry them forward to Work Control Documents (WCDs). To transfer discrepancies to a depot WCD, the corrective action block of the AFTO FORM 781A must reference the WCDs used to close the discrepancy. The depot will transfer each open discrepancy to WCD and enter the statement, "Transferred to depot WCD (specify identification number)" in each corrective action block and enter date and minimum signature.

3.17.1.2 Transfer all AFTO FORM 781K entries to WCD and enter the statement, "All preceding open discrepancies transferred to depot WCD (specify identification number)" after the last entry. Follow the statement with the date and

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minimum signature of a production inspector or a representative of the depot documentation activity. The end result must be a complete audit trail in the 781 series forms.

3.17.2 The depot WCD will contain, (1) open discrepancies that appear on the maintenance documents which accompany the aerospace vehicle, (2) each TCTO scheduled for accomplishment and (3) an identification of any special requirements or special projects. Document all work performed by depot personnel on applicable depot WCD.

3.17.3 Depots will reconcile all WCDs prior to aerospace vehicle -6 TO preflight transfer to flight test aircrew. At this time, initiate new AFTO FORM 781 and transfer all open WCD discrepancies to reflect current aerospace vehicle status. All maintenance actions will then be documented on AFTO FORM 781 to provide a maintenance audit trail and depot WCDs to ensure maintenance action approval, tech data and material availability, and financial accounting.

3.17.4 Return the closed out AFTO FORM 781 and a copy of the closed out depot package to the owning organization. If available, the unit may request an electronic copy of the depot package instead. Return all AFTO FORM 95s to the owning unit with the following: (1) part numbers and serial numbers for all serially tracked items and include Date of Manufacture (DOM) and Date of Installation (DOI), (2) TCTOs, (3) Time Change Item (TCI), (4) Equipment Transfer Report (if available), (5) special or scheduled inspections (with the date and aerospace vehicle time they were accomplished), (6) and any other significant information. All serially controlled items, warranty items, TCIs, and inspections will be entered into REMIS prior to transfer.

CHAPTER 4

SYMBOLS AND THEIR USE

4.1 GENERAL.

4.1.1 The symbols described in this section are established for use on maintenance documents to make important notations instantly apparent. They indicate the condition, fitness for flight or operation, servicing, inspection, and maintenance status of the aerospace vehicle or equipment. These symbols and their use must be fully understood in order to make proper entries on maintenance documents.

4.1.2 Symbol entries will be made in red to make the important warning signals stand out clearly. The Red X represents the most serious possible condition. The Red W the next most serious condition, the Red Dash the next most serious, and the Red Diagonal the least serious condition. Computer-generated forms symbols are printed in black, but will be overwritten in red (MAJCOM option). All manually entered symbols must be entered in red, except black name initials.

4.1.3 The instructions for completing each of the various maintenance, discrepancies, and work documents contain more specific applications of symbols.

4.2 RED X.

4.2.1 A Red X indicates that the aerospace vehicle, equipment, or SE is considered unsafe or unserviceable and will not be flown or used until the unsatisfactory condition is corrected and/or the symbol is cleared. No one will authorize or direct an aerospace vehicle to be flown, a missile to be launched, or equipment to be used until the Red X has been properly cleared in accordance with applicable technical data. See TABLE 4-1 for a list of additional Red X conditions.

4.2.2 Exception: Aerospace vehicle, equipment, or SE with a Red X condition may be operated (but not flown or taxied at high speed) as necessary to troubleshoot or repair the discrepancy.

4.2.3 For TCTOs or commercial service bulletin equivalents, use a Red X to ground or remove equipment from service:

4.2.3.1 upon receipt of an immediate action TCTO.

4.2.3.2 after expiration of a TCTO compliance period.

4.2.3.3 when work is started on urgent action and safety TCTOs.

4.2.3.4 within the time limits established by TO 00-5-15.

4.2.4 When a Red X is applied, maintenance personnel authorized to clear a Red X will inspect the work performed to correct the discrepancy and validate all related discrepancies for completeness and accuracy.

4.2.5 Except for ground launched missiles, use of a Red X will be mandatory for time-change items as prescribed in Table 4-1.

4.2.6 When AEROSPACE EQUIPMENT is in an unserviceable or unsafe condition and a Depot Field Team or Contract Field Team (DFT/CFT) is dispatched, the chief of that team will clear the Red X for only the work the team has corrected, if specifically authorized by the dispatching organization.

4.2.6.1 Inspectors who participate in accomplishment of the repair work and who are authorized to clear Red X symbols will enter their minimum signature in the "INSPECTED BY" block, provided that another member of the maintenance crew accomplishing the work signs the "CORRECTED BY" block with their minimum signature. This maintenance technician must be involved in the work required to complete the task. In addition, the inspector and the maintenance technician who signs the "CORRECTED BY" block, must have the opportunity to accomplish, monitor, or verify the correct completion of the work. Work accomplished by an inspector, in any other way, will not be verified in this manner and will require a check by another inspector.

4.2.6.2 When operations are conducted in locations where qualified maintenance personnel are not available, the home station MXG/CC will designate an individual to sign off the Red X. The designated individual at the location may accomplish the required work and clear the Red X by entering their minimum signature in the "CORRECTED BY" block, initialing the "INSPECTED BY" block, and placing the last name initial over the symbol.

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4.2.6.3 When AEROSPACE EQUIPMENT is placed on a Red X for accomplishment of an inspection, the Red X is cleared by an inspector who will enter a statement in the "CORRECTIVE ACTION" block indicating the required inspection has been accomplished in accordance with the applicable technical order. The inspector will enter his/her minimum signature in the "INSPECTED BY" and "EMPLOYEE NUMBER" blocks.

4.2.6.3.1 This entry indicates the individual has reviewed all applicable maintenance documents and that the inspection requirements contained in the scheduled inspection and requirements manual have been accomplished.

4.2.6.3.2 If parts of the inspection are not accomplished due to lack of parts, test equipment etc., a Red Dash (unless prohibited by the -6 or other applicable TOs) will be entered in the AFTO FORM 781A or AFTO FORM 244/245 to indicate these inspection requirements have not yet been accomplished.

4.2.7 Use a Red X when maintenance or life support (ALS) personnel perform maintenance or an inspection on the escape system, that involves disassembly and subsequent reassembly of a component or sub-component of the escape system.

4.2.7.1 A separate Red X entry is required for an egress final. When technical orders do not specify an egress final, MAJCOMs will specify such requirements as necessary.

4.2.7.2 A Red X will be used to indicate a complete Cartridge Actuated Devices (CAD)/Propellant Actuated Devices (PAD) verification is required during aerospace vehicle transfer/acceptance inspections. B-1B and B-2A aerospace vehicles are exempt.

4.2.8 Use a Red X when an inspection of installed LSE becomes past due. EXCEPTION: Those item(s) coming due while an aerospace vehicle is on alert status, away from home station, or not required for safe flight or operation (such as when life rafts are overdue but no over water mission is scheduled). These are placed on a Red Dash until the aerospace vehicle goes off alert, returns to home station, or ALSE mission requirements change, before upgrading to a Red X.

4.2.9 Use a Red X when installed pre-positioned ALSE have not been inspected and repacked when 30 days has accrued since arrival at gaining unit.

4.2.10 Use a Red X when a scheduled inspection renders the SE unsafe or unserviceable. An individual Red X is not required for items covered by the work cards.

4.2.11 Additional Red X Requirements: Refer to Table 4-1 at the end of Chapter 4.

4.3 RED DASH (NOT APPLICABLE TO GROUND-LAUNCHED MISSILES).

4.3.1 The presence of the Red Dash symbol indicates the condition of the equipment is unknown and a more serious condition may exist.

4.3.2 Use a Red Dash to indicate:

4.3.2.1 A required special inspection, accessory replacement, operational check, periodic inspection (Phase 1 or Phase 2 for SE), or Functional Check Flight (FCF) is due.

4.3.2.2 A scheduled inspection, preflight (hourly), post flight, basic post flight, etc. is due (includes time or other factors that will not allow accomplishment of the inspection before flight or use).

4.3.2.3 An aerospace vehicle inspection is due IAW applicable -6 TO or equipment manual. This inspection must be accomplished as soon as the condition preventing its completion no longer exists, but no later than during the next scheduled major inspection (60-Day/180-Day/HPO/HSC/ISO/Phase or equivalent). Inspections not completed by the next scheduled major inspection will be upgraded to a Red X. EXCEPTION: The inspection will not be postponed if prohibited by applicable -6 TO or equipment manual.

4.3.2.4 Alternate Mission Equipment (AME)/Normally Installed Equipment (NIE) that is due a scheduled inspection may be flown in an unarmed, unused configuration. Refer to -6 TO for inspection requirements.

4.3.2.5 An aerospace vehicle listed in TO 00-25-4 is due programmed depot maintenance (PDM). After 90 days, upgrade the Red Dash to a Red X, unless an extension has been obtained from the appropriate SM. Refer to TO 00-25-4 for detailed instructions. In use beyond their scheduled replacement will be carried on a Red Dash until upgraded to a Red X.

4.3.3 Time change life sustaining items not replaced at the actual replacement time or date, and the nearest scheduled inspection has not come due, will be placed on a Red X. Those items due while the aerospace vehicle is on alert status or

away from home station will be placed on a Red Dash, and the aerospace vehicle will be allowed to return home before upgrading the discrepancy to a Red X.

4.3.4 Service life requirements for ALSE items can be found in specific TOs (e.g. TOs 14D, 14S, 15X, etc.). Units should schedule CAD/PAD items for replacement at the nearest scheduled inspection prior to expiration of service life unless excessive time remains to expiration and apply Rule 4 of Table 6-1.

4.3.5 Shelf/service life limits of life sustaining CAD/PAD items will not exceed the limits established within the 11A and 11P series TOs.

4.3.6 For C-E and trainers, a Red dash symbol will be upgraded to a Red X for a deficient condition not corrected prior to the next periodic inspection due date. The Red X will be cleared using instructions in this TO.

4.3.7 Red dash discrepancies are signed off by the individual who accomplishes the inspection/corrective action by entering their minimum signature in the "INSPECTED BY" block on all maintenance discrepancy work documents (examples are 781A, AFTO FORM 244/245, etc.).

4.4 RED DIAGONAL.

4.4.1 The Red Diagonal indicates that a discrepancy exists on equipment, but is not sufficiently urgent or dangerous to warrant its grounding or discontinued use.

4.4.2 The Red Diagonal will be a straight line from the lower left to the upper right corner of the symbol block. When a condition warrants a Red Diagonal, write a description of the discrepancy on the appropriate AFTO forms or equivalent.

4.4.3 Enter a Red Diagonal on the appropriate AFTO forms or equivalent immediately upon receipt of an urgent action or Category I, routine action safety modification TCTO, or commercial equivalent.

4.4.4 Red diagonal discrepancies are signed off by the individual who accomplishes the corrective action by entering their minimum signature in the "CORRECTED BY" block on all applicable AFTO forms or equivalent.

4.5 CLEARING RED SYMBOL ENTRIES.

Any individual who signs off a Red symbol for a specific maintenance task must be qualified/certified for the task and knowledgeable of the technical orders required to accomplish the task. The individual who signs off a discrepancy in the "CORRECTED BY" OR "INSPECTED BY" block, as applicable, enters their black last name initial over the symbol in the "SYMBOL" block of the applicable maintenance document indicating that he/she has accomplished the required maintenance or inspection and found the condition satisfactory.

4.6 CHANGING SYMBOLS AFTER AN ORIGINAL ENTRY.

4.6.1 Entry of Red symbols on an AFTO form or equivalent by an individual represents his/her assessment of the seriousness of the defect. Therefore, no individual will be directed to change a symbol that has been entered.

4.6.2 Any person who determines a Red diagonal is more serious than previously entered may upgrade that symbol by drawing a line through the minimum signature of the person who made the entry, and entering his/her own minimum signature above the "DISCOVERED BY" block.

4.6.3 If any supervisory personnel believe that the condition is less serious than represented by the symbol, the matter will be brought to the attention of the MXG/CC, equivalent contractor representative, or any personnel specifically authorized by the MXG/CC to downgrade Red X or W entries (for exception see paragraph 4.2). If the symbol is downgraded, the authorized individual who made the decision will annotate their action in the "CORRECTIVE ACTION" block for the particular defect. This entry will read as follows: "Symbol downgraded from a Red X to a Red Diagonal. Reentered page (No.), item (No.)." Individuals who enter the remark assume responsibility for their action by initialing over the symbol and entering their minimum signature in the "INSPECTED BY" block. Reenter the same entry for the discrepancy, the new symbol, and the printed minimum signature of the person originally discovering the discrepancy in the next open block of the applicable AFTO form or equivalent and include an entry to read essentially as follows: "Symbol downgraded from a Red X to a Red Diagonal on (date) by (employee minimum signature)." This entry remains with the discrepancy until it is corrected.

4.6.4 Symbols/initials once entered will never be erased even if entered in error. Correct erroneously entered symbols/initials as follows:

4.6.4.1 When a Red Dash or Red Diagonal is entered in error on a discrepancy or work document, the individual discovering the incorrect entry enters the statement in the “CORRECTIVE ACTION” block: “Symbol/Initial entered in error, discrepancy and correct symbol/initial reentered on page ____, item____” or “Symbol entered in error, no discrepancy exists,” and enter their minimum signature in the “CORRECTED BY” block. When required and on the AFTO 244/245, reenter the discrepancy and correct symbol in the next open “DISCREPANCY” block on the form.

4.6.4.2 When a Red X or a Red W is entered in error, the individual discovering the incorrect entry will enter the applicable statement identified in paragraph 4.6.4.1. If they are authorized to clear these symbols, they will complete the “INSPECTED BY” block and initial over the symbol. If they are not authorized to clear these symbols, they will enter their minimum signature in the “CORRECTED BY” block. An individual authorized to clear these symbols initials over the symbol and completes the “INSPECTED BY” block. This procedure will not be used to circumvent downgrade procedures.

4.6.4.3 When an initial is entered in error, clear the discrepancy by entering “Initial entered in error, see Page ___ Item ___”, enter the minimum signature in the “CORRECTED BY” block and reenter the discrepancy in the next open block.

4.6.5 When a discrepancy is entered in error, the discrepancy will not be erased or changed by anyone other than the originator. The individual discovering the incorrect entry will enter “Discrepancy entered in error, correct discrepancy reentered on page ____, item ___”, in the “CORRECTIVE ACTION” block, and enter his/her minimum signature in the “CORRECTED BY” block. When required, reenter the correct discrepancy in the next open “DISCREPANCY” block of the applicable maintenance document.

4.6.6 When an uncleared condition originally assigned a Red Diagonal becomes more serious, upgrade the symbol for the original entry and appropriately describe it with a remark, draw a line through the name of the person who made the entry, and enter their own minimum signature in the discrepancy block preceded by a date entry. When a Red Dash is upgraded to a Red X, close out the original Red Dash by the remark, “Symbol upgraded to a Red X,” in the corrective action block. Rewrite the original entry in the next open discrepancy block with the Red X symbol.

4.7 DOWNGRADING A RED X FOR ONE-TIME FLIGHT.

4.7.1 An aerospace vehicle with a Red X condition may be released for a one-time flight provided the aerospace vehicle is or can be made airworthy under tightly controlled and specified operating conditions. Such action must be authorized by the owning MXG/CC or his/her designated official (also applicable for personnel at deployed locations), the SM, or through the on-site chief of an AFMC repair team (when aerospace vehicle is possessed by AFMC). The following AFTO FORMs 781A and 781H documentation are required to downgrade a Red X and release the aerospace vehicle for a one-time flight.

4.7.2 To downgrade a Red X on the AFTO FORM 781A, the MXG/CC or designated official enters the following similar statement in the “CORRECTIVE ACTION” block, “Red X changed to a Red diagonal (see page____, item____) for the purpose of a one-time flight to (name destination station)” and if applicable, “with an enroute stop at (name station).” This individual will also enter their minimum signature in the “INSPECTED BY” block and initial over the symbol block with their last name initial.

4.7.2.1 If a downgrading official is not available to sign the “INSPECTED BY” block, continue the “CORRECTIVE ACTION” statement: “One-Time flight authorized by (name, rank, title, organization).” The on-site person, authorized by the downgrade official, will downgrade the Red X by signing the “INSPECTED BY” block and initialing over the “SYMBOL” block.

4.7.2.2 In the next open block of the AFTO FORM 781A, enter a Red Diagonal in the “SYMBOL” block and current date in “Date Disc” block. In the “DISCREPANCY” block, enter the original discrepancy with a descriptive statement of temporary repair or inspection accomplished to make the aerospace vehicle airworthy for one-time flight. Also, enter restrictions to normal flight operation of systems and/or equipment, such as gear operation, pressurization, altitude or airspeed limits, etc. Sign the “DISCOVERED BY” block (normally, the same person that downgraded the Red X).

4.7.3 When the aerospace vehicle arrives at the destination, the Red Diagonal will be upgraded to a Red X.

4.7.4 When activities need to defer/waive accomplishment of an immediate or urgent action TCTO, activities will request a waiver of noncompliance with the TCTO from the SM, through their MAJCOM. When compliance of a TCTO or commercial equivalent is deferred/waived, downgrade the Red X to a Red Dash symbol IAW this TO and enter a brief statement of reason for noncompliance with the TCTO on the applicable forms. Upon termination of the condition that required the use of the waiver, the Red Dash symbol will be upgraded to a Red X.

4.8 CONVENTIONAL MUNITIONS AND/OR AIR-LAUNCHED TACTICAL MISSILES.

4.8.1 Conventional Munitions/Tactical Missile serviceability and documentation will be in accordance with TO 11A-1-10, Air Force Munitions Surveillance Program and Serviceability Procedures.

4.9 RED W (GROUND-LAUNCHED MISSILE USE ONLY).

A Red W symbol for ground launched missiles is used to reflect a condition of an item of SE, or Real Property Installed Equipment (RPIE) that is inoperative for its intended use and requires careful attention because of a condition:

4.9.1 At a missile site that will not prevent successful launch, flight impact, or command and control of the launch or flight

4.9.2 Off site that will not prevent the operation of a major end item of powered or non- powered SE

4.9.3 At a missile trainer that will not prevent its operation.

4.10 ADDITIONAL RED X REQUIREMENTS.

The requirements listed in the following table list minimum requirements but are not all inclusive. Units may publish additional Red X requirements, as they deem necessary. A Red X will be entered on the applicable forms under any of the following conditions:

Table 4-1. Additional Red X Requirements

Item No.	Condition
1	When aerospace vehicle, equipment, or SE is considered unsafe or unserviceable
2	When work or inspections are performed in or around the air intake areas of jet or gas turbine engines. The inspection to clear the Red X will be accomplished prior to engine operation. EXCEPTION: Scheduled inspections which require intake inspection as items of the MDS specific -6 TO work cards such as thruflight, postflight, etc. do not require separate Red X documentation on the AFTO FORM 781A.
3	When work or inspections are performed in aerospace vehicle engine exhausts. EXCEPTION: Scheduled inspections which require exhaust inspection as items of the MDS specific -6 TO work cards such as thruflight, postflight, etc. do not require separate Red X documentation on the AFTO FORM 781A.
4	Upon removal of any component or assembly that affects safety of flight or safe operation of the equipment.
5	When the removal and replacement of any component or assembly is such that improper reinstallation would affect safety of flight or create an operational hazard
6	When a major scheduled inspection (e.g. isochronal, phase, periodic, programmed depot maintenance, etc.) is in progress for an aerospace vehicle or SE.
7	When egress maintenance safety pins (over and above normal aircrew/ground safety pins) are installed to facilitate maintenance as required in the applicable maintenance TO.
8	When maintenance is in progress on the mechanical or electrical portions of fuel tank jettison, or internal or external stores release, such as for pods, pylon tow reels.
9	When maintenance is performed on the fuel system or any fuel system component while installed on the aerospace vehicle, engines, AGE, or auxiliary power unit.
10	When fuel tank or fuel cell is open for maintenance
11	When fuel tank or fuel cell maintenance involves installation of plugs or caps on the fuel or vent lines
12	When a jumper wire or other type of shorting device is installed in an electrical system while performing maintenance.
13	When equipment is improperly serviced or contaminated with the wrong type, grade, or proportion of fuel, oil, or hydraulic fluid according to applicable TOs.
14	When an aerospace vehicle pilot static system is inoperative, plugged, or taped.
15	When aerospace vehicle weight and balance is unknown.

Table 4-1. Additional Red X Requirements - Continued

Item No.	Condition
16	When the oil analysis program (OAP) laboratory recommends and the appropriate maintenance supervisor agrees to take grounding action, until a second oil sample can be examined that confirms or negates the first sample of excessive wear metals.
17	When rig pins are installed (identify number of pins installed in accordance with applicable TO).
18	When wind gust locks are installed.
19	When egress final inspection is required.
20	When flight control or throttle control systems are being adjusted and/or rigged.
21	When it is suspected or known that an aerospace vehicle or piece of equipment has become contaminated with a nuclear, biological or chemical contaminant.
22	When an engine blade requires blending.
23	When periodic inspections, maintenance, or calibration are due on munitions SE that is used to test, load, support or transfer nuclear weapons
24	When vermin are suspected to be on the aerospace vehicle and can not be located.
25	Use a Red X when a scheduled inspection renders the SE unsafe or unserviceable.
26	When items are lost, suspected to be lost, or cannot be accounted for in areas of aerospace vehicles and equipment (cockpits, flight control or throttle control areas, engine bays, fuel cells, etc.) that present a FO hazard and could result in damage or injury to personnel.
27	When AEROSPACE EQUIPMENT is impounded
28	Enter a Red X for each warning tag that is installed as part of a maintenance process. One AFTO Form 781A entry may contain several warning tags only if they pertain to the same discrepancy.

CHAPTER 5

AFTO FORM 781 SERIES

5.1 GENERAL PURPOSE OF AFTO FORM 781.

Use the AFTO FORM 781 series collectively to provide a maintenance, inspection, service, configuration, status, and flight record for the particular aerospace vehicles and trainers for which they are maintained. There may be slight differences between the forms provided as examples in this TO and the forms available from the MIS and AF Publishing website. If the MIS is available, it will be used; if the MIS is not available, the version on the web will be used. Supervisors will ensure that current forms are being used, and entries on these forms are accurate. Prior to flight, the aerospace vehicle commander will review the AFTO FORM 781 series forms for aerospace vehicle status. Prior to maintenance, technicians will review the AFTO FORM 781 series forms. Use the 24-hour military clock format when recording time entries in all forms. These forms are designed for use in a clear binder. Substitute binders are permitted but must be standardized at unit level.

5.2 AIRCREW TRAINING DEVICE (ATD) FORMS.

5.2.1 The AFTO FORMS 781, 781A, 781F, 781H, 781K and AFTO FORM 781B and/or 781L as needed, are mandatory for ATDs in the 6930 Federal Stock Class (FSC). Accomplish documentation for visual systems listed in FSC 6930 on the forms of the simulator to which they are attached. MXG/CCs have the option of using other 781 series forms with the FSC 6930 ATDs, and all 781 series forms with other ATDs.

5.2.2 When documenting the AFTO FORM 781 series forms, precede the MDS of the aerospace vehicle being simulated by the letter "S" to denote a specific aerospace vehicle ATD MDS.

5.3 ARRANGEMENT OF FORMS WITHIN THE BINDER.

5.3.1 The AFTO FORMS 781, 781A, 781F, 781G, 781H, 781J, 781K, and 781M are mandatory for aerospace vehicle and are maintained in the aerospace vehicle forms binder. Use of all remaining AFTO FORM 781 series forms are a MXG/CC option. The following arrangements will be used:

5.3.1.1 The AFTO FORM 781F serves as identification for the binder of a particular aerospace vehicle and as a source document to obtain billing information for fuel and oil issues. Insert this form in the front cover of the binder. Use two copies if a stiffener is used for the binder covers.

5.3.1.2 The AFTO FORM 781G contains basic information that serves as an aid in making entries on the AFTO FORM 781. Place this form in the back cover of the binder. Use two copies if a stiffener is used for the binder covers.

5.3.1.3 The AFTO FORM 781M contains basic information that serves as an aid in making entries on the AFTO FORMS 781A and 781K. Insert this form in a clear page holder at the back of the binder.

5.3.1.4 The AFTO FORM 781N is a mandatory aerospace vehicle form for aerospace vehicles equipped with the J-79 engine and is maintained (arrangement optional) in the 781 binder. Complete the 781N in accordance with the TOs referenced on this form.

5.3.1.5 Arrangement of forms in the binder are as follows: AFTO FORM 781, AFTO FORM 781H, and AFTO FORM 781A in that order. The MXG/CC will determine arrangement of all other forms as long as they are arranged after the AFTO FORM 781A. In addition, forms arrangement in the binder must be standardized on all assigned aerospace vehicles. Dividers, punched to fit the rings of the binder, can be used to separate forms.

5.3.1.6 Maintain the AF FORM 664, Aerospace vehicle Fuels Documentation Log, in the AFTO FORM 781 binder (arrangement optional) in accordance with AFI 23-202. When utilizing the fuel automated system, the AFTO FORM 664 is not required.

5.4 DOCUMENTING OPERATIONAL CHECKS AND FUNCTIONAL CHECK FLIGHTS.

5.4.1 FCFs and Operational Checks, to include leak checks, which must be preformed IAW TO 1-1-300, and the applicable MDS specific -6 TO, and -2 maintenance manual, will be entered on the AFTO Form 781A and documented as follows:

5.4.1.1 OPERATIONAL CHECKS. When required, an operational check will be part of the maintenance action. Document in the "CORRECTIVE ACTION" block by including a statement such as "OPS CK OK." If a malfunction is detected during the operational check, document the finding (for example, sign off the write-up as "OPS CK BAD") and refer to a new write-up documenting the malfunction under the appropriate symbol.

5.4.1.1.1 In the event that the operational check cannot be accomplished concurrently with or immediately after completion of the maintenance, close out the original entry by describing the corrective action with a statement that an operational check is required. When this situation occurs, record the prescribing TO number and make a new entry for the operational check in the next open block on the AFTO FORM 781A.

5.4.1.1.2 The original entry and the operational check entries must refer to each other by entering "see page number and item number." The operational check entry must adequately describe the reason for the operational check with the prescribing TO number recorded.

5.4.1.1.3 When an in-flight operational check is required to verify or supplement a ground check and does not involve an FCF, make an AFTO FORM 781A entry to describe the type and extent of the check needed.

5.4.1.1.4 When an in-flight operational check is completed, enter the remark "OPS CK OK" in the "CORRECTIVE ACTION" block. Place the last name initial of the individual who completes the operational check over the symbol in the SYM block and their signature entered in the "INSPECTED BY" block.

5.4.1.2 FUNCTIONAL CHECK FLIGHTS. Enter an appropriate statement to indicate the reason for which the FCF is being accomplished in the "DISCREPANCY" block.

5.4.1.2.1 Record discrepancies encountered during an FCF on the AFTO FORM 781A.

5.4.1.2.2 Record discrepancies noted during an FCF performed by depot facility personnel on depot work documents; however, when this option is taken, the AFTO FORM 781A will contain a statement reading: "FCF defects recorded on _____" (enter the form identification).

5.4.1.2.3 After the required depot work is completed, sign off the AFTO FORM 781A entry as "Reported defects cleared on" (enter form identification) and enter minimum signatures in the "CORRECTED BY" and/or "INSPECTED BY" blocks. Ensure copies of depot documentation reflecting discrepancies and corrective action accomplished by depot facilities during pre-flight and FCFs accompany the aircraft being returned to the owning command. These documents will be filed in the historical file and disposed of in accordance with AFMAN 37-139.

5.4.1.2.4 After completion of the FCF, if the aerospace vehicle is released, enter the following statement in the "CORRECTIVE ACTION" block, "FCF completed, aircraft released for flight."

5.4.1.2.5 If a check flight was performed to complete a scheduled inspection and it fulfills all of the inspection requirements, document the scheduled inspection completion on the AFTO FORM 781A. Change this inspection status upon completion of the FCF that fulfills all of the inspection requirements. If subsequent check flights are required for non-inspection requirements, charge these discrepancies to the specific equipment requiring the functional check flight.

5.4.1.2.6 The A/C who accomplishes the FCF will initial over the symbol in the "SYM" block and enter his/ her minimum signature in the "INSPECTED BY" block.

5.4.1.2.7 To eliminate duplication of FCF entries, utilize the original FCF AFTO FORM 781A entry for additional check flights when the original condition or maintenance work requires further testing.

5.4.1.2.8 If a condition occurs during the FCF requiring another FCF after the maintenance work is completed, make a new entry on the AFTO FORM 781A for the new discrepancy.

5.5 RECORDING ENGINE STORAGE.

When installed engines are placed in storage, make entries on the AFTO FORM 781A to indicate the type of storage and which portions of TO 2R-1-11 or TO 2J-1-18 have been complied with. Examples: engines in temporary storage, TO 2R-1-11, sect par CW or engine in 1 to 30 days storage, TO 2J-1-18, sect par CW. When the engines are removed from storage status, record a reference to the de-preservation instructions that were used in the "CORRECTIVE ACTION" blocks.

5.6 PROCEDURES FOR TRANSFER OF DATA BY DEPOT/CONTRACTOR FACILITY.

5.6.1 When aerospace vehicles (including depot assigned test project aerospace vehicles) are being processed by a depot facility and all AFTO FORMS 781A and 781K entries are transferred to depot work documents, enter a statement reading, "All preceding uncleared entries transferred to (enter form identification)" after the last entry on both the AFTO FORMS 781A and 781K. Follow the statement with the date and minimum signature of a production inspector or a representative of the depot documentation activity. AFTO FORM 781 series may be used as depot forms.

5.6.2 Document all work performed by depot personnel on applicable depot work documents. The depot work documents will contain:

5.6.2.1 a listing of all uncleared discrepancies that appear on the maintenance documents which accompany the aerospace vehicle.

5.6.2.2 a listing of TCTOs that are scheduled for accomplishment.

5.6.2.3 an identification of any special requirements or special projects.

5.6.3 When all work is completed, initiate a new AFTO FORM 781 series for the return shipment that reflects current status information.

5.6.4 When new AFTO FORMS 781 series are initiated, return the old ones with the aerospace vehicle and file them in the historical file located in the documentation activity of the unit possessing the aerospace vehicle. Return a copy of AFTO FORM 95 to the owning unit with the following: part numbers and serial numbers for all serially tracked items and include DOM and DOI, TCTOs, TCIs, an Equipment Transfer Report (if available), special or scheduled inspections (with the date and aerospace vehicle time they were accomplished), and any other significant information. All serially controlled items, warranty items, TCIs, and inspections will be entered into REMIS prior to transfer.

5.7 CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) FOR AIRLIFT (G081)/CAMS PLANNING REQUIREMENTS FOR TRANSFER.

5.7.1 Units possessing G081/CAMS capability will use automated products.

5.7.2 Always forward two copies of the automated products with an aerospace vehicle, engine, or engine module which is being transferred to a depot for PDM, MOD or ACI. Forward both copies of the automated products to the depot aerospace vehicle or engine records section. The aerospace vehicle or engine records section ensures all information which affects the aerospace vehicle, engine or engine module historical records, such as accessory and TCIs, is documented on both copies of the automated products. Line through old entries in red. Enter new entries immediately below the old entries.

5.7.3 When all pertinent aerospace vehicle, engine or engine module historical information has been documented on the automated products, the aerospace vehicle or engine scheduling branch chief certifies that all entries are complete by signing both copies of the report. Return one copy of the signed report to the unit of assignment and retain the second copy in the depot aerospace vehicle or engine records section for 180 days.

5.7.4 When the aerospace vehicle, engine or engine module (as applicable) returns to the unit of assignment, forward the certified automated products to the aerospace vehicle or engine records section where the CAMS data file will be updated based on the information provided by the automated products.

5.7.5 Units may use the Mass File Transfer system in lieu of the automated products when transferring aerospace vehicle to another CAMS-equipped unit. Establish local procedures for Maintenance Data Systems Analysis to coordinate with the host data processing installation to obtain the transfer media.

5.8 AFTO FORM 781, AFORMS (AIR FORCE OPERATIONS RESOURCE MANAGEMENT SYSTEM) AIRCREW/MISSION FLIGHT DATA DOCUMENT (FIGURES 5-1 AND 5-2).

5.8.1 The AFTO FORM 781 is the source document for recording individual flying time, sorties and/or events for input into the MIS and AFORMS.

5.8.2 Maintenance personnel or aircrew trainer technician/operator will ensure that sufficient copies of the AFTO FORM 781 are aboard the aerospace vehicle or in the AFTO FORMS 781 binder or available at the Aircrew Training Device (ATD). Maintenance or aircrew trainer technician/operator will complete blocks 2 through 5.

5.8.2.1 Block 2, "MDS." Enter the mission, design and series (MDS) designators from block 12 of the AFTO FORM 781F.

5.8.2.2 Block 3, "SERIAL NUMBER." Enter the aerospace vehicle serial number. Example: 85-11428, 65-0966.

5.8.2.3 Block 4, "Unit CHARGED FOR FLY HOURS/HOSM-CODE." Enter the organization to which the aerospace vehicle is possessed, with the command designation in parenthesis. (Example: 374 AW (AMC).) Enter the four-letter code of the Host Operation System Management (HOSM) which services that organization, (supplied by the unit operations officer) to which the original forms must be sent for processing and filing.

5.8.2.4 Block 5, "LOCATION." Enter the base to which the aerospace vehicle is assigned.

5.8.3 The aerospace vehicle commander will complete blocks 1, 6 through 33, 35, and 36 in accordance with AFI 11-401.

5.8.4 Remove the completed AFTO FORM 781 from the aerospace vehicle forms binder and enter data into the MIS at maintenance debriefing. Maintenance debrief will complete block 34, "MAINT. REVIEW" to show the form was reviewed and the data was entered into MIS. Send completed form to unit operations. MAJCOMs may direct this form also be forwarded to Maintenance Operations Flight plans and scheduling.

5.8.5 The AFORMS input operator will complete block 37 in accordance with AFI 11-401.

5.9 AFTO FORM 781A, MAINTENANCE DISCREPANCY AND WORK DOCUMENT (FIGURES 5-3 AND 5-4).

5.9.1 Use the AFTO FORM 781A to document each discrepancy discovered by aircrew or maintenance personnel. Exception: Discrepancies resulting from battle damage will not be documented on the 781A. TO 1-1H-39, General Aircraft Battle Damage Repair (ABDR) technical manual, contains specific instructions on documenting aerospace vehicle battle damage repairs.

5.9.2 For aerospace vehicles that are equipped with Aircraft Integrated Data Systems (AIDS), such as the C-5 Maintenance Analysis Detection and Recorder Subsystem (MADARS), maintenance personnel will record malfunctions detected by the airborne automatic checkout equipment on the AFTO FORM 781A. This requirement includes C-5 Fault Reporting Manual (FRM)/Fault Isolation Manual (FIM) codes detected by MADARS, and the aircrew will document all discrepancies in the aerospace vehicles forms prior to completing debrief. Download the C-17 Aircraft Diagnostics and Integrated Test System (ADITS) to disc and process during aerospace vehicle debriefing. At the completion of each flight, the flight engineer will manually interrogate the computer for a summary printout of the malfunctions detected on all monitored items. Attach the summary printout to the AFTO FORM 781A (upon termination at the home station only) even though the defects may be recorded on the form.

5.9.3 Maintenance or aircrew trainer technician/operator are responsible for the following:

5.9.3.1 Ensuring sufficient copies of the AFTO FORM 781A are available for the entire mission.

5.9.3.2 Transcribe open discrepancies to a new AFTO FORM 781A, remove the AFTO FORM 781A from the binder, and forward removed forms to the work center office. After the responsible supervisor reviews and ensures the entries are accurate, forward the AFTO FORM 781A to the documentation activity responsible for filing. (Maintain ATD AFTO FORM 781As at the work-center).

5.9.4 Complete entries for the AFTO FORM 781A as follows:

5.9.4.1 Minimum heading requirements for double-sided AFTO FORM 781A forms will be: (1) From, To, MDS, Serial Number, Page __, and Of __ Pages on page one. (2) Page number on all even numbered pages. (3) Serial Number and page number on all remaining odd numbered pages. When single-sided forms are used the minimum heading requirements are (1)

From, To, MDS, Serial Number, Page ___ and Of ___ Pages on page one. (2) Serial Number and Page Number on all remaining pages.

5.9.4.2 "FROM." Enter the date the form was initiated. Example: 20000419.

5.9.4.3 "TO." Enter the date the form was closed out and removed from the binder. Example: 20000420. The "FROM" date represents the date the form was initiated and the "TO" date, represents the date the form was closed out and removed from the aerospace vehicle forms binder. The "FROM" date of a new form will always be the same as the "TO" date on the form that is closed out. This entry provides a positive means of determining whether any forms are missing from the aerospace vehicle file. Securely fasten all forms together to prevent loss.

5.9.4.4 "MDS." Enter the aerospace vehicle mission, design, and series designator. Example: C-130H.

5.9.4.5 "SERIAL NUMBER." Enter the aerospace vehicle serial number. Example 85-1428, 65-14828.

5.9.4.6 "PAGE." Enter the page number. On two-sided forms the front and back of the form will be considered as separate pages and will be numbered accordingly.

5.9.4.7 "OF ___ PAGES." When closing out a set of forms enter the total number of pages on page one only. Example: Page 1 of 8 Pages.

5.9.4.8 "SYM BLOCK." Enter the proper symbol of each discrepancy documented. Entries in this block will never be erased, even if entered in error.

5.9.4.9 "JCN." Maintenance personnel or aircrew trainer technicians ensure the job control number, when assigned, is entered.

5.9.4.10 "DATE DISC." Aircrew or maintenance personnel will print the date discovered.

5.9.4.11 "DOC NUMBER." Maintenance personnel or aircrew trainer technicians ensure the supply document number, if part(s) is back-ordered, are entered.

5.9.4.12 "CF 781A," "XF 781K." When a new AFTO FORM 781A is initiated, uncorrected discrepancies will be carried forward to a new AFTO FORM 781A and discrepancies other than Red X items may be transferred to the AFTO FORM 781K. When an individual transcribes a discrepancy to the AFTO FORM 781K or a new AFTO FORM 781A, in addition to checking the appropriate block, they will also sign the "CORRECTED BY" block with his/her minimum signature. Downgraded Red Xs will never be transferred to the AFTO FORM 781K.

5.9.4.12.1 "CF 781A." When a discrepancy is carried forward to a new AFTO FORM 781A, the individual transcribing the discrepancy will place a check mark in the CF 781A box. Transcribe the SYM, JCN, original date discovered, discrepancy and, if applicable, the supply document number. The individual transcribing the discrepancy will print the name and employee number of the individual who made the initial entry.

5.9.4.12.2 "XF 781K." If the discrepancy is to be transferred to the AFTO FORM 781K, place a check mark in the XF 781K box. Transcribe the SYM, JCN, original discrepancy and, if applicable, the supply document number.

5.9.4.12.3 Do not place an initial over the symbol for the discrepancies that are carried forward or transferred to another form, since this only represents a transcribing action and does not correct the reported condition.

5.9.4.13 "DATE CORRECTED." Enter the date that the discrepancy is corrected. Example: YYYYMMDD, 20021208

5.9.4.14 "WUC (MXG/CC option)/REFERENCE DESIGNATOR (MAJCOM option)." Use this block, if applicable, to document Work Unit Code information or the appropriate Reference Designator.

5.9.4.15 "FAULT CODE." Use of this block applies to those aerospace vehicles that use fault codes to aid in troubleshooting. The "FAULT CODE" is often computer generated and describes a system malfunction which cross references to a narrative or troubleshooting procedure in the maintenance technical order for the given aerospace vehicle or system.

5.9.4.16 "STA CODE." Use this block when any corrective action is accomplished away from home station and when maintenance is performed by other than home station personnel. Enter the four-letter geographic location (GEO-LOC) indicator for the location where the repair was accomplished. The GEO-LOC will be entered at the time the discrepancy is

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corrected. GEO- LOC Codes are located in REMIS/CAMS/GO81. EXCEPTION: Do not include the GEO-LOC or Station Code information for aerospace vehicle on classified missions.

5.9.4.17 “DISCREPANCY.”

5.9.4.17.1 Prior to entering new discrepancies, review the forms to prevent duplication.

5.9.4.17.2 Aircrew or maintenance personnel will print a thorough description of the discrepancy in the next open “DISCREPANCY” block. More than one block may be used for a discrepancy if required

5.9.4.17.3 Aircrew/maintenance personnel will enter all defects noted before, during, and after each flight. They will not, under any circumstances, enter more than one defect in each block. EXAMPLE: A system problem reported by an aircrew member would be one discrepancy. All subsequent maintenance performed such as equipment removal/installation and panel/door removals would be considered separate discrepancies and would be documented separately using the appropriate Red symbol. All panel/door removals will be entered as a separate individual discrepancy. If panels/doors are removed as part of troubleshooting and/or repair of another discrepancy, reference will be made to the original discrepancy by using the see page __, item __ format. Multiple fastener access doors (non-quick access) that are opened will be documented as a separate discrepancy. EXCEPTION: Multiple panel/door removals (except those requiring IPIs) may be grouped into one discrepancy as a MXG/CC option. If grouped, all panels/doors removed must be listed individually within the discrepancy or on an approved panel list.

5.9.4.17.4 Whenever a Red X discrepancy is of a nature that operation of the affected system could be hazardous or result in further damage or injury to personnel, include a warning note following the discrepancy statement. For example: “NOTE - DO NOT APPLY ELECTRICAL POWER TO FUEL SYSTEM OR OPERATE ENGINE-FIRE HAZARD.” Enter the word “NOTE” and remarks in red or underlined in red. When the condition that created the note no longer exists, line through the warning/note.

5.9.4.17.5 Whenever a non-Red X discrepancy exists, but operation of the affected system could be hazardous or result in further damage or injury to personnel, include a warning note following the discrepancy statement. For example: “NOTE - DO NOT apply electrical power to galley oven - FIRE HAZARD.” When the condition that created the note no longer exists, line through the warning/note.

5.9.4.17.6 The following documentation will be accomplished whenever a maintenance action is stopped prior to completion or a change of maintenance technician occurs (e.g. job awaiting parts, technician reassigned to another job, end of shift, etc.):

5.9.4.17.6.1 The technician(s) will document and sign off the TO steps accomplished prior to the maintenance action(s) being stopped. Example: Lt MLG Strut repack steps 1 thru 25 CW IAW 1C-5B-5-5JG-2, Sec 5-2 (reference the page __, item __ of original entry).

5.9.4.17.6.2 The technician will create a subsequent entry in the AFTO FORM 781A detailing the remaining open TO steps or tasks. Example: Lt MLG Strut requires repack IAW 1C-5B-5- 5JG-2, Sect 5-2, steps 26 thru 30 NCW (reference original entry).

5.9.4.17.6.3 Keep the original discrepancy and job control number (JCN) open until the entire maintenance action is completed, since subsequent discrepancy corrective actions only document partial completion. Do not transcribe aerospace vehicles forms until all tasks associated with the original discrepancy are completed.

5.9.4.17.6.4 When all steps or tasks of the maintenance action are complete, a qualified technician will clear the discrepancy and review all pertinent discrepancies to determine if all steps were accomplished in accordance with the applicable technical data.

5.9.4.17.7 Certain entries are required to assure adequate inspections of affected system components are made to prevent or reduce the possibility of future mishaps. The individual having initial knowledge of the occurrence regardless of the apparent condition of the aerospace vehicle will make these entries. Make a brief entry in the “DISCREPANCY” block when an aerospace vehicle has (Refer to MDS specific -6 TO or maintenance manual):

5.9.4.17.7.1 Made a barrier arrestment/engagement.

5.9.4.17.7.2 Been involved or damaged in ground or air mishap.

5.9.4.17.7.3 Encountered severe turbulence or icing during flight.

5.9.4.17.7.4 Made contact with a foreign object.

5.9.4.17.7.5 Exceeded the airspeed or “G” limitations.

5.9.4.17.7.6 Made a hard landing.

5.9.4.17.7.7 Suspected or actual hot brakes.

5.9.4.17.7.8 Flown sustained flights below 3000 feet over salt water.

5.9.4.17.7.9 A required special inspection, TCI replacement, operational check, or FCF is due.

5.9.4.17.7.10 A required inspection is overdue (e.g. phase, ISO, PR, PR/BPO, BPO, TH, etc.).

5.9.4.17.7.11 A chemical spill is discovered inside the aerospace vehicles.

5.9.4.17.7.12 Used oil dilution for cold weather operation or engine de-sludging purposes. Record the duration of each oil dilution.

5.9.4.17.8 Record discrepancies discovered during scheduled inspections on AFTO FORM 349s, locally developed/approved lists, or WCDs. Locally developed lists, WCDs, and/or AFTO FORM 349s used to record discrepancies discovered during scheduled inspections will be routed with the 781 series forms package. Only Red X entries will be required on the AFTO FORM 781A. MXG/CCs have the option of developing local lists to record the removal of panels required by an inspection as long as an entry is made in the AFTO FORM 781A which reflects its use. This will preclude a separate Red X entry for each panel. Transcribe discrepancies, other than Red X conditions, discovered during scheduled inspections, that cannot be corrected by the allotted scheduled inspection time to the AFTO FORM 781A or the AFTO FORM 781K as appropriate. Local lists and WCDs will be treated the same as aerospace vehicle documents and filed with the inspection historical documents.

5.9.4.17.9 Any component removed to correct a discrepancy or to Facilitate Other Maintenance (FOM), which would cause a grounding or unsafe condition if not reinstalled, will be documented as a separate discrepancy with the appropriate Red symbol entry. This applies even if the item is immediately reinstalled. This includes all equipment removed to troubleshoot and/or repair another discrepancy. Reference will be made to the original discrepancy by using the see page ____, item ____ format. EXCEPTION: Procedures that require removal of a component as a step of the task and contain all of the steps for component removal/installation within the same procedure, do not need to be documented separately.

5.9.4.17.10 Identify Repeat/Recurring discrepancies by entering in red “Repeat/Recurring” in the “DISCREPANCY” block. For further guidance reference AFI 21-101.

5.9.4.17.11 Internally loaded munitions will be entered as an “INFO NOTE,” identifying type of munition uploaded (e.g. impulse carts installed, chaff and flare loaded, decoys loaded, ammunition installed). Annotate multiple entries in the same discrepancy block. Update the “INFO NOTE” with types of expendables prior to each flight. The applicable “INFO NOTE” will be retained in the aerospace vehicle forms until munitions are removed and/or expended.

5.9.4.18 “DISCOVERED BY.” Aircrew/maintenance personnel will print their first name initial and last name for each discrepancy recorded.

5.9.4.18.1 A discovered by is not required for GO81 generated jobs that are part of a job package (i.e. isochronal inspections, -6 inspections, TCTO, Debrief, etc.). In these instances, the 781A discovered by block will read “GO81 GENERATED JOB.”

5.9.4.19 “EMPLOYEE NO.” Maintenance personnel will enter their employee/FAA certification number or equivalent.

5.9.4.19.1 An employee number is not required for GO81 generated jobs that are part of a job package (i.e. isochronal inspections, -6 inspections, TCTO, Debrief, etc.). In these instances, the employee number block will be blank.

5.9.4.20 “CORRECTIVE ACTION.” When the discrepancy listed on the AFTO FORM 781A is cleared, document a description of the corrective action.

5.9.4.20.1 For Red X and Red Dash discrepancies, include TO reference (including page and paragraph/figure number or function number) or equivalent, in the “CORRECTIVE ACTION” block and enter the date in the “DATE CORRECTED” block. MXG/CCs may specify additional minimum TO reference.

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5.9.4.20.2 When a temporary/partial repair is accomplished that warrants changing the symbol entered for the discrepancy, and the final repair action is deferred, enter the temporary/partial repair corrective action. Close out the original discrepancy and enter a new discrepancy, with the appropriate symbol and description of the work to be accomplished in the next open block of the AFTO FORM 781A. The original entry "CORRECTIVE ACTION" block and new entry "DISCREPANCY" block must refer to each other by the entries "see page __, item __." Units with automated forms will reference the original job control number in the "DISCREPANCY" block of the new entry.

5.9.4.20.2.1 AFTO FORM 781A entries for temporary repair of fuel leaks will include the following information in the discrepancy block: (1) tank, (2) wing station or X-Y plot, (3) leak classification, (4) cause, and (5) whether or not this was a repeat or recur leak.

5.9.4.20.3 AFTO FORM 781A entries for the unscheduled replacement of TCIs accomplished away from home station will include the items' serial numbers and previous operating times.

5.9.4.21 To clear a previously complied with (PCW) discrepancy, the transcriber will print "PCW", see forms dated FROM __, TO __ (from the old forms), Page __, Item __, in the "CORRECTIVE ACTION" block of the new set of forms. The transcriber will then print their minimum signature in the "CORRECTED BY" block and initial over the symbol in the "SYMBOL" block..

5.9.4.22 "CORRECTED BY," "INSPECTED BY" and "EMPLOYEE NUMBER."

5.9.4.22.1 When a Red diagonal entry has been corrected, the maintenance technician will enter his/her minimum signature in the "CORRECTED BY" and "EMPLOYEE NUMBER." blocks.

5.9.4.22.2 When a Red dash entry has been corrected, the maintenance technician will enter his/her minimum signature in the "INSPECTED BY" and "EMPLOYEE NUMBER." blocks.

5.9.4.22.3 When a Red X entry has been corrected, the maintenance technician clearing the discrepancy will enter his/her minimum signature in the "CORRECTED BY" and "EMPLOYEE NUMBER" block and the inspector will enter his/her minimum signature in the "INSPECTED BY" and "EMPLOYEE NUMBER" blocks. For a Red X that is an inspection, see paragraph 4.2.6.3.

5.10 AFTO FORM 781B, COMMUNICATIONS SECURITY (COMSEC) EQUIPMENT RECORD (FIGURE 5-5).

5.10.1 This form is designed to provide COMSEC equipment status. Use the AFTO FORM 781B, when COMSEC equipment is installed on the aerospace vehicle. Annotate 781 binder IAW para 3-13. Maintenance personnel remove the completed AFTO FORM 781B and dispose of it in accordance with AFMAN 37-139. In the case of transient aerospace vehicles, retain completed forms in the binder until the aerospace vehicle returns to the home organization. The A/C or designated aircrew member checks the AFTO FORM 781B prior to flight to ascertain that the COMSEC equipment configuration conforms to the mission requirements. The following form entries are required:

5.10.2 Complete the heading with the appropriate aerospace vehicle and date information.

5.10.2.1 "ITEM." Enter the nomenclature of the equipment installed.

5.10.2.2 "SERIAL NUMBER." Enter the serial number of the COMSEC equipment item.

5.10.2.3 "POSITION." Enter the position number of the item. Examples: KY-28 number five, enter a 5; KIR-1A number two, enter a 2.

5.10.2.4 "DATE INSTALLED." Enter the date the item is installed. If the installation date is unknown, verify the item is installed and enter the current date.

5.10.2.5 "SIGNATURE AND EMP NUMBER." The maintenance technician who installed the item or verified installation enters his/her minimum signature. If a person transcribes the information from another AFTO FORM 781B, he/she will enter his/her minimum signature.

5.10.2.6 "DATE REMOVED." Enter the date the COMSEC equipment item is removed.

5.10.2.7 "SIGNATURE AND EMPLOYEE NUMBER." Enter the signature and employee/FAA certification number of the person who removed the item, or verified removal.

5.10.3 When all columns have been completely filled in or when columns have been utilized to the extent that initiation of a new AFTO FORM 781B becomes necessary, transcribe all line entries that do not show entries in the date removed block to a new AFTO FORM 781B.

5.11 AFTO FORM 781C, AVIONICS CONFIGURATION AND LOAD STATUS DOCUMENT (FIGURES 5-6 AND 5-7).

5.11.1 The form provides avionics configuration and load status and is used when directed by the MXG/CC. Maintenance personnel remove the completed AFTO FORM 781C and dispose of it in accordance with AFMAN 37-139. In the case of transient aerospace vehicles, retain the completed forms in the binder until the aerospace vehicle returns to the home organization. When the form is used, the A/C checks the AFTO FORM 781C prior to flight to ascertain that the avionics equipment status and configuration conform to the mission requirements. Maintenance personnel ensure the validity and legibility of all required entries.

5.11.2 The following entries are required:

5.11.2.1 Complete the heading with the appropriate aerospace vehicle and date information.

5.11.2.2 "ITEM." Enter the common name of the equipment installed. When the equipment is removed, draw a line through the entry and enter a notation in the "REMARKS" block at the lower portion of the form to indicate that the item was expended or removed.

5.11.2.3 "TYPE AND SIZE." If applicable, enter the type of equipment on the top line and size of the equipment on the lower line.

5.11.2.4 "QUANTITY." Enter the quantity of the item installed.

5.11.2.5 "POSITION." Enter the position where the item is installed. Examples: Left inboard (L inbd), right outboard (R outbd).

5.11.2.6 "COMPARTMENT." If applicable, enter the compartment in which the item is installed.

5.11.2.7 "WEIGHT." Enter the weight of the item.

5.11.2.8 "SYS CHECKED DATE AND TIME." Enter the date and time operational checks were performed prior to or after installation of the equipment. Example: 20020719 will be entered on the top line and 1900 on the lower line to indicate 19 July 2002 at 1900 hours. When a series of consecutive entries are made or checked by the same individual, draw a diagonal line through this column from the first to the last entry, with a single date entry above the line and a time entry below the line.

5.11.2.9 "OPERATIONAL STATUS." Make an entry in this block indicating the item is either operational (OP) or non-operational (NON-OP).

5.11.2.10 "SIGNATURE AND EMPLOYEE NUMBER." The maintenance person responsible for the overall condition of the listed item enters his/her minimum signature. When a series of consecutive entries are made or checked by the same individual, draw a diagonal line through this column from the first to the last entry and initial the line(s).

5.11.2.11 "REMARKS." Use this block to enter explanatory remarks that are pertinent to installations or removals, special precautions and so forth. Follow entries in this block by a minimum signature, date and time of entry.

5.12 AFTO FORM 781D, CALENDAR AND HOURLY ITEM INSPECTION DOCUMENT (FIGURES 5-8 AND 5-9).

5.12.1 Use the AFTO FORM 781D for listing calendar and hourly inspection items peculiar to the aerospace vehicle for which space is not available on the AFTO FORM 781K. Use the AFTO FORM 781D separately or in conjunction with the AFTO FORM 781K to provide separate tailored listings for MDS specific -6 TO calendar/hourly items which are applicable to aerospace vehicle short term items, aerospace vehicle long term items, engine long term items or other special equipment which has numerous MDS specific -6 TO items listed. When this option is exercised, stamp or print in bold the following statement on the AFTO FORM 781K: "See AFTO FORM 781D." To facilitate scheduling, the AFTO FORM 781D will normally be maintained in the documentation activity with the AFTO FORM 781E. Insert these forms in the aerospace vehicle forms or place aboard the aerospace vehicle only when required for TDY or extended cross-country missions. Additionally, if an AFTO FORM 781D is used as an extension of the AFTO FORM 781K, attach it to the AFTO FORM 781K and carry it aboard the aerospace vehicle. When this option is used, maintenance personnel are responsible for maintaining the AFTO FORM 781D. Maintain long term items listed on the AFTO FORM 781D in appropriate documentation or scheduling sections for aerospace vehicle or, if documentation sections are established in engine or specialized equipment sections, keep the tailored AFTO FORM 781D there.

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5.12.2 The following entries are required:

5.12.2.1 Maintenance personnel will complete the entire form heading.

5.12.2.2 "INSPECTION ITEM." Enter those items to be inspected or tested at specified hourly or calendar periods. To establish uniformity, list the special hourly and calendar inspection items in appropriate interval groups, in the sequence that they appear in the MDS specific -6 TO and maintenance manual. Use a two-line entry for those items requiring inspection at either an hourly interval or a calendar period. Use one line to indicate the hourly interval and the next line to indicate the calendar time at which the inspection is due. Enter additional items requiring inspection, following the listing obtained from the applicable -6 TO and maintenance manual, that may be required due to the type of mission, geographical location, or at the direction of the MXG/CC. Do not list recurring inspection items that are prescribed on inspection work cards on this form. Document special inspections (e.g., NDI) established to track and re-verify repairs to fracture critical structures. The SM establishes these special inspection requirements and intervals in conjunction with authorizing a repair(s) performed in accordance with the -3 technical order. Document a description of the repair, authority for the repair, location and repairing activity on the applicable AFTO FORM 95.

5.12.2.3 "FREQUENCY." Enter the frequency of the inspection in this column.

5.12.2.4 "NEXT DUE." In the first NEXT DUE column, enter the aerospace vehicle hours, engine hours, or date the next inspection is due. Upon completion of the inspection, line out the date or hours reflected in the old "NEXT DUE" column and the new date or hours will be entered in the adjacent "NEXT DUE" column, and so forth.

5.12.3 Transcribe the form as needed and follow disposition instructions in AFMAN 37-139.

5.13 AFTO FORM 781E, ACCESSORY REPLACEMENT (FIGURES 5-10 AND 5-11).

5.13.1 This form is used to record data to facilitate compliance with replacement requirements and the necessary data for reporting discrepancies when a MIS product is not used. Also use this form to document replacement intervals of the items as specified in the applicable MDS specific -6 TO and maintenance manual, related commodity series TOs and accessories and components of reciprocating and turbojet engines as outlined in TOs 2R-1-16 and 2J-1-24. Regardless of whether the equipment is serviceable or repairable, keep the AFTO FORM 781E current as long as the aerospace vehicle or equipment is in the possession of the owning activity. On aerospace vehicles that have engine events history recording devices installed, compute the elapsed operating time as indicated on the recording device and document it on the AFTO FORM 781E.

5.13.2 Initiate one AFTO FORM 781E for aerospace vehicle accessories, and one for each engine. List the replacement items in the sequence they appear in the applicable MDS specific -6 TO and maintenance manual. Separate these listings into convenient groups. Lines may be left blank after each group to provide space for recording replacement of items listed within that group.

5.13.3 Accessory replacement documents for jet engines (excluding J-79) will include an entry for each main shaft bearing to reflect serial number, manufacturer, part number, location, previous operating time, and the engine time at installation.

5.13.4 Use a two-line entry for those items requiring replacement at either the aerospace vehicle or equipment time, or specified cycles, rounds, or a calendar period. Use one line to indicate the aerospace vehicle or equipment time and the next to indicate cycles, rounds, or calendar time, at which the replacement is due. Use ditto marks in columns A, B, and C for the second line of such entries.

5.13.5 Enter additional items requiring replacement, following the listing obtained from the -6 TO and maintenance manual, that may be required due to the type mission, GEO-LOC, or at the direction of the MXG/CC. When replacements are made, use the next open line to record entries for the newly installed item.

5.13.6 Make a separate entry on the AFTO FORM 781E to reflect complete identification data for each explosive item utilized, such as those employed in aircrew escape systems and external stores jettison systems. Record the following minimum data, the item nomenclature, type, and item serial number. To complete the identification data, make entries in the "LOCATION," "REPLACE EVERY," and "INSTALLED AT" columns. When subsequent changes of these items are made, make entries in the remaining applicable columns of the form in accordance with the instructions in this section and post new data for the replacement item. Data for small items, such as a blasting cap, fire extinguisher cartridges or squibs, and squib and plate assemblies, are available only on the outer containers. If an explosive device is received as a component of an assembly and the identification data are not attached and the shipping organization cannot furnish the data, the date of manufacture stamped on the item will be used in lieu of the lot number for recording purposes. If the date of inspection is not known, consider the DOM as the DOI.

5.13.7 There is no requirement for making AFTO FORM 781E entries for impulse cartridges installed in external stores jettison systems when the frequency of installation and removal make it impractical to maintain a current status.

5.13.8 Entries on the AFTO FORM 781E are as follows:

5.13.8.1 "FROM." Enter the date the form was initiated. Example: 20020914.

5.13.8.2 "TO." Enter the date the form was closed out and removed from the binder.

5.13.8.3 "MDS." Enter the aerospace vehicle's type MDS. When an AFTO FORM 781E is used to track engine mounted accessories, enter the engine type in the MDS block.

5.13.8.4 "SERIAL NUMBER." Enter the serial number of the affected aerospace vehicle or engine.

5.13.8.5 "PAGE." When more than one sheet of this form is required, enter the page number and total number of pages.

5.13.8.6 COLUMN A, "NOMENCLATURE AND TYPE." Enter the nomenclature and type of accessory or equipment requiring replacement at a specified interval.

5.13.8.7 COLUMN B, "SERIAL NUMBER." Enter the serial number, normally found on the data plate. If the serial number is not on the accessory, enter "none." When new forms are being prepared to replace lost forms and the serial number cannot be identified without expenditure of excessive man-hours, enter the word "unknown."

5.13.8.8 COLUMN C, "LOCATION." Enter the installed location of the accessory. Leave this block blank when a single installation of the accessory in the aerospace vehicle or engine is involved and the location of the item is obvious.

5.13.8.9 COLUMN D, "REPLACE EVERY." Enter the operating interval or the calendar period at which the accessory or component should be replaced. This replacement time will be found in the applicable MDS specific -6 TO and maintenance manual or related commodity series TOs. When the replacement intervals for items are reduced locally, enclose the entry in this block within parentheses. Also enclose within parenthesis items prescribed by the MXG/CC. Use of the parentheses denotes unique replacement intervals.

5.13.8.10 COLUMN E, "PREVIOUS OPERATING TIME." Enter the previous operating time or usage of the accessory. Para 5.13.8.15 contains specific instructions for computing the previous operating time for accessories having a different replacement time on various aerospace vehicles or engines on which it may be used or when accessories are added to the replacement manual.

5.13.8.11 COLUMN F, "INSTALLED AT." Enter the aerospace vehicle or engine time to the nearest hour, or the calendar date, for items that are changed on an hourly or calendar basis.

5.13.8.12 COLUMN G, "REPLACEMENT DUE AT." Enter the aerospace vehicle or engine time to the nearest hour, calendar date, cycles, or rounds fired when an accessory or item of equipment is due for replacement. This entry will be the maximum allowable operating time of the accessory. For hourly time change items, add the time to the aerospace vehicle or engine hours entered in column F. When an accessory that has not been overhauled prior to installation is being reused, subtract the previous operating time from the maximum allowable operating time.

5.13.8.13 COLUMN H, "REMOVED." Enter the aerospace vehicle or engine time to the nearest hour, cycles, rounds fired, or calendar date at which the accessory or item of equipment was removed. For components requiring replacement based on actual operating time, such as APUs, entries in columns F, G, and H will be in terms of component operating time instead of aerospace vehicle time. Maintain forms for engine mounted accessories in terms of engine operating time.

5.13.8.14 COLUMN I, "TIME ACCUMULATED." Enter the accumulated time, cycles, or rounds fired on the accessory during this installation period. Compute this by subtracting the installation time, cycles, or rounds from the removal time, cycles, or rounds.

5.13.8.15 COLUMN J, "TOTAL OPERATING TIME." Enter the time, cycles, or rounds, the accessory was operated since new or last overhaul. Compute this by adding the accumulated time entry of column I to the previous operating time entry in column E. For example, if an item having 250 hours previous operating time is installed at 550 hours and removed at 1050 hours, the operating time will be 750 hours (column J). Entries for items having only a calendar replacement interval will reflect the calendar period of installation as computed from the date of installation to the date of removal.

5.14 AFTO FORM 781F, AEROSPACE VEHICLE FLIGHT REPORT AND MAINTENANCE DOCUMENT (FIGURES 5-12 AND 5-13).

5.14.1 A completed AFTO FORM 781F is always displayed at the front cover of the AFTO FORM 781-series binder. When an aerospace vehicle is transferred or when possession of the aerospace vehicle changes from one organization to another (except depot-level maintenance), the gaining unit will revise the data and complete a new form. Document the codes in blocks 10, 11, and 16 for billing customer's fuel, maintenance cost per flying hour, and consumption factors.

5.14.2 Fill out the AFTO FORM 781F to reflect the requirements of the aerospace vehicle. For a trainer, the AFTO FORM 781F will include all but the "MDS" and "SERIAL NUMBER" blocks.

5.14.3 Post entries on the AFTO FORM 781F in bold print in the appropriate blocks in accordance with the following instructions:

5.14.3.1 BLOCK 1, "ID NUMBER." Enter the aerospace vehicle identification number.

5.14.3.2 BLOCK 2, "PILOT." Enter the name and grade of the assigned primary pilot (A/C), as applicable.

5.14.3.3 BLOCK 3, Blank. Use of this block is a MXG/CC option. If used, standardize entries among wing aerospace vehicles.

5.14.3.4 BLOCK 4, "STANDARD REPORTING DESIGNATOR" (SRD). Enter the standard reporting designator. The REMIS tables contain a master SRD list.

5.14.3.5 BLOCK 5, "CREW CHIEF." Enter the name and grade of the aerospace vehicle dedicated crew chief (DCC).

5.14.3.6 BLOCKS 6-8, "ASST CC." Enter the name(s) and grade(s) of the assistant aerospace vehicle dedicated crew chief(s) (ACC).

5.14.3.7 BLOCK 9, Use of this block is a MXG/CC option. If used, standardize entries among wing aerospace vehicles.

5.14.3.8 BLOCK 10, "DOD ACTIVITY ADDRESS CODE." Enter the DoD activity address code of the base fuels accounts (FP) at the possessing base.

5.14.3.9 BLOCK 11, "CUSTOMER ID CODE." Enter the customer ID code, using the two-digit MAJOR COMMAND Code from TO 00-20-2 Appendix B.

5.14.3.10 BLOCK 12, "MISSION DESIGN SERIES." Enter the aerospace vehicle mission, design, and series designator. Example: C-17A. (For ATDs see paragraph 5.2.2)

5.14.3.11 BLOCK 13, "SERIAL NUMBER." Enter the aerospace vehicle serial number. Example: 85-1428, 65-14828.

5.14.3.12 BLOCK 14, "ORGANIZATION." Enter the designation of the organization to which the aerospace vehicle is assigned. Example: 437 AW.

5.14.3.13 BLOCK 15, "LOCATION." Enter the location of the organization to which the aerospace vehicle is assigned. Example: Charleston AFB, SC. Overseas organizations enter their APO/FPO number in this block.

5.14.3.14 BLOCK 16, "STATION CODE." Enter the assigned station code corresponding to the location shown in block 15.

5.14.3.15 BLOCK 17, "SERVICE CAPACITY." Servicing capacities.

5.14.3.16 Enter in line "A" under "INTERNAL," the total fuel capacity of all internal fuel tanks. Under "EXTERNAL," enter the total fuel capacity of all external fuel tanks. Under "TOTAL," enter the total fuel capacity of the aerospace vehicle. Use the applicable -5 weight and balance TO for total fuel capacity. Do not use the vehicles "usable fuel" capacity on this form.

5.14.3.17 Enter in line "B" under "EACH ENGINE," the total capacity of each engine oil tank. Under "AUXILIARY TANKS" enter the total capacity of auxiliary oil tanks. Use the applicable engine TO for each engine oil tank capacity. Line out the inappropriate words of the title of lines A and B to reflect the unit of measure that is being used.

5.14.3.18 BLOCK 18, "INV DATA ASSIGNMENT AND POSSESSION." Under the "COMMAND" column, enter on lines "A" the command code for the assignment of the aerospace vehicle (e.g., ACC, AMC, ANG, etc., reference TO 00-20-2 Appendix B) and on line "B" the command code of the command possessing the aerospace vehicle. For example, an aerospace vehicle may be assigned to ACC but temporarily possessed by AFMC for depot maintenance. Under the "PPIC" column on lines "A" and "B" enter the assignment and possession code for the aerospace vehicle. Plans and Scheduling manages AFI 21-103 reporting and is the source for this data.

5.15 AFTO FORM 781G, GENERAL MISSION CLASSIFICATION (FIGURES 5-14 AND 5-15).

The AFTO FORM 781G contains basic information to serve as an aid in making entries on the AFTO FORM 781. File in the rear cover of the binder. Use two copies if a stiffener is used for the binder covers.

5.16 AFTO FORM 781H, AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE DOCUMENT (FIGURES 5-16 AND 5-17).

5.16.1 Use the AFTO FORM 781H to document maintenance status, servicing information, and to provide a ready reference as to the status of aerospace vehicles, ATDs or air-launched missiles. This form also indicates the status and history of inspections. When off-station, leave the form in the binder until the aerospace vehicle returns to home station. The current active AFTO FORM 781H will be on top of the old AFTO FORM 781Hs.

5.16.2 Prepare a new AFTO FORM 781H at the end or prior to the start of the specified flying period, if the aerospace vehicle or ATD has flown. If the aerospace vehicle has not flown and if a new pre-flight (or equivalent) is accomplished, a new AFTO FORM 781H is not required. Simply document the new pre-flight below the previous pre-flight. If blocks are completely filled, a new AFTO FORM 781H may be required.

5.16.2.1 If additional lines are needed during the specified flying period, initiate a second 781H. Print "Page 1 of 2" at the top of page 1, and "Page 2 of 2" on the top of page 2.

5.16.2.2 An authorized individual as outlined in paragraph 5.16.3.7.3.1. checks the aerospace vehicle status prior to flight and signs the exceptional/conditional release. When a authorized individual has not signed the exceptional/conditional release, the A/C is responsible for the status check and exceptional/conditional release. The A/C will also check the servicing entries recorded in block 13 "SERVICING DATA" to verify that the quantities are adequate for the flight. After each flight, the A/C will complete block 7, "FLIGHT CONDITION DATA." Specific responsibilities are as follows:

5.16.2.2.1 The A/C documents the airframe time, full stop landings, total landings, cartridge/JFS starts, and engine cycles, as required, in blocks 9, 10, 11 and 12 of the AFTO FORM 781H, at the completion of each sortie and validates this by signing the appropriate line in block 7.

5.16.2.2.2 For missile carrier aerospace vehicles (e.g. ALCM and CALCM), the A/C will ensure the designated aircrew member posts the missile airframe time and/or engine operating time on individual missile AFTO FORMS 781H carried aboard the aerospace vehicle.

5.16.3 AFTO FORM 781H ENTRIES. Complete the form for aerospace vehicle and ATDs in the following manner:

5.16.3.1 For ATDs, completion of blocks 1 through 4 and 6 "STATUS TODAY" is mandatory and completion of the exceptional release portion of block 6 and the remaining blocks is a MXG/CC option.

5.16.3.2 BLOCK 1, "FROM." Enter the year, month, and day of the beginning date for the use of this form. Record all dates on the forms by eight digits in the order of year, month, and day. Example: YYYYMMDD, 20020914 for 14 Sept 2002.

5.16.3.3 BLOCK 2, "TO." Enter the year, month, and day of the ending date for the use of this form.

5.16.3.4 BLOCK 3, "MDS." Enter the aerospace vehicle mission, design, and series designator. Example: F-15E. (For ATDs, see paragraph 5.2.2.)

5.16.3.5 BLOCK 4, "SERIAL NUMBER." Enter the aerospace vehicle serial number. Example: 85-1500, 65-0966.

5.16.3.6 BLOCK 5, "CERTIFICATION OF PRE-FLIGHT (PR), BASIC POST-FLIGHT (BPO), COMBINED PR/BPO AND COMBINED PR/TH, THRU-FLIGHT (TH), QUICK TURN (QT), WALK AROUND INSPECTION (WAI), PRE-LAUNCH INSPECTION (PLI) AND ALERT (AL)." The maintenance person who accomplishes or supervises the PR, BPO, combined PR/BPO, combined PR/TH, TH, QT, WAI, PLI or AL will enter in the appropriate columns the type inspection, minimum signature and the local date and time completed. MAJCOMs have the option of using Zulu time. When initiating a

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new form, transfer the time and date of the completed inspection (provided the pre-flight validity period has not expired) and carry forward the individual's minimum signature who accomplished the inspection by printing in block 5 of the new form. The individual transcribing the entries enters the abbreviations "CF" and their first and last name initial in the "ACCOMPLISHED BY" column of the old form. Record the entries for each column of this block as follows:

5.16.3.6.1 "FLT NUMBER." Use of this block is a MXG/CC option. If used, enter the corresponding flight number from block 7 when documenting the condition after flight. When transcribing an inspection to a new form, leave the flight number column blank.

5.16.3.6.2 "TYPE." Enter the abbreviation of the type inspection.

5.16.3.6.3 "ACCOMPLISHED BY." Use this column to record the minimum signature of the individual who accomplished the inspection.

5.16.3.6.4 "COMPLETED DATE, TIME." Enter the date in YYYYMMDD format, and time of completion.

5.16.3.7 BLOCK 6, "STATUS DATA." Entries will be:

5.16.3.7.1 "STATUS TODAY." Enter symbols in the "STATUS TODAY" block of the AFTO FORM 781H to reflect current status of the aerospace vehicle. A black last name initial indicates no known discrepancies which require a symbol exists and no inspections are due and/or overdue on the aerospace vehicle. When initiating this form, bring forward the last status symbol of the previous form to box 1 of the new form. If no discrepancies exist on the aerospace vehicle, enter the last name initial of authorized individual who accomplished or supervised the pre-flight inspection. The status symbol recorded in these columns always represent the most serious condition. When status changes occur, the maintenance technician responsible for the change will use the next open box to record the applicable symbol. Symbol entries recorded in these columns will never be erased, initialed over or changed even if entered in error. Explain any symbols entered in error by making an AFTO FORM 781A entry prior to entering a new correct status symbol in the next open box.

5.16.3.7.2 "BOX NUMBER." This column is used to record the box number of the "STATUS TODAY" column for which an exceptional/conditional release is being signed. This entry is the responsibility of the authorized individual who signs the exceptional release.

5.16.3.7.3 "EXCEPTIONAL/CONDITIONAL RELEASE." An exceptional/conditional release is required before flight. Under no circumstances will the exceptional/conditional release be granted when the aerospace vehicle status is indicated by a Red X symbol. The exceptional/conditional release serves as a certification that the authorized individual who enters their minimum signature has reviewed the active forms to ensure the aerospace vehicle is safe for flight.

5.16.3.7.3.1 A list of personnel designated to sign the exceptional/conditional release will be approved by the MXG/CC and include maintenance officers, senior NCOs, or their civilian equivalents. If, after thorough review, the MXG/CC determines that local conditions require the assignment of other than maintenance officers, senior NCOs or their civilian equivalents to sign exceptional releases, a waiver request is forwarded to the MAJCOM for approval. Such request must fully justify the need for the waiver and identify actions being taken or planned to resolve the problem.

5.16.3.7.3.2 When an exceptional/conditional release is signed by a designated individual, it will not require another signature during the pre-flight validity period unless additional Red symbol discrepancies are encountered or the 781H has to be removed as outlined in paragraph 5.16.1. When an additional symbol is entered or the form is removed, the prior signature is no longer valid and another exceptional release is necessary. When designated personnel are not available to sign the exceptional release, the A/C will sign the release. When a release is signed by the A/C, it is effective only for those flights in which the releasing A/C participates as an aircrew member. The launch control officer, maintenance officer, senior NCO, or civilian equivalent will sign an exceptional/conditional release, when required for installed air launched missiles. For aerospace vehicle (including bailed and government furnished property) undergoing maintenance at a contractor's facility, exceptional/conditional releases shall be signed by personnel identified by the contractor in a listing provided to the Air Force Contract Administration Office, as required by this TO. Additional special instructions relative to exceptional releases are as follows:

5.16.3.7.4 An exceptional release may be granted as a conditional release. A conditional release allows an aerospace vehicle to be flown although a discrepancy exists which restricts the aerospace vehicle's capabilities. When such conditional releases are granted, the conditions of the release will be described by an appropriate entry in the AFTO FORM 781A. Additionally, enter "conditional, see AFTO FORM 781A, (page ____, and item ____)" in the next open line after the exceptional release signature. As an example, conditional releases may be given to an aerospace vehicle that has cargo weight restrictions due to cracks, fuel limitations, or airspeed restrictions, etc.

5.16.3.7.4.1 To indicate what conditions are covered by the exceptional/conditional release, the releaser will draw a red line under the entire last entry on the AFTO FORM 781A. When the exceptional/conditional release is signed, the releaser places his/her initials at the left margin of the AFTO FORM 781A beside the red line entry. If new discrepancies are entered, draw a new red line under the last item to indicate coverage of the next exceptional release signature. If the same person who signed the previous exceptional/conditional release reviews the discrepancies and corrective actions, the individual may initial beside the red line and release the aerospace vehicle without another minimum signature in block 6, provided the status has not changed. If no additional red symbol entries are entered, but the aerospace vehicle status changes to a Red Dash or Red Diagonal as a result of an AFTO FORM 781K entry, a new exceptional/conditional release is required. The releaser will initial immediately above the original initials on the AFTO FORM 781A.

5.16.3.8 BLOCK 7, "FLIGHT CONDITION DATA." The A/C enters data in this block IAW AFI 11-401.

5.16.3.8.1 Upon completion of a flight, the A/C will indicate the aerospace vehicle condition after flight in the block opposite the applicable flight number. If discrepancies were encountered during flight, enter the total number of such discrepancies in the appropriate "COND AFT FLT" block. If no discrepancies were encountered, enter "OK" in the appropriate "COND AFT FLT" block.

5.16.3.8.2 If an over-temperature of a jet engine is encountered, enter the number of such encounters opposite the applicable flight number in the "OVER TEMP ENCTRD" column. Record a description of conditions encountered, including temperatures reached and duration of the over-temperature, on the AFTO FORM 781A. Additionally, if an over-temperature is encountered during ground operation, record a descriptive entry on the AFTO FORM 781A.

5.16.3.8.3 The aircrew will enter auxiliary engine or APU operation in the column titled "AUX ENGINE OR APU OPERATION" and will represent actual hours of operation. Entries may be omitted when an auxiliary engine or APU is equipped with an hour meter or the unit is not a time change item. Sum the total of all occurrences at the end of the specified flying period and enter the "TOTAL TODAY" in the block below.

5.16.3.8.4 Upon completion of the above entries, the A/C enters his/her signature in the "PILOT'S SIGNATURE" block. In addition, a description of each discrepancy encountered during flight will be entered in the AFTO FORM 781A.

5.16.3.9 BLOCK 8, "MUNITIONS AND/OR GUNS STATUS." This block indicates the status of loaded munitions and/or guns and refers to the page and item number in the AFTO FORM 781A for types loaded. Use of this block will be a MAJCOM option. If used, block 8 will indicate the status of internally loaded munitions (chaff, flare, decoys, impulse cartridges, and gun system ammunition). Aircraft with cartridge-activated devices installed for release of aerospace vehicle fire extinguishing agents do not need to be documented in this block.

5.16.3.9.1 "STATUS." The load-crew chief circles the appropriate letter in red, L for "loaded," E for "empty," or N for "(system) not installed." After all items have been expended or downloaded, place a black X in the STATUS and 781A ENTRY blocks. When new items have been uploaded, indicate the new status in the next open block.

5.16.3.9.2 "AFTO FORM 781A ENTRY." Enter the corresponding page (P) number and item (I) number of the AFTO FORM 781A munitions entry. If "STATUS" is "E," or "N," X out this block.

5.16.3.10 BLOCK 9, "AIRFRAME TIME." Upon initiation of a new form, transcribe the total time from the "TOTAL" block of the previous form to the "PREVIOUS" block of the new form. Ensure the airframe time is updated in the AFTO FORM 781J. At the completion of each flight, record the flight time of each AFTO FORM 781 pertaining to the date involved in the appropriate flight blocks. Add these entries for a new total entry in the "TOTAL" block at the end of the specified flying period.

5.16.3.11 BLOCK 10, "LANDINGS." Use this block to record previous "FULL STOP" and "TOTAL" landings on aerospace vehicles for which maintenance or inspection of the landing gear system or components is based on a specified number of landings. Maintain a separate record of full stop landings for aerospace vehicles under this criteria. The A/C will document total landings, which include full stop landings, in the "TOTAL" column and document only the full stop landings in the "FULL STOP" column. These entries will be added for a new total entry in the "TOTAL" block at the end of the specified flying period.

5.16.3.12 BLOCK 11, "CARTRIDGE/JET FUEL STARTER (JFS) STARTS." For selected engines, maintain a history of cartridge/JFS starts to determine starter time change. The A/C will document in the "CARTRIDGE/JFS START" column by engine number, the number of cartridge/JFS starts for each flight. Maintenance personnel will document each ground cartridge/JFS start. These entries will be added for a new total in the "TOTAL" block at the end of the specified flying period. This total will be carried forward to block 11, "PREVIOUS" of the new AFTO FORM 781H.

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5.16.3.13 **BLOCK 12, "ENGINE CYCLE DOCUMENTATION."** For selected engines, maintain a history of cycles for compressors, turbine disks, and other designated components to determine fatigue life. The A/C will document cycles which have occurred during the flight, on the "FLIGHTS" line. The definition of cycles for each engine is included in the applicable aerospace vehicles MDS specific -1, -2, and -6 TOs and the appropriate engine TO and maintenance manual. When blocks 10, 11 and 12 are not used line out the printed words and use the blocks for other purposes.

5.16.3.14 **BLOCK 13, "SERVICING DATA."** Servicing data is grouped into four basic categories: FUEL, OIL, OXYGEN AND NITROGEN/WATER. Line through all unused blocks in a servicing number row. For example, if only fuel is checked or serviced, line through oil, oxy, and nitrogen/water blocks not used in the servicing number row. (This will ensure that no additional entries are made on a service line that has been certified in block 14). Specific entries are as follows:

5.16.3.14.1 **"OCTANE or GRADE."** For each servicing line, enter the fuel grade/octane with which the aerospace vehicle was serviced. Example: JP-8.

5.16.3.14.2 **"QTY SRVCD."** Enter the total quantity of fuel (liters, gallons, or pounds) serviced or drained at one operation. If no service is required, enter a "0" (zero) to serve as a positive indication that the tanks have been checked. To indicate the unit of measure being used for the "QTY SRVCD" and "TOTAL IN TANKS" entries, enter "P," "G," or "L," which will indicate pounds, gallons, or liters, as a part of the serviced or in tanks entry. Example: 2,750P or 6,243G. Enter total pounds, gallons, or liters of fuel drained in red and will carry a minus sign prefix. Example: -250G. Make these entries upon completion of the servicing by maintenance personnel performing or supervising the servicing. Record fuel taken onboard, fuel dumped overboard, fuel off loaded or oil transferred from an auxiliary tank to an engine or engines during flight, as a separate service in the next open block. Enter the quantity of fuel dumped or off loaded in red and carry a minus sign prefix. The A/C or other aircrew member will make these entries for in-flight operations.

5.16.3.14.3 **"TOTAL IN TANKS."** Enter the total number of pounds, gallons, or liters, of fuel onboard in all tanks (excluding in-flight refueling tanks of tanker aerospace vehicles. Enter a separate line entry when a different grade of fuel is onboard other than that of the aerospace vehicles.) after servicing, draining, or completion of an "in-tank" check. Enter a "P," "G," or "L" as described above.

5.16.3.14.4 **"OIL (HALF-PINTS, PINTS, QUARTS, GALLONS, OR LITERS)."** In the "SER" column of the applicable servicing number row, enter the number of half-pints, pints, quarts, gallons, or liters of oil serviced or drained from each oil tank. Record the total number of half-pints, pints, quarts, gallons, or liters of oil in each engine tank after servicing or draining in the "IN" block. If no servicing is required, enter a "0" (zero) in the "SER" block to serve as a positive indication that the "in-tanks" checks have been made. Enter oil drained in Red and a minus sign prefix. Example: -15. To indicate a complete oil change, circle amount added in "SER" column in Red. Line out the non-applicable words of the title of this block to indicate what units of measure are being used and list the type and/or specification of the oil serviced to the right of the title, if different than what the TO calls for. If different oils are mixed according to TO 42B2-1-1, make an appropriate entry in the AFTO FORM 781A. Aerospace vehicle having requirements for recording constant speed drive (CSD) and extended range oil tank (ext. range) oil servicing, may draw a red line between rows after the last engine entry and record CSD or EXT oil servicing information behind the red line separator. Cross out the engine number of the column being used and pencil in the CSD or EXT number. Example: CSD # or EXT range #.

5.16.3.14.4.1 Accurate running totals of oil added to each engine are essential for performing accurate OAP analysis and preventing potentially catastrophic engine/component failures. Ensure amounts of oil serviced for each engine are also annotated on the aerospace vehicle AFTO FORM 781J in the appropriate engine "OIL ADDED" column. Use the AFTO FORM 781J to maintain precise, cumulative totals of oil added between OAP samples to facilitate proper documentation in the DD FORM 2026, OIL ANALYSIS PROGRAM SAMPLES "OIL ADDED SINCE LAST SAMPLE" block.

5.16.3.14.4.2 For engine programs that do not require oil samples to be taken, there is no requirement to record amounts of oil serviced on the AFTO FORM 781J.

5.16.3.14.5 **"OXY PRESS OR QTY."** In the OXY PRESS OR QTY line, enter the oxygen system pressure or quantity as indicated at the time of the check or after servicing. The individual making the check will ensure the pressure or quantity is at or above the minimum prescribed in the applicable -2 TO. Line out the non-applicable portion of the title. Leave this block blank for aerospace vehicles not equipped with oxygen.

5.16.3.14.6 **"NITROGEN/WATER."** In the nitrogen/water servicing line, enter the nitrogen/water quantity as indicated at the time of the check or after servicing. If this block is not used, the MXG/CC may designate its use for other purposes. For example, F-16 units may use this block to document hydrazine (H-70) quantity.

5.16.3.14.7 “PRE TOT.” When transcribing the AFTO FORM 781H, the previous total (PRE TOT) row is used to record the last entry of servicing data documented on the previous AFTO FORM 781H block 13. All additional entries below the PRE TOT row of block 13 will match corresponding servicing certification information in block 14.

5.16.3.15 BLOCK 14, “SERVICING CERTIFICATION.” The individual who performs or supervises the servicing, draining, or “in-tanks” check of items in block 13 enters his/her minimum signature in the “BY” block corresponding with the numbered servicing or draining entries recorded in block 13. Enter the station name and date at which the action was performed in the corresponding “AT” and “DATE” blocks. The A/C or other aircrew member will sign the “BY” block, the words “in-flight” or “hot pit” will be entered in the “AT” block and the date will be entered in the “DATE” block to certify any in-flight or hot pit servicing accomplished.

5.17 AFTO FORM 781J, AEROSPACE VEHICLE ENGINE FLIGHT DOCUMENT (FIGURES 5-18 AND 5-19).

5.17.1 “FROM” and “TO.” Enter the date on which the form was initiated in the “FROM” block. When the form is closed out, enter the date in the “TO” block. The “FROM” block on the new form will agree with the “TO” block on the old form.

5.17.2 “MDS.” Enter the aerospace vehicle mission, design and series designator. Example: C-130H.

5.17.3 “SERIAL NUMBER.” Enter the aerospace vehicle serial number. Example: 85-1428, 65-14828.

5.17.4 “PAGE-OF-PAGES.” Enter the page number and the total number of pages.

5.17.5 “DATE.” Enter the date on which the aerospace vehicle flies in the first open line.

5.17.6 “AIRFRAME TIME.” When transcribing the AFTO FORM 781J, the “previous total” row is used to record the last entry of data documented on the previous AFTO FORM 781J “carried forward” row. The last entry in this column corresponds with the “total row” entry in block 9 of the AFTO FORM 781H. At the end of the specified flying period, enter the time accrued for that day’s flying or operation on the line opposite the specific date entry identifying that day’s operation. Add this entry to the previously recorded time to provide new totals. MXG/CCs may elect to post entries on this form for each flight in lieu of the specified flying period.

5.17.7 “OIL SAMPLE (X).” Enter an X in this block, on the line corresponding to the specific date entry to indicate that an oil sample was taken for oil analysis. This distinguishes the correct placement of the X, (line entry Vs total).

5.17.8 “OIL ADDED.” In the first “OIL ADDED” block, enter the total amounts of oil added in half-pints (HP), pints (P) or quarts (Q), as reflected on the last entry of the previous AFTO FORM 781J.

5.17.8.1 Line through non-applicable measurements in the header “AIRCRAFT AND ENGINE OPERATING TIME, CYCLE AND OIL ADDED” (half-pints, pints, quarts).

5.17.8.2 Enter the total amount of oil serviced for each engine on the line corresponding to the specific date entry. The MXG/CC may elect to post entries after each flight. The amount of oil serviced for each engine will match oil servicing amounts reflected in the AFTO FORM 781H, block 13, “SERVICING DATA.” Add these oil amounts to the previously recorded “OIL ADDED” column amounts to derive new cumulative totals. Use this column to maintain precise, cumulative totals of oil added to each engine to facilitate accurate documentation in the DD FORM 2026, OIL ANALYSIS RECORD, “OIL ADDED SINCE LAST SAMPLE” block. Accurate running totals of oil added to each engine between oil samples are essential for performing accurate oil analysis and preventing potentially catastrophic engine/component failures. Ensure amounts of oil serviced for each engine are also annotated on the 781H.

5.17.9 “ENGINE POS #.” The first engine “ENGINE POS #” column is for engine number 1, the second is for engine number 2 and so on. One- and two-engine aerospace vehicles may use the remaining engine position columns as continuations. If a column is not used, MXG/CCs may authorize other standardized entries (e.g. engine start cycles, events, times, attempts, daily/flight information, etc.). For aerospace vehicles with more than four engines, use front and back, or use a second form if single sided, to track additional engines. Label each column with the appropriate engine position numbers and each form with appropriate headings.

5.17.10 “OIL CHANGE TIME.” Enter the engine time at the last oil change. To facilitate completion of a DD FORM 2026, OIL ANALYSIS RECORD, circle the engine operating time in red when an oil change is made.

5.17.11 “ENGINE TIME” and “CYCLES.” For engines equipped with Engine Monitoring Systems (EMS) such as F100, F110, TF34, T701C, etc. use of the AFTO Form 781J is by the direction of the MXG/CC. For those engines not incorporating EMS tracking like T56, TF33, etc. use of the AFTO Form 781J is required.

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5.17.11.1 Engine time will reflect engine total hours accumulated throughout the life of the engine. Therefore, the accrued cycles column will start with the accumulated cycles annotated on the AFTO FORM 95 prepared by the overhaul activity and will be found immediately after the total time (TT) and time since complete overhaul (TSCO). This information will be used for the initial cycles entry on the new AFTO FORM 781J. If previously accumulated cycles are not available, contact the applicable ALC engine manager.

5.17.11.2 On aerospace vehicles that have engine-recording devices installed, the engine time need not be entered in the time columns. Line out the "Engine Time" in the No. 1 engine block and in as many other number engine blocks as required, and enter the Event History Recorder (EHR) "Ser. No." or Engine Time Temperature Recorder (ETTR) "Ser. No." as applicable. Use these columns to maintain the recording device serial number.

5.17.11.3 When an engine change occurs, post a brief entry in the next open date line. Reopen entries for the new engine, together with active entries of other columns in the "TOTAL" block. Transcribe total cycles/hours accumulated on the removed engine to the engine AFTO FORM 95. Extract accumulated cycles on the newly installed engine from the AFTO FORM 95.

5.17.12 "CARRIED FORWARD". When all columns have been completely filled in or when columns have been utilized to the extent that initiation of a new 781J becomes necessary; total all columns in the appropriate blocks in the "CARRIED FORWARD" row. Carry these individual totals along with other applicable data forward to the appropriate blocks of the new AFTO FORM 781J.

5.17.13 When corrections are made to the airframe and engine operating time and cycle documentation data, enter them in red to highlight the changes. For automated forms, draw a red line under the corrected data line to highlight the action.

5.17.14 For jet engine powered missiles, use the AFTO FORM 781J to document the missile airframe time and engine operating time. Missile airframe time will be the same as each day's flight time of the carrier aerospace vehicles. The total missile airframe time will be cumulative for the life of the missile. Engine operating time will be cumulative for the installed engine and the document will be appropriately adjusted when an engine change occurs. When missile forms are carried aboard the aerospace vehicle, the A/C will ensure the time entries are made.

5.18 AFTO FORM 781K, AEROSPACE VEHICLE INSPECTION, ENGINE DATA, CALENDAR INSPECTION, AND DELAYED DISCREPANCY DOCUMENT (FIGURES 5-20 AND 5-21).

5.18.1 Enter the appropriate heading entries (Date, From, To, MDS, and Serial Number at the top of the form in accordance with the instructions that apply to the 781H (paragraphs 5.16.3.2 through 5.16.3.5). Enter symbols in the "SYM" block of the AFTO FORM 781K, to reflect the seriousness of the particular discrepancy. Some rules concerning symbol entries are

5.18.1.1 Never enter the Red X on the AFTO FORM 781K; only use Red Diagonal and Red Dash symbols. Once entered there, symbols will not be erased or initialed over.

5.18.1.2 When the symbol for a time compliance technical order (TCTO) or a discrepancy entered on the AFTO FORM 781K is to be upgraded, transfer that TCTO or discrepancy to the AFTO FORM 781A. Enter the upgraded symbol in the AFTO FORM 781A "SYM" block.

5.18.1.3 If a symbol is entered in error, the person making the entry will enter the following statement in the "DELAYED DISCREPANCY OR TCTO NUMBER AND PUBLICATION DATE" block: "Symbol entered in error, discrepancy and correct symbol reentered on page ____, item ____." The person will enter their employee number in the appropriate block. Then reenter the discrepancy, with the correct symbol, on the next open line.

5.18.2 The MXG/CC may approve use of a separate 781K for each aerospace vehicle engine. This form will be maintained in the aerospace vehicle forms binder. Standardize entries among like engines. The 781K(s) will stay with the engine upon removal. File these engine 781K(s) directly following the aerospace vehicle 781K.

5.18.3 BLOCK A, "AEROSPACE INSPECTION STATUS." Use the spaces to the right of the title "NEXT PERIODIC, MAJOR, OR PHASED INSPECTION DUE NUMBER." to document the number and type of the next inspection due. Use the "TYPE," "COMPL," and "NEXT DUE" columns to identify the types of inspections involved, including HSC and HPO, the airframe time or date an inspection was completed; and the airframe time or date an inspection is next due. Upon completion of the prescribed inspection listed in this block, line out the old "COMPL" and the next "NEXT DUE" entries and enter the new "COMPL" and "NEXT DUE" time.

5.18.4 BLOCK B, "ENGINE DATA." This block is provided to record engine position, serial number, and engine change due time. In the space provided for "ENG SER NUMBER," enter the serial number of each engine in the space provided to

the right of the applicable “PSN” number that denotes the position in which each engine is installed. In the “ENG CHANGE DUE TIME” column enter the aerospace vehicle/engine time at which the next engine change is due. Transcribe only current engine entries when initiating a new form. This block may be left blank for ATDs and for aerospace vehicles which have engine history recording devices installed. For aerospace vehicles with modular engines, the time change due date will be based on the lowest time remaining module. Aerospace vehicles with engine history recorders (EHR) will enter EHR serial numbers under the engine change due time.

5.18.5 BLOCK C, “CALENDAR AND HOURLY INSPECTION SCHEDULE.” Use this block to document inspection items that are to be inspected or tested at a specific hourly or calendar period. List calendar and hourly inspections with frequency and next due date. Items listed will be primarily those short-term special inspection requirements that frequently become due. Short-term items are those having an interval of less than six months or an hourly interval less than the periodic inspection interval. For control purposes, load all installed aircrew life support items in the MIS. Maintain entries for those accessories that require an oil change or lubrication on a basis of actual operating hours. To facilitate completion of the DD FORM 2026 make a single line entry on the 781K stating, “Engine oil samples due.” This will provide a history of oil samples at specified hourly intervals and the next oil sample due date. Compute oil sample due times using the airframe time. No entry is required when the sample is a MDS specific -6 TO inspection work card item or if it is taken concurrently with a scheduled inspection.

5.18.6 BLOCK D, “DELAYED DISCREPANCIES, URGENT ACTION, AND OUTSTANDING ROUTINE ACTION TCTOs.” Enter all delayed discrepancies, urgent action TCTOs, Category I routine action safety modification TCTOs, outstanding routine action TCTOs, or commercial equivalents in this block. Delayed discrepancies may be transferred from the AFTO FORM 781A, or upon completion of scheduled maintenance from the AFTO FORM 349 or WCD. Red X entries will not be entered in the AFTO FORM 781K. Transfer urgent action and Category I routine safety TCTOs from the 781K to the 781A upon notification of applicability in anticipation of immediate accomplishment. List open TCTOs grounding within 120 days and any part/component in overfly. Blocks requiring entries: SYM, JCN, TCTO Number, Doc Number, and Ground Date/Time (date TCTO grounds). When compliance with routine action Category I TCTOs or commercial equivalents for which kits or parts are available depends upon prior compliance with depot TCTOs, time computation for application of the Red Diagonal does not begin until the depot work is accomplished. After the depot work is accomplished, apply the Red Diagonal at the specified number of days in the category I TCTO.

5.18.6.1 The assigned JCN will be entered in the “JOB CONTROL NUMBER” column.

5.18.6.2 Enter the TCTO number date, and short title in the “DELAYED DISCREPANCY OR TCTO NUMBER AND PUBLICATION DATE” column. When delayed discrepancies are added to this section for reasons other than parts, a brief explanation will follow the discrepancy.

5.18.6.3 Enter the supply document number for all delayed discrepancies, if applicable, in the “DOCUMENT NUMBER” column. For TCTOs, no supply document number (when parts, kits, and tools are required) will be required.

5.18.6.4 Enter the TCTO grounding date or airframe time, as applicable, in the “GROUND DATE/TIME” column.

5.18.6.5 When a delayed discrepancy or TCTO entered on the AFTO FORM 781K is to be corrected or accomplished, the entry must be transferred to the AFTO FORM 781A or WCD. After the entry is transferred to the AFTO FORM 781A, follow procedures for clearing AFTO FORM 781A entries. When an aerospace vehicle is undergoing a scheduled inspection, transfer entries to an AFTO FORM 349, WCD or to the AFTO FORM 781A for corrective action or upgrading.

5.18.6.6 When an entry is transferred, the person accomplishing the transfer will enter their employee number for the entry in the “TRANSFERRED BY EMPLOYEE NUMBER” column. Line out the transferred entry with a single line except for the employee number block. The line will denote that the entry has been transferred. When a Red Dash symbol is involved, draw the line above or below the Red Dash, so it will not hide the symbol. Aerospace vehicles inducted into PDM will follow procedures specified in para 9.3.

5.18.7 When it becomes necessary to initiate a new AFTO FORM 781K carry forward open delayed discrepancies, TCTOs and other data affecting the status of the aerospace vehicle to the new form. Upon completion of the transcribing action, the transcriber will enter their minimum signature in the “SIGNATURE and EMPLOYEE NUMBER” space at the bottom of block D.

5.19 AFTO FORM 781L, RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI) (FIGURE 5-22).

5.19.1 Use this form to provide control for serial number CCI and as an aid in serial number accountability. When used, the form is completed in two copies with one copy forwarded to base supply (document control) and one copy included in the aerospace vehicle records. Complete the form for the following conditions:

5.19.1.1 When an aerospace vehicle scheduled for PDM retains its CCI serial number controlled asset, the owning unit generates the form to indicate the status.

5.19.1.2 When an aerospace vehicle is going to a depot that employs foreign nationals and a US citizen will not be available to control the CCI asset, the owning unit removes the asset prior to aerospace vehicle departure and generates the form to indicate the status.

5.19.1.3 When CCI equipment is replaced and a serial number controlled asset from another organization is installed, the maintenance technician performing the replacement action generates the form.

5.19.2 Use the following entries when completing the form:

5.19.2.1 PART I, "UNIT, BASE AND EQUIPMENT INFORMATION." Complete all applicable items.

5.19.2.2 PART II, "CCI INFORMATION:" Complete all applicable items. MXG/CC may authorize requirements for optional items.

5.19.2.2.1 SECTION A, "REMOVED CCI INFORMATION."

5.19.2.2.2 SECTION B, "INSTALLED CCI INFORMATION."

5.19.2.3 PART III, "GENERAL COMMENTS."

5.20 AFTO FORM 781M, STATUS SYMBOLS AND FUNCTIONAL SYSTEM CODES (FIGURES 5-23 AND 5-24).

The AFTO FORM 781M contains basic information to serve as an aid in making entries on the AFTO FORMS 781A and 781K. It is inserted in a clear page holder and placed at the rear of the binder.

5.21 AFTO FORM 781N, J-79 ENGINE RUNUP RECORD (FIGURES 5-25 AND 5-26).

The AFTO FORM 781N is maintained in the aerospace vehicle forms binder for aerospace vehicle equipped with the J-79 engine. Complete the 781N in accordance with the TOs referenced in the form.

FROM		TO		MDS	SERIAL NUMBER		PAGE	OF	PAGES	
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY <i>(Print)</i>			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY <i>(Print)</i>			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY <i>(Print)</i>			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY <i>(Print)</i>			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781A, 20020617 (EF-V3)

MAINTENANCE DISCREPANCY AND WORK DOCUMENT

Figure 5-3. AFTO FORM 781A, Maintenance Discrepancy and Work Document

FROM		TO		MDS	SERIAL NUMBER		PAGE	OF	PAGES	
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY (Print)			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY (Print)			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		
SYM	JCN	DATE DISC	DOC NO.		CF <input type="checkbox"/> 781A	XF <input type="checkbox"/> 781K	DATE CORRECTED			
WUC/REF DESIGNATOR		FAULT CODE	STA CODE	CORRECTIVE ACTION						
DISCREPANCY										
CORRECTED BY						EMPLOYEE NO.				
DISCOVERED BY (Print)			EMPLOYEE NO.		INSPECTED BY			EMPLOYEE NO.		

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781A, 20020617 (Reverse)

Figure 5-4. AFTO FORM 781A, Maintenance Discrepancy and Work Document (Reverse)

1. ID NUMBER			5. DEDICATED CREW CHIEF (DCC)		
2. PILOT			6. ASST DCC		
3.			7. ASST DCC		
4. STANDARD REPORTING DESIGNATOR			8. ASST DCC		
9.					
<p>HOURS AND MINUTES TO</p> <p>3 thru 8 minutes - .1 hour</p> <p>9 thru 14 minutes - .2 hour</p> <p>15 thru 20 minutes - .3 hour</p> <p>21 thru 26 minutes - .4 hour</p> <p>27 thru 33 minutes - .5 hour</p> <p>34 thru 39 minutes - .6 hour</p> <p>40 thru 45 minutes - .7 hour</p> <p>46 thru 51 minutes - .8 hour</p> <p>52 thru 57 minutes - .9 hour</p> <p>58 thru 60 minutes - Next whole hour</p>					
10. DOD ACTIVITY ADDRESS CODE		11. CUSTOMER ID CODE	12. MISSION DESIGN SERIES		13. SERIAL NUMBER
14. ORGANIZATION			15. LOCATION		16. STATION CODE
17. SERVICE CAPACITY			18. INVENTORY		COMMAND
					PPIC
A FUEL CAPACITY	POUNDS	INTERNAL	EXTERNAL	TOTAL	A ASSIGNMENT
	'GALLONS OR LITERS'				
B OIL CAPACITY HALF PINTS, PINTS, QUARTS, GALLONS OR LITERS	EACH ENGINE		AUXILIARY TANKS		B POSSESSION

AFTO FORM 781F, 20020617 (EF-V1) PREVIOUS EDITION IS OBSOLETE AEROSPACE VEHICLE FLIGHT REPORT AND MAINTENANCE

Figure 5-12. AFTO FORM 781F, Aerospace Vehicle Flight Status Report Maintenance Document

INSTRUCTIONS FOR AFTO FORM 781			
AIRBORNE DUTY/POSITION SYMBOLS			
PILOT	STUDENT	TYPE LANDING	
FP - First Pilot	SP - Student Pilot Solo (or First Pilot in Multi-Engine Aircraft)	LL - Left Seat Landing on Hard Surface	
IP - Instructor Pilot		RL - Right Seat Landing on Hard Surface	
CC - Command Pilot		TG - Tough and Go Landing on Hard Surface	
CP - Co-Pilot	SC - Student Co-Pilot	TN - Touch and Go Landing at Night on Hard Surface	
AC - Auxiliary Pilot	SN - Student Navigator	LN - Left Seat Landing at Night on Hard Surface	
RP - Radio Control Pilot	NONRATED		
OP - Pilot systems Operator	BO - Boom Operator	RN - Right Seat Landing at Night on Hard Surface	
EP - Pilot Evaluator	AO - Assistant Boom Operator	FL - Front Seat Landing on Hard Surface	
OV - Operational Evaluator	FM - Flight Mechanic	BL - Back Seat Landing on Hard Surface	
NAVIGATOR/OBSERVER			
NN - Navigator	HM - Helicopter Mechanic	FN - Front Seat Landing at Night on Hard Surface	
NB - Navigator-Bombardier	FE - Flight Engineer	BN - Back Seat Landing at Night on Hard Surface	
NI - Weapon Systems Officer	SE - Systems Engineer	LW - Left Seat Water Landing	
NE - Electronic Warfare Officer	IC - Intercept Controller	RW - Right Seat Water Landing	
IN - Instructor Navigator	CS - Communications System Operator	WN - Left Seat Water Landing (Night)	
ID - Instructor Navigator Bombardier	SO - Radar Operator	WB - Right Seat Water Landing (Night)	
II - Instructor Weapon Systems Officer	EO - ECM Operator	SS - Ski Landing	
IE - Instructor Electronic Warfare Officer	AW - Aircraft and Warning Operations	JUMP CONDITION SYMBOLS	
AN - Auxiliary Navigator/Observer	TR - Tow Reel Operator	T - Tactical or Operational	M - Mass Tactical or Operational
CC - Command	AP - Aerial Photographer	A - Administrative	C - Combat
SV - Systems Evaluator	WR - Weather Reconnaissance	N - Night	W - Water
FLIGHT SURGEON			E - Full Equipment
FS - Flight Surgeon	RS - Pararescue Man	ES - Ejection Seat	O - Oxygen Procedures
	LM - Loadmaster	F - Free Fall	X - Operational or test
	FT - Inflight Passenger Specialist	PARACHUTIST	
	FN - Flight Nurse	P - Parachutist	M - Jumpmaster
	MT - Medical Technician	S - Student Parachutist	
	AG - Aerial Gunner all positions		
	AB - Airborne Battle Staff Duty		
	IS - Instructor/Examiner		
	IO - Illumination Operator		
	FF - Firefighter		
	FI - Navaid Flt. Insp. Tech.		
	AS - Airborne Support		
INDIVIDUAL FLIGHT CHECKS (for use in column E, Form 781)			
<u>Pilot</u> PP - Qualification YP - Instrument	<u>Navigator/Observer</u> DP - Qualification	<u>Non Rated</u> GP - Instrument	
CREDIT CODES FOR USE IN COLUMN U, OF AFTO FORM 781			
L - LEAVE STATUS			
R - NOT CREDITABLE FOR PROFICIENCY			
N - NOT CREDITABLE FOR PAY OR PROFICIENCY			
T SIMULATOR OR TRAINER			
REMARKS GENERAL			
<p>T.O. 00-20-5, Section III is the prescribing directive for the preparation of AFTO Form 781, Columnar headings clarify each block to be filled in. The above flying duty symbols reflect the authorized codes to be used. A line entry will be filled in for each type of duty performed by the individual. Departure and arrival points; landing, takeoff, and elapsed times; total time; total landings, total sorties and mission symbol will be recorded in the spaces provided on AFTO Form 781.</p>			

AFTO FORM 781F, 20020617

Figure 5-13. AFTO FORM 781F, Aerospace Vehicle Flight Status Report Maintenance Document (Reverse)

<p>Instructions to pilots - Use only one mission symbol per AFTO Form 781. The flight authorization will indicate the authorized mission symbol (<i>or symbols</i>).</p> <p style="text-align: center;">CA CODED AIRCRAFT MISSION CLASSIFICATION</p> <p>A1 SCHEDULED FLIGHTS: Missions in which the main goal is to move cargo/passengers on a scheduled frequency.</p> <p>A2 SCHEDULED AIR EVACUATION FLIGHTS: Missions in which the main goal is to move patients who require immediate evacuation to the proper treatment facility.</p> <p>A3 NONSCHEDULED AIR EVACUATION FLIGHTS: Missions in which the main goal is to move patients who require immediate evacuation to the proper treatment facility.</p> <p>A4 NONSCHEDULED LOGISTICS: Missions in which the main goal is to move cargo/passengers on other than scheduled flights.</p> <p>A5 POSITIONING/REPOSITIONING: The nonproductive part of a flight that is required to locate an aircraft at a station for onload or returning an aircraft to home station.</p> <p>A6 TACTICAL TRAINING: Missions in which the main goal is nonscheduled joint airborne training that includes personnel and equipment/supply drops.</p> <p>A7 OTHER: Classified and/or other special missions.</p> <p>NOTE: Missions Symbols A1 through A7 are for CA coded aircraft use outside of a combat environment and ARRS CF coded aircraft.</p>
<p style="text-align: center;">SUPPORT MISSIONS</p> <p>S-1-ADMINISTRATIVE: Missions in which the main purpose is aerial transportation of personnel accomplishing executive, administrative, and inspection functions. These include staff and command ordered flights. Also includes Air ROTC, Air Explorers, and CAP Indoctrination and similar flights.</p> <p>S-2-PERSONNEL: Missions in which the main purpose is air movement of personnel. This symbol includes courier flights. Does not include flights by MAC common user passenger/cargo transports accomplishing single manager operations for airlift services.</p> <p>S-3-MATERIEL AND SUPPLIES: Missions in which the main purpose is air movement of materiel and supplies. Does not include flights MAC common user passenger/cargo transports accomplishing single manager operations for airlift services.</p> <p>S-4-LOGISTICS: Missions in which the main purpose is air movement of personnel, materiel and supplies. This symbol includes flights in direct support of combat units and combat supporting unit operations. Does not include flights by MAC common user passenger/cargo transport.</p> <p>S-5-SPECIAL: Missions in which the main purpose is to complete specific special activities of the Air Force and other governmental agencies, such as target missions for air defense purpose; tow missions for defense and tactical forces, and local search and rescue, civil relief, mercy missions and air demonstration flights.</p> <p>S-6-NAVAIDS CHECKS: Mission in which the main purpose is flight-check radar and navigational aids.</p> <p>S-7-AIRCREW QUALIFICATION: Missions in which aircrew members who occupy aircrew or instructor crew positions complete standardization and instrument check flights as well as qualification and currency checks.</p> <p>S-8-SUPPORT TRAINING: Missions in which the purpose is to perform annual flying requirements, to include instrument, proficiency and other qualification checks as prescribed by AFR 60-1. This symbol is used by "behind-the-line" aircrews who are not assigned to MSL aircrew positions.</p> <p>NOTE: Symbols S-1 through S-8 are used for Z coded operational support aircraft only.</p>
<p style="text-align: center;">TRAINING MISSIONS</p> <p>T-1-STUDENT TRAINING: Missions in which the main goal is to instruct and train pilots and aircrews under the direction of the Air Training Command or other USAF activities engaged in formal student instruction (includes flying of instructors in the course of student training). Specific mission symbols within this category, may be designated locally.</p> <p>T-2-COMBAT CREW TRAINING: Instructions and training of pilots and crews undergoing formal course of combat crew training in designated combat training organizations. Specific mission subsymbols within this category may be designated locally.</p> <p>T-3-OPERATIONAL TRAINING: Missions in which the main goal is the accomplishment of scheduled gunnery, bombing, reconnaissance, navigation, instrument, target missions for air defense purposes, towing targets, search and rescue, and transportation of cargo and/or personnel (excludes flight of MAC common user passenger/cargo transports accomplishing single manager operations for airlift services). Specific missions within this category may be designated locally.</p> <p>T-4-SPECIAL: Missions in which the main purpose is the direct support of nonmilitary activities in such areas as civil relief, mercy missions, health communications, public works and others contributing to the economic and social well-being of the nation.</p> <p>T-5-AIRBORNE ALERT MISSIONS: See Note 1.</p> <p>T-6-LOW LEVEL MISSIONS: See Note 1.</p> <p>NOTE 1: Codes T-5 and T-6 are applicable to specific SAC aircraft.</p> <p>NOTE 2: T symbols are used in force structure aircraft in assignment codes such as CB, CC, CF, CA, and TF.</p>
<p style="text-align: center;">OPERATIONS MISSIONS</p> <p>O-1-COMBAT: Aerial activity engagements or attacks conducted by committee units or aircraft, under the operational control of a theater commander or other appropriate authority, which have as a primary purpose the expenditure of munitions or other destructive materiel against an enemy of the United States or an opposing foreign force or any flying activity in direct support thereof. Specific mission subsymbols, using numeric suffixes, may be designated locally.</p> <p>O-2-COMBAT SUPPORT: Aerial activity or engagements conducted by committed units or aircraft, under the operational control of a theater commander or other appropriate authority, which have as a primary purpose the support of friendly foreign forces engaged in armed conflict, and which:</p> <ol style="list-style-type: none"> (1) Encounter foreign armed opposition, or (2) Are otherwise placed in such a position that hostile action by armed forces was imminent even though it did not materialize. <p>O-3-AIRCRAFT DELIVERY: Aircraft delivery flights under the control of TAC, including intercommand transfers; USAF, Navy or other pilots attached to TAC for purposes of delivering aircraft are considered TAC aircraft delivery crews. This will include flying time accumulated by pilots assigned to the TAC aircraft delivery organizations as well as "borrowed" crews. Also includes aircraft deliveries other than under TAC control.</p> <p>O-4-TEST: Missions in which the main goal is engineering testing of aerospace vehicles, to include the airframe, propulsion units, and components that are integral parts of the vehicle being test.</p> <p>O-5-DIRECT TEST SUPPORT: Missions which are performed in direct support of research, development, test, or engineering programs for the purpose of data acquisition. Includes flights to and from test locations.</p> <p>O-6-INDIRECT TEST SUPPORT: Missions in which the main goal is the accomplishment of simulated mission profiles in preparation for approved test programs. Included in this category are missions in E, D, and CB coded aircraft in which the main goal is proficiency flying training, initial checkout, requalification, annual instrument and proficiency check, etc.</p> <p>O-7-SPECIAL (AFLC, AFSC, AFCC use only): Missions performed in E and CF coded aircraft which do not fall within the categories explained above. Included are missions such as search and rescue, demonstrations, record attempts, flight inspection, traffic control and landing system (TRACALS) evaluations, and air traffic control operational evaluations.</p> <p>O-8-MAINTENANCE TESTS: Missions in which the main goal is to perform functional check flights after completing inspections or maintenance to assure that the aircraft is airworthy and capable of mission accomplishment. This symbol applies to aircraft in all assignment codes.</p> <p>O-9-OPERATIONAL RECONNAISSANCE: Aerial activity or engagements conducted by committed units or aircraft which have as a main purpose the accomplishment of higher headquarters directed reconnaissance missions that do not fall in the other categories explained above.</p> <p>NOTE: For all missions flown into, or out of designated combat areas, the suffix A is used to provide differentiation of, and credit for actual combat flying time. The suffix B is used on designated combat missions, established by HQ USAF that result in personnel tour curtailment or other personnel actions.</p>

AFTO FORM 781G, 19990806 (EF-V1-LRA)

PREVIOUS EDITION IS OBSOLETE

GENERAL MISSION
CLASSIFICATIONS - MISSION

Figure 5-14. AFTO FORM 781G, General Mission Classifications-Mission

INDUSTRIAL FUNDED AIRCRAFT MISSION CLASSIFICATIONS
<p>L-1 through L-8 CONTINGENCY: Special transport missions that support contingency plans and test exercises. Symbol is assigned by HQ MAC in the Operation Order. If no OPORD is written, MAC Command Post (MCP) assigns symbol to be used.</p> <p>M-1-CARGO: Scheduled transport missions in which the main goal is the movement of cargo.</p> <p>M-2-PASSENGER/PATIENTS: Scheduled transport missions in which the main goal is the movement of passenger/patients.</p> <p>M-3-CARGO/PASSENGERS: Scheduled transport missions in which the main goal is the movement of mixed loads (cargo/passengers).</p> <p>M-4-POSITIONING FOR CHANNEL: Locating an aircraft at a station for channel traffic onload. This includes missions from the offload station of a special assignment airlift mission (SAAM) or contingency mission to the onload station of channel traffic mission.</p> <p>M-5-DEPOSITIONING FOR CHANNEL: Returning an aircraft to home station from channel traffic offload station and to return an aircraft to backup position from an offload or terminating point of any mission where backup equipment has been.</p> <p>M-6-SPECIAL ASSIGNMENT: Transport missions in which the main goal is the accomplishment of special assignment airlift missions. These missions will include hours logged from the time the aircraft departs from home station or is diverted from channel traffic (scheduled mission) until the aircraft returns to home station or returns to channel traffic, operations.</p> <p>M-7-NONREVENUE: Nonscheduled missions operated in support of the airlift force other than exercises.</p> <p>M-8-JOINT AIRBORNE OR AIR TRANSPORTABILITY TRAINING: Transport missions in which the main goal is nonscheduled joint airborne training.</p> <p>N-1-TRAINING AND STANDARDIZATION: Training and standardization evaluation flights for personnel assigned or attached to a tactical or transport unit.</p> <p>N-2-TACTICAL TRAINING: Unilateral tactical training other than joint airborne training. This includes: airdrop, formation flying, and low level navigation training missions.</p> <p>N-3-SEARCH: Industriallyfunded aircraft diverted to perform search missions. Symbol will be used starting with time of diversion until aircraft returns to normal mission</p> <p>N-4 through N-8 RESERVED FOR FUTURE USE: These symbols will be used to complement the contingency mission symbols as assigned by MCP.</p> <p>NOTE: L, M, and N symbols are used in force structure aircraft in assignment codes CC, CF, IF and TF.</p>
SIMULATOR/TRAINER CLASSIFICATIONS
<p>Q-1-STUDENT TRAINING: Instruction and training of pilots and crews under the direction of the Air Training Command or other USAF organization engaged in formal student instruction.</p> <p>Q-2-MISSION TRAINING: Synthetic trainer/simulator missions in which the main goal is training of tactical and support aircrews.</p> <p>Q-3-MAINTENANCE TESTS: Performance of functional check lights.</p> <p>Q-4-OPERATIONAL TRAINING: Simulator time logged during a formal course of training that is creditable to operational flying duty.</p> <p>Q-5-SIMULATOR TEST: Missions for the acquisition of data or verification of simulator performance, handling qualities, and systems.</p> <p>Suffix "E" is reserved for engineering tests for the purpose of simulator hardware/software design or development. Suffix "F" is reserved for missions scheduled in direct support of personnel research.</p>

AFTO FORM 781G, 19990806 (Reverse)

Figure 5-15. AFTO FORM 781G, General Mission Classifications-Mission (Reverse)

13. SERVICING DATA																						
FUEL (Pounds, Gallons or			OIL (Half pints, pints, quarts, gallons or liters)																OXY PRESS OR QTY	NITROGEN	WATER	
OCTANE OR GRADE	QTY SRVCD	TOTAL IN TANKS	1		2		3		4		5		6		7		8					
			SER	IN	SER	IN	SER	IN	SER	IN	SER	IN	SER	IN	SER	IN	SER	IN				
Pre Tot																						
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						

14. SERVICING CERTIFICATION (Signature, Employee Number, and Station at Which Servicing is Accomplished)																							
1	BY							7	BY							13	BY						
	AT	DATE							AT	DATE							AT	DATE					
2	BY							8	BY							14	BY						
	AT	DATE							AT	DATE							AT	DATE					
3	BY							9	BY							15	BY						
	AT	DATE							AT	DATE							AT	DATE					
4	BY							10	BY							16	BY						
	AT	DATE							AT	DATE							AT	DATE					
5	BY							11	BY							17	BY						
	AT	DATE							AT	DATE							AT	DATE					
6	BY							12	BY							18	BY						
	AT	DATE							AT	DATE							AT	DATE					

AFTO FORM 781H, 20020617

Figure 5-17. AFTO FORM 781H, Aerospace Vehicle Flight Status and Maintenance Document (Reverse)

PART I - UNIT, BASE, AND EQUIPMENT INFORMATION	
OWNING UNIT AND BASE	
UNIT AND BASE PERFORMING MAINTENANCE	
MDS/SRD	
END ITEM SERIAL OR TAIL NUMBER	POSITION NUMBER
PART II - CCI INFORMATION	
SECTION A - REMOVED CCI INFORMATION	SECTION B- INSTALLED CCI INFORMATION
MODEL/TYPE	MODEL/TYPE
NSN	NSN
COMPLETE CCI SERIAL NUMBER	COMPLETE CCI SERIAL NUMBER
ACCOUNT/DOCUMENT NUMBER <i>(Optional)</i>	DATE INSTALLED
CUSTODIAN <i>(Optional)</i>	ACCOUNT NUMBER <i>(Optional)</i>
NAME/PHONE	NAME/PHONE
PART III - GENERAL COMMENTS	
SERIAL NUMBERS VERIFIED BY	
REMARKS <i>(Optional)</i>	

AFTO FORM 781L, 20020617 (EF-V1)

RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI)

Figure 5-22. AFTO FORM 781L, Record of Removal/Installation of Controlled Cryptographic Items (CCI)

SYSTEM NUMBERS, GENERAL GROUPING, AND SYSTEM TITLES	
<p>AIRCRAFT SUPPORT GENERAL:</p> <p>01 Ground Handling, Servicing and Related Tasks.</p> <p>02 Aircraft Cleaning - Includes washing, decontamination corrosion control, ground frost, ice removal, etc.</p> <p>03 "Look" Phase of Scheduled Inspection - Includes all work such as greasing, etc., included on work cards and minor fixes such as tightening clamps and connections and unbuttoning up the aircraft.</p> <p>04 "Look" Phase of Special Inspections - Includes items of work as defined for 03 above.</p> <p>05 Preservation, Depreservation, and Storage of Aircraft, Engines, and Associated Equipment.</p> <p>06 Ground Safety - Includes disarm and rearm seat, canopy, and other explosive squibs and disconnect or reconnect battery.</p> <p>07 Preparation and Maintenance of Records.</p> <p>08 Shop Support General.</p> <p>AIRCRAFT BASIC:</p> <p>11 Airframe</p> <p>12 Cockpit and Fuselage Compartments</p> <p>13 Landing Gear</p> <p>14 Flight Control</p> <p>15 Helicopter Rotor System (<i>Rotors, Hub Controls</i>)</p> <p>16 Escape Capsule</p> <p>17 Aerial Recovery System</p> <p>18 Vehicle or Short Take Off and Landing (<i>V/STOL</i>) Power and Control Transmission System</p> <p>POWER PLANTS:</p> <p>19 Engine Starting</p> <p>21 Reciprocating Power Plant</p> <p>22 Turbo-Prop/Turbo Shaft Power Plant</p> <p>23 Turbo-Jet or Turbo-Fan Power Plant</p> <p>24 Auxiliary Power Plant</p> <p>25 Rocket Power Plant</p> <p>26 Helicopter Rotary Wing Drive System</p> <p>27 Turbo-Jet or Turbo-Fan Power Plant (<i>Accessory Gear Box (B-1 Only)</i>)</p> <p>PROPELLERS:</p> <p>31 Electric</p> <p>32 Hydraulic</p> <p>33 Electro-Hydraulic</p> <p>34 Mechanical and Fixed Pitch</p> <p>UTILITIES:</p> <p>39 Ice and Rain Protection</p> <p>41 Air Conditioning, Pressurization and Surface Ice Control</p> <p>42 Electrical Power Supply</p> <p>43 Electrical Multiplex (<i>EMUX</i>)</p> <p>44 Lighting Systems</p> <p>45 Hydraulic and Pneumatic Power Supply</p> <p>46 Fuel System</p> <p>47 Oxygen System</p> <p>48 Indicating/Recording</p> <p>49 Miscellaneous Utilities - Includes fire extinguishing, fire detection, water, personnel warning, overheat warning, JATO systems and VGH Recording Systems.</p>	<p>INSTRUMENTATION:</p> <p>50 Cockpit Management Systems</p> <p>51 Instruments</p> <p>52 Auto Pilot</p> <p>53 Drone Airborne Launch and Guidance System</p> <p>54 Telemetry</p> <p>55 Malfunction Analysis and Recording Equipment</p> <p>56 Automatic All Weather Landing System</p> <p>57 Integrated Guidance and Flight Control - Includes Auto Pilot When Part of Integrated System</p> <p>COMMUNICATION EQUIPMENT:</p> <p>58 MILSTAR Terminal Segment</p> <p>59 Crew Communications</p> <p>60 VLF/LF Communication</p> <p>61 HF Communication</p> <p>62 VHF Communication</p> <p>63 UHF Communication</p> <p>64 Interphone, Audio Switching, and Recording</p> <p>65 IFF/SIF</p> <p>66 Emergency Communications</p> <p>67 SHF/EHF</p> <p>68 AFSATCOM</p> <p>69 Miscellaneous Communications Equipment</p> <p>NAVIGATION, BOMB-NAV, FIRE CONTROL WEAPONS DELIVERY, ELECTRONIC COUNTERMEASURES, PHOTOGRAPHIC:</p> <p>70 Nuclear Detection</p> <p>71 Radio Navigation</p> <p>72 Radar Navigation</p> <p>73 Bombing Navigation</p> <p>74 Fire Control</p> <p>75 Weapons Delivery</p> <p>76 Electronic Countermeasures</p> <p>77 Photographic/Reconnaissance</p> <p>78 Electronic Countermeasures</p> <p>81 Airborne Command and Control Surveillance Radar (<i>AWACS</i>)</p> <p>MISCELLANEOUS EQUIPMENT:</p> <p>82 Computer and Data Display (<i>Graphic</i>)</p> <p>89 Airborne Battlefield Command Control Center (<i>capsule</i>)</p> <p>91 Emergency Equipment</p> <p>92 Tow Target Equipment</p> <p>93 Drag Chute Equipment</p> <p>94 Meteorological Equipment</p> <p>95 Smoke Generator, Scoring and Target Area Augmentation Systems and Airborne Cooperation Equipment</p> <p>96 Personnel and Miscellaneous Equipment</p> <p>97 Explosive Devices and Components (<i>Excluding Nuclear</i>)</p> <p>98 Atmospheric Research Equipment</p>
<p>PREVIOUS EDITION IS OBSOLETE</p>	<p>AFTO FORM 781M, 19990806 (LRA) STATUS SYMBOLS AND FUNCTIONAL SYSTEM CODES</p>

Figure 5-23. AFTO FORM 781M, Status Symbols and Functional System Codes

CODES ON AFTO FORM 781A ENTRIES	STATUS SYMBOLS
<p>PILOT WILL REPORT ON</p> <ul style="list-style-type: none"> A. Forced landings due to weather or other nonmaterial failures. B. Forced landings resulting from mechanical or material failures. C. Extremely hard landings. D. Exceeding of airspeed limitations. E. Overtemperatures encountered on jet engines. 	<p>STATUS SYMBOLS</p> <p>RED X: This symbol grounds the aircraft: maintenance required is of a serious nature and endangers the operation of the aircraft. No one will authorize or direct that an aircraft will be flown until the red x is properly cleared.</p>
<p>WHEN DISCOVERED CODES:</p> <ul style="list-style-type: none"> A. Before Flight - Abort B. Before Flight - No Abort C. In Flight - Abort <i>(For aircraft this includes precautionary landings at the home station, intermediate station or final destination as a result of an inflight malfunction)</i> D. In-Flight - No Abort/During AGE Operation E. After Flight F. Between Flights - Ground Crew <i>(when not associated with an inspection)/During Unscheduled Maintenance (AGE)</i> G. Ground Alert - not Degraded/AIM 270 Day Checkout/AGM 18 Month Checkout H. Basic Postflight, Thru flight or Alert Exercise Postflight Inspection/AIM 30 Day Checkout/AIM 30 Day Storage Inspection J. Preflight or Combined Preflight/Postflight or End of Runway Inspections K. Hourly Postflight Inspection/Minor Inspection - Isochronal/AIM 120 Day checkout/AGM Combined Systems Checkout/AGM 45 Day Checkout L. During Training or Maintenance on Training Equipment M. Periodic/Phased/Major Isochronal Inspection/AIM 180 Day Checkout/60 Day GMT Inspection/AGM/TGM 12 Month Checkout N. Ground Alert - Degrade/AIM 360 Day Checkout/AGM 24 Month Checkout P. Functional Check Flight Q. Special Inspection R. Quality Control Check S. Depot Level Maintenance T. During Scheduled Calibration U. Oil Analysis V. During Unscheduled Calibration W. In-Shop Repair and/or Disassembly for Maintenance X. Engine Test Stand Operation Y. Upon Receipt of Withdrawal from Supply Stocks Z. "AGM Under Wing Check" Use of this code for aircraft equipped with MADREC should be limited to discrepancies discovered through analysis of MADREC tape 0. Eddy Current <ul style="list-style-type: none"> 1. Magnetic Particle 2. During Operation of Malfunction Analysis and Recording Equipment or Subsequent Data Analysis. 3. Eddy Current 4. Magnetic Particle 5. Aircraft Interior Refurbishment 6. All Other NDIs 7. X-Ray 8. Ultrasonic 9. Fluorescent Penetrant 	<p>RED DASH: This symbol indicates that a required inspection has not been performed.</p> <p>RED DIAGONAL: This symbol indicates that an unsatisfactory condition exists on the aircraft or equipment; but, is not sufficiently urgent or dangerous to warrant grounding the aircraft or discontinuing use of the equipment.</p> <p>BLACK LAST NAME INITIAL: The initial placed over a red X, red dash or red diagonal means that the trouble has been corrected. A symbol will never be placed over the initial.</p> <p>NOTE: When a red dash or red diagonal is used, the Aircraft Maintenance Officer or Pilot will authorize a flight by signing the exceptional release. Such authorization indicates that the officer has investigated the nature and extent of the defect and assumes full responsibility for mechanical safety in flight.</p>

AFTO FORM 781M, 19990806 (Reverse)

Figure 5-24. AFTO FORM 781M, Status Symbols and Functional System Codes (Reverse)

<p>Date _____ Engine S/N _____ Engine Time TSN/TSO _____ Reason for Run _____ Engine Inspected for FOD _____ Engine Rigging Checked _____ EGT Harness & Cockpit Ind. Check _____ OAT _____ °C _____ °F</p> <p style="text-align: center;">NOTE</p> <p>Insure the following requirements are/have been accomplished:</p> <ol style="list-style-type: none"> a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24 b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24 c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24 d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24 e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26 <p style="text-align: center;">RUN DATA</p> <p>Start Fuel Flow _____ PPH Lite-Off Time _____ Sec Max EGT _____ °C _____ °F</p> <p>Idle RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Military <i>(T5 Shorting Switch Installed)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL</p> <p>Adjust RPM per T.O. 1F-4()2-8 Section 4.</p>	<p>Adjust EGT to 625 ± 10° C per T.O. 1F-4C/D-2-8</p> <p>Adjust T5 to 590° C per T.O. 1F-4-E/G-2-8</p> <p>Military <i>(System Normal)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Afterburner Lite-Off Time _____ Sec RPM Rollback _____ % Recovery Time _____ Sec</p> <p>Max Afterburner Stabilized RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Accel Check Idle to Mil _____ Sec</p> <p>Org. _____</p> <p>Signature _____</p>
<p>Date _____ Engine S/N _____ Engine Time TSN/TSO _____ Reason for Run _____ Engine Inspected for FOD _____ Engine Rigging Checked _____ EGT Harness & Cockpit Ind. Check _____ OAT _____ °C _____ °F</p> <p style="text-align: center;">NOTE</p> <p>Insure the following requirements are/have been accomplished:</p> <ol style="list-style-type: none"> a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24 b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24 c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24 d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24 e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26 <p style="text-align: center;">RUN DATA</p> <p>Start Fuel Flow _____ PPH Lite-Off Time _____ Sec Max EGT _____ °C _____ °F</p> <p>Idle RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Military <i>(T5 Shorting Switch Installed)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL</p> <p>Adjust RPM per T.O. 1F-4()2-8 Section 4.</p>	<p>Adjust EGT to 625 ± 10° C per T.O. 1F-4C/D-2-8</p> <p>Adjust T5 to 590° C per T.O. 1F-4-E/G-2-8</p> <p>Military <i>(System Normal)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Afterburner Lite-Off Time _____ Sec RPM Rollback _____ % Recovery Time _____ Sec</p> <p>Max Afterburner Stabilized RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Accel Check Idle to Mil _____ Sec</p> <p>Org. _____</p> <p>Signature _____</p>

AFTO FORM 781N, 19990806 (EF-V1-LRA) PREVIOUS EDITION IS OBSOLETE J-9 ENGINE RUN-UP RECORD

Figure 5-25. AFTO FORM 781N, J-79 Engine Run-Up Record

<p>Date _____ Engine S/N _____ Engine Time TSN/TSO _____ Reason for Run _____ Engine Inspected for FOD _____ Engine Rigging Checked _____ EGT Harness & Cockpit Ind. Check _____ OAT _____ °C _____ °F</p> <p style="text-align: center;">NOTE</p> <p>Insure the following requirements are/have been accomplished:</p> <ol style="list-style-type: none"> a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24 b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24 c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24 d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24 e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26 <p style="text-align: center;">RUN DATA</p> <p>Start Fuel Flow _____ PPH Lite-Off Time _____ Sec Max EGT _____ °C _____ °F</p> <p>Idle RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Military <i>(T5 Shorting Switch Installed)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL</p> <p>Adjust RPM per T.O. 1F-4()2-8 Section 4.</p>	<p>Adjust EGT to 625 ± 10 °C per T.O. 1F-4C/D-2-8</p> <p>Adjust T5 to 590 °C per T.O. 1F-4-E/G-2-8</p> <p>Military <i>(System Normal)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Afterburner Lite-Off Time _____ Sec RPM Rollback _____ % Recovery Time _____ Sec</p> <p>Max Afterburner Stabilized RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Accel Check Idle to Mil _____ Sec</p> <p>Org. _____</p> <p>Signature _____</p>
<p>Date _____ Engine S/N _____ Engine Time TSN/TSO _____ Reason for Run _____ Engine Inspected for FOD _____ Engine Rigging Checked _____ EGT Harness & Cockpit Ind. Check _____ OAT _____ °C _____ °F</p> <p style="text-align: center;">NOTE</p> <p>Insure the following requirements are/have been accomplished:</p> <ol style="list-style-type: none"> a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24 b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24 c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24 d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24 e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26 <p style="text-align: center;">RUN DATA</p> <p>Start Fuel Flow _____ PPH Lite-Off Time _____ Sec Max EGT _____ °C _____ °F</p> <p>Idle RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Military <i>(T5 Shorting Switch Installed)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL</p> <p>Adjust RPM per T.O. 1F-4()2-8 Section 4.</p>	<p>Adjust EGT to 625 ± 10 °C per T.O. 1F-4C/D-2-8</p> <p>Adjust T5 to 590 °C per T.O. 1F-4-E/G-2-8</p> <p>Military <i>(System Normal)</i> RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Afterburner Lite-Off Time _____ Sec RPM Rollback _____ % Recovery Time _____ Sec</p> <p>Max Afterburner Stabilized RPM _____ % Indicator _____ % JET-CAL EGT _____ °C Indicator _____ °C JET-CAL Fuel Flow _____ PPH Oil Press _____ PSI Noz Position _____</p> <p>Accel Check Idle to Mil _____ Sec</p> <p>Org. _____</p> <p>Signature _____</p>

AFTO FORM 781N, 19990806 (Reverse)

Figure 5-26. AFTO FORM 781N, J-79 Engine Run-Up Record (Reverse)

CHAPTER 6

ACCESSORY REPLACEMENT AND REUSE PROCEDURES

6.1 ACCESSORY REPLACEMENT AND REUSE.

6.1.1 Accessories, as defined in this TO, include both Time Change Items (TCI) and Condition Replacement Items (CRI). Those accessories not identified in the applicable MDS specific -6 TO and maintenance manual as time-change items are condition replacement items. Condition items only require replacement when it is determined they are operationally unserviceable.

6.1.2 Do not remove items from AEROSPACE EQUIPMENT involved in a mishap until investigation personnel authorize such removals. Reuse of parts or accessories from wrecked or damaged aerospace vehicles or equipment requires extreme caution. Using the appropriate technical orders, conduct thorough testing and/or inspection of items that may have been damaged before they are used. Although the external appearance may indicate that the item was not damaged, hidden flaws may exist due to stress, strain, or other forces that can only be detected by testing and inspection. Items routed for test and/or inspection will include a notation on the AFTO FORM 350 that the item was removed from a wrecked or damaged AEROSPACE EQUIPMENT. In the absence of appropriate technical orders contact the SM through the MAJCOM for guidance.

6.2 TIME-CHANGE ITEM (TCI) REPLACEMENT POLICIES.

Items designated as TCIs are replaced at specified intervals. The primary objective of the time-change replacement program is to achieve maximum utilization of components consistent with the economic operation of AEROSPACE EQUIPMENT without jeopardizing flight or operational safety.

6.2.1 Time-change replacement requirements are prescribed only for those items that have a measured service life expectancy and that display an age related failure pattern, (e.g. a failures rise sharply at some given operating time or age of an item). Additionally, the item must fall into one or more of the following categories to be a valid candidate for time-change replacement:

6.2.1.1 Items whose failure due to location or function within a system would compromise safety of flight of airborne systems or the operational safety of ground equipment.

6.2.1.2 Items whose failure due to location or function within a system would definitely cause a mission to abort or ground equipment failures that would cause excessive downtime for mission critical items.

6.2.1.3 Items for which a failure might cause damage beyond economical repair.

6.2.1.4 Items whose physical characteristics allow an accurate prediction of deterioration from calendar time or hours in operational use.

6.2.2 The replacement schedule of the -6 scheduled inspection and maintenance requirements manual or inspection work cards are the only authority for the scheduled replacement interval of accessory and components, except for the following deviations:

6.2.2.1 Technical Order 2-1-18 will be used as the authority for scheduled replacement of reciprocating engines, gas turbine engines, and propeller reduction gearboxes.

6.2.2.2 The 11P () or 11A () series TOs will be used for scheduled replacement of explosive devices. Service life requirements for ALSE items can be found in specific technical orders, for example 14D, 14S, 15X, etc.

6.2.2.3 The MDS specific -6 TOs or inspection work cards will make note of each listed item and reference the applicable commodity series TOs. These TOs will serve as authority if in conflict with the MDS specific -6 TOs or work cards.

6.2.3 Replacement intervals for any specific item are based on the AEROSPACE EQUIPMENT installation and utilization, rather than being a general replacement interval for all applications. Based on this rule, the replacement interval for an identical item may vary considerably for different AEROSPACE EQUIPMENT application.

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6.2.4 Equipment in an operational status that is used for ground instructional purposes will have the TCIs replaced at the specified replacement interval. Compute operating time accrued on accessories installed on the equipment while in such status by multiplying the estimated monthly usage by the number of months that the equipment is in such status.

6.2.5 Consider TCIs due for replacement at the hourly postflight, home station check, phased, periodic, minor or major isochronal, scheduled PDM, etc. nearest to the replacement date. Base the determination of the nearest inspection for calendar TCIs on the average or projected utilization of the AEROSPACE EQUIPMENT for any given period. As an example, if an aerospace vehicle having a 26-hour inspection cycle accrues an average of 25 hours each month and is undergoing an inspection on the first day of the month, any calendar TCIs due for change between the 1st and 15th of that month are due for change at that inspection. Similarly, any calendar TCIs due for change between the 16th and the last day of that month will be considered due for change at the next inspection.

6.2.5.1 MAJCOMs may waive the requirement to make time changes at hourly postflight when the interval is 50 hours or less. This policy enhances effective maintenance scheduling, reduces equipment downtime, and eliminates the need for checking replacement documents on a daily basis.

6.2.5.2 The expiration date for both the service and shelf life on life sustaining or CAD/PAD items will be the last day of the expiration month. EXCEPTION: Service limits of life sustaining or CAD/PAD items can not exceed the limits imposed by Tables 6-1 and 6-2. Units should schedule these items for replacement at the nearest scheduled inspection prior to expiration of service life established by the applicable series technical orders.

NOTE

Requests for CAD/PAD shelf/service life extensions should be forwarded for action to OO-ALC/WMJ, Hill AFB, UT with an information copy to appropriate aerospace vehicle SM and MAJCOM Functional Manager, on a case-by-case basis. The following information will be included: Aerospace vehicle serial number; date CAD/PAD item was installed; aerospace vehicle grounding date; CAD/PAD DOM, lot number, and status of requisition for replacement part. The required engineering analysis will be accomplished by the OO-ALC/WMJ and a flight/grounding recommendation made to the aerospace vehicle SM. The aerospace vehicle SM will make the final determination on aerospace vehicle status. Requests for ALSE items shelf/service life extensions should be forwarded to HSC/YAD, 8107 13th Street, Brooks AFB TX, 78236-5238 through appropriate MAJCOM focal point. The Life Support System Manager (HSC/YA) will consider shelf/service life extensions based upon item application and engineering technical analysis IAW AFI 11-301. The intent is to preclude unnecessary aerospace vehicle grounding.

6.2.6 When the previous operating time of a TCI is unknown or known to be invalid refer to Table 6-2.

6.2.7 During depot processing, replace TCIs only if due as indicated by the TCIs replacement documents. It may be more expedient and less expensive to accomplish replacement of some TCIs at the depot. The annual workload conference should review those TCIs that, because of accessibility or other factors, may be candidates for depot change. The candidates would then be negotiated for change prior to PDM input when their accumulated time was high in relation to their specific replacement interval. The item must be included on the applicable AFTO FORM 103, AEROSPACE VEHICLE/MISSILE CONDITION CODE.

6.2.8 Continue processing aerospace vehicle/missile time-change items (except helicopter gearboxes) for shipment to areas outside the CONUS when the accumulated time of the item plus 150 hours does not exceed the specified replacement interval. Helicopter gearboxes may be continued in use when the remaining time equals or exceeds 50 percent of the established replacement interval. Additionally:

6.2.8.1 Those items having a replacement interval of 150 hours or less will be replaced with zero-time items during processing.

6.2.8.2 Those items having replacement interval expressed in calendar time may be continued in use if they have four months of service life remaining.

6.2.8.3 Those items to be continued in use will be given a thorough inspection and functional test to determine operational serviceability.

6.2.8.4 The above procedures do not apply to AEROSPACE EQUIPMENT possessed by overseas activities being delivered to CONUS facilities for maintenance and return to the owning organization. In these cases, the provisions of TO 00-25-4 will apply.

6.2.9 Forecasting procedures for TCIs are contained in TO 00-20-9.

6.3 TIME-CHANGE ITEM REUSE POLICIES.

6.3.1 When TCIs that have been previously used are installed on a AEROSPACE EQUIPMENT and the replacement interval is the same, enter the previous time in use on the appropriate time change item replacement documents or automated system.

6.3.2 If the previous scheduled replacement interval is different from the scheduled replacement interval for the AEROSPACE EQUIPMENT on which the item is being installed, recompute the operating time.

6.3.2.1 Compute the operating time for the new installation by obtaining the previous operating time from the DD FORM 1574 or historical documents, and subtract this figure from the former scheduled replacement interval.

6.3.2.2 Divide the resulting figure by the replacement interval of the former installation and multiply by 100 to obtain the percentage of remaining operating time on the item.

6.3.2.3 Multiply the resulting percentage by the replacement interval time for the AEROSPACE EQUIPMENT in which the item is to be installed. This provides the remaining operating time for the item, which is used to determine the time the next replacement is due.

6.3.2.4 For CAD/PAD items, paragraph 6.3.2.2 and 6.3.2.3 do not apply.

6.3.3 When a TCI is removed prior to expiration of the replacement interval for repair, TCTO compliance, or because of modification of the AEROSPACE EQUIPMENT, reuse the item as governed by the following requirements (excluding CAD/PAD):

6.3.3.1 An item may be reused after minor repair or modification when the accumulated time on the item plus 100 hours does not exceed the replacement interval specified in the scheduled inspection and maintenance requirements manual.

6.3.3.2 If an item cannot be made serviceable through minor repair, modification, or if its remaining life is 100 hours or less, completely overhaul the item prior to reuse. If a complete overhaul is beyond base level capability, process and ship the item to a depot facility.

6.3.3.3 An item having a calendar replacement interval may be reused after minor repair when more than three months of service life remains. If less than three months remains, completely overhaul the item prior to reuse.

6.3.4 When an item installed in AEROSPACE EQUIPMENT is selected as a TCI, and the item's age is less than the prescribed replacement interval for the item, assume that the operating time of the TCI is the same as the AEROSPACE EQUIPMENT.

6.3.4.1 When both an hourly and calendar interval are prescribed for the added item, base the calendar age on the ratio of the AEROSPACE EQUIPMENT age to the hourly replacement interval. For example, an item has an age of 300 hours and requires replacement at 500 hours (or if three years were added to the replacement schedule), assume that 3/5 of the calendar interval has been consumed and that 2/5 or 14 months of the calendar age remains.

6.3.4.2 When the operating time of the AEROSPACE EQUIPMENT exceeds the prescribed replacement interval for a newly selected TCI, assume the TCI has 50 percent of its established replacement interval remaining.

6.3.5 For class A-2 and B-2 engine accessories, assume the item was installed at the last engine change. When engine power packs are involved, assumed the operating time is the same as the power pack time since last overhaul.

6.3.6 Conditional replacement items may be removed from one type of AEROSPACE EQUIPMENT, be restored to a serviceable condition through off-equipment maintenance or minor repair, and then be issued for installation on a AEROSPACE EQUIPMENT where it will be a TCI. Partial service life will have accrued; however, because the item has been a conditional replacement item, a "previous operating time" entry could not be made on the serviceable tag. To determine service life status of these items, maintenance personnel must examine the serviceable tag on each time change item prior to installation, determine the tag's source of initiation, and take one of the following courses of action:

6.3.6.1 If the serviceable tag was initiated by the manufacturer or an AFMC overhaul facility, assume the item has zero operating time.

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6.3.6.2 If the serviceable tag was initiated by an operating location or centralized repair facility, assume that the item has 50 percent of its service life remaining.

6.3.6.3 When an operating location or centralized repair facility is authorized to overhaul items as prescribed in the AEROSPACE EQUIPMENT maintenance manuals, consider these items as having zero operating time. Identify items overhauled at these maintenance facilities with the word “overhauled” stamped across the face of the serviceable tag.

6.3.6.4 Do not zero the operating time for limited life items.

6.3.6.5 Retain total time since manufacture for all document purposes.

INSPECTION WORK DOCUMENT				ELECTRICAL PWR	SERVICE	CARD NO.
MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS		
		SYS	SUB-SYS			
SAMPLE						
CARD NO	WORK AREA	TYPE MECH RQR	MECH NO	CARD TIME	PUBLICATION NUMBER AND DATE	CHANGE NO

AFTO FORM 26D, 19951201 (EF-V2)

PREVIOUS EDITION WILL BE USED

Figure 6-1. AFTO FORM 26D

Table 6-1. Red Symbol Entries for Installed AEROSPACE EQUIPMENT Time Change Items

Part 1			
Aerospace Equipment Time Change Items Rules			
Rule	A If a AEROSPACE EQUIPMENT time change item:	B And maintenance:	C Then maintenance will:
1	is determined due replacement at the next scheduled inspection	fails to replace the item at the next scheduled inspection excluding, preflight, thru flight, and basic post flight	place a Red Dash in the applicable maintenance forms indicating that the time change is due replacement
2	was determined due replacement at the last scheduled inspection or the replacement time has expired and the aerospace vehicle had no -6 HPO requirement	placed a Red Dash in the applicable maintenance forms	upgrade to a Red X in the applicable maintenance forms at the start of the next scheduled inspection

Part 2			
Life Sustaining Aerospace Equipment Time Change Items Rules			
Rule	A If a life sustaining time change item identified with an asterisk in the -6 or a CAD/PAD item:	B And maintenance:	C Then maintenance will:
3	is determined to be due at the next applicable inspection, and that inspection will occur after the items replacement time/date has expired	does not replace the item when the item replacement time/date expires	place a Red X in the applicable maintenance forms indicating that the item is due replacement prior to the next flight or operation
4	is determined to be due at the next applicable inspection, and that inspection will occur before the times replacement time/date has expired	does not replace the item during the inspection	place a Red dash in the applicable maintenance forms indicating that the item is due replacement at the expiration of replacement time/date
5	was entered in the forms as a Red dash indicating replacement due at the expiration of the replacement time/date	does not replace the item when the replacement time/date expires	place a Red X in the applicable maintenance forms indicating the time is due replacement prior to the next flight or operational use

Table 6-2. Processing Time Change Items Where Previous Operating Time is Unknown or Known to be Invalid

Rule	A If AEROSPACE EQUIPMENT time change item (includes CAD/PAD) has a previous operating	B And the time change item is:	C Then maintenance will:
1	time which is unknown or known to be invalid:	life sustaining installed in an aerospace vehicle	place a Red X in the applicable maintenance forms indicating that item is due replacement prior to the next flight or operational use
2		life sustaining not installed in an aerospace vehicle	process for overhaul in accordance with TO 00-20-3
3		not life sustaining and is installed in an aerospace vehicle	estimate the previous operating time at 50 percent of the service life and continue to use
4		not life sustaining and not installed in an aerospace vehicle	process in accordance with TO 00-20-3 for condition determination. If serviceable, or made serviceable by minor maintenance, estimate previous operating time at 50 percent of serviceable life. If made serviceable through an authorized overhaul, it may be considered as having zero operating time unless notification has been issued to the contrary by the overhaul facility

CHAPTER 7

SUPPORT EQUIPMENT (SE)

7.1 PURPOSE.

For the purposes of this chapter, the term support equipment (SE) will refer to SE; powered and non-powered aerospace ground equipment (AGE); industrial plant equipment (IPE); vehicular SE; Test, Measurement and Diagnostic Equipment (TMDE); nuclear, conventional, and chemical munitions handling and test equipment; test equipment; ground photographic equipment; trainers; and special tools requiring scheduled inspections (specific SE terms are defined in Appendix A1.62). This chapter prescribes requirements and documentation procedures for SE. In conjunction with AFI 21-101 and the 00-20 series technical orders, this TO provides a complete maintenance documentation system using AFTO FORMS 244 and 245 for equipment covered by this publication. The AFTO FORM 244 will be used to document SE delayed discrepancies, corrective actions, record service, periodic and special inspection, record inspection status, and historical data. The AFTO FORM 245 is a continuation form for PART V of the AFTO FORM 244. It provides users with a means to document discrepancies and corrective actions as an extension of the AFTO FORM 244. Use of the AFTO FORM 245 is optional as directed by the MXG/CC.

7.2 FORMS LOCATION.

7.2.1 The AFTO FORM 244/245 will accompany all SE when:

7.2.1.1 The SE is dispatched for use by other agencies or work centers (e.g. commonly used powered and non-powered AGE, etc.).

7.2.1.2 The SE is due inspection.

7.2.1.3 The SE is on a Red X.

7.2.1.4 The SE is processed or stored for mobility/TDY.

7.2.1.5 EXCEPTION: At the discretion of the MXG/CC, the forms may be maintained in a specific separate file when equipment use or size makes it hazardous or impractical for the form to accompany the equipment. These forms will be grouped together by type of equipment and kept in a file or binder in either the work center having primary responsibility for the end item or in the production control/support section having scheduling responsibility for the end item.

7.2.2 When AFTO FORMS are located on the equipment they will be kept in a waterproof envelope, container or compartment in or on the equipment and will be readily available to user and maintenance personnel.

7.3 INSPECTION REQUIREMENTS.

Maintenance inspection requirements and accomplishment intervals for SE are identified in the applicable inspection, engineering, and commercial technical manuals, work cards or checklists. SMs are responsible for evaluating the inspection requirements and ensuring published guidance is available. The MXG/CC determines inspection criteria for items of SE for which no inspection requirements are published. Develop local inspection work cards/checklists as required, based on usage, location, and design of the item. However, when formal inspection work cards are published for similar equipment, those work cards will be used in lieu of locally- developed work cards. The inspection system consists of the following inspections which will be accomplished by the SE and trainer work center having possession of the equipment. These inspections will be documented on Part III of AFTO FORM 244 or automated equivalent, except for operators' inspections (documentation is optional), and service inspections (which are documented on Part II).

7.3.1 Servicing Inspection. This inspection is an equipment condition inspection outlined in the applicable inspection, engineering, and commercial technical manuals, work cards or checklists. This inspection will be accomplished in conjunction with equipment servicing, following major/minor maintenance (except bits and pieces and/or hardware that do not affect serviceability) or prior to placement on the ready-line. As a MXG/CC option, this inspection may also be required prior to placement in a dispatch pool/sub-pool. Each inspection will be documented on Part II of AFTO FORM 244.

7.3.2 Operator Inspection. This inspection is applicable to all SE including training equipment and is accomplished to ensure serviceability and safety of the equipment prior to use. It consists of a review of the forms for current status, and a visual inspection of the equipment for defects and adequate servicing. The operator inspection is the responsibility of the

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user. The operator inspection may be documented at the option of the MXG/CC; however, if during the operator inspection a defect is discovered, the operator will record the defect in Part V of the AFTO FORM 244/245, and contact the equipment's owning work center or depot maintenance supervisor.

7.3.3 Special Inspection. Special inspections for SE including powered and non-powered AGE and training equipment are prescribed in the applicable inspection workcards. Special Inspections of a one-time or short duration nature may also be directed through TOs, TCTOs, MAJCOM or local directives. Document the special inspection completion Part V and update the special inspection interval on Part III of the AFTO Form 244.

7.3.4 Scheduled Inspections and Lubrications. Inspection and lubrication requirements are accomplished upon accrual of specified operating hours, or at expiration of a calendar period, and recorded in Part III of the AFTO FORM 244. Document discovered discrepancies in Part V of the AFTO FORM 244/245. Inspection and lubrication intervals specified in TOs, checklists, and work cards for SE are the prescribed intervals during which the affected equipment can remain in service without performing the required inspections or lubrications. A Red Dash will be annotated in the AFTO FORM 244/245 for equipment with identified due inspections/lubrications. A due inspection must be accomplished as soon as the condition preventing its completion no longer exists, but no later than during the next scheduled major inspection (Phase I, Phase II, Periodic or equivalent). Inspections not completed by the next scheduled major inspection will be upgraded to a Red X. Exception: For inspections on Munitions Material Handling Equipment (MMHE), refer to TO 11N-35-51 and the Master Nuclear Certification Listing contained in TO 00-110N-16. For Cryogenics equipment, follow the applicable guidance as outlined in 37C2 series technical orders.

7.3.5 Acceptance Inspections. The gaining MAJCOM/unit will perform an acceptance inspection on all newly assigned SE prior to placement into service and on all received from organic or contract depot maintenance prior to being placed in service. The gaining MAJCOM/unit may perform this inspection at the depot or an alternate location. These inspections will be of sufficient depth to determine the ability of the item to perform its designed function. Check to ensure the completeness of historical documents. Record this inspection on the appropriate documents and the appropriate MIS. The discrepancies will also be entered into the Deficiency Reporting System IAW TO 00-35D-54.

7.3.6 Transfer Inspection Requirements. When SE is transferred from one organization for operational use to another organization, the transferring organization will accomplish an inspection to ensure the equipment is fully operational and that supporting forms and documents are accurate and complete. The transfer inspection will include a functional check to ensure serviceability of the equipment. If more than 75 percent of the inspection interval has elapsed since the last completed inspection, the transferring organization will accomplish the next scheduled inspection. Place an entry in the appropriate forms to indicate that a transfer inspection was accomplished in accordance with the applicable equipment technical orders.

7.4 WAR RESERVE MATERIAL (SRM) OR MOBILITY EQUIPMENT.

When SE is designated as WRM or mobility equipment, perform all inspections prior to storage. When WRM or mobility equipment is placed in deep (long term) storage, comply with inspection requirements in TO 35-1-4 in lieu of calendar inspections. While stored outside, reinspect SE at 18-month intervals; while stored inside, reinspect at 24-month intervals while stored in a controlled environment (e.g. airconditioned and humidity controlled), reinspect at 36-month intervals. The MXG/CC may designate more frequent or detailed inspection requirements.

7.5 SUPPORT EQUIPMENT DOCUMENT ADMINISTRATION.

When maintenance responsibilities are divided among two or more work centers, the owning work center will ensure applicable forms are correctly initiated and maintained. The using individual is responsible for documenting the status and condition of the equipment as indicated on the AFTO FORMs 244/245. When AFTO forms are located on the equipment, they will be kept in a waterproof envelope, container or compartment and will be readily available to user and maintenance personnel. However, at the option of the MXG/CC, the forms may be maintained in a specific separate file when use or size of the equipment makes it hazardous or impractical for the form to accompany the system or equipment. When the form is closed out, it will be forwarded to the documentation section for filing disposition as prescribed in AFI 21-101, AFI 21-109, Communications Security (COMSEC) Equipment Maintenance AND Maintenance Training, AFMAN 37-139, and this TO. If applicable, MAJCOMs may direct the use of MIS products in lieu of the AFTO FORM 244 and AFTO FORM 245. As a minimum, the MIS products will contain the same data elements as described in the AFTO forms above.

7.5.1 If a discrepancy renders the equipment unsafe or unfit for use, document the discrepancy with a Red X in the MIS (if available) and/or in the symbol block on Part V of the AFTO FORM 244/245 as appropriate. Then remove the equipment from service.

7.5.2 Discrepancies that are discovered on SE which do not impair the operation or use of the equipment will either be corrected by the SE repair activity, owning workcenter, or trainer maintenance personnel during the inspection, or a discrepancy entered in the maintenance record. Delayed discrepancies will be recorded in the MIS if available or if the MIS is not available, use the AFTO FORM 244/245.

7.5.3 Ground instructional equipment is maintained in its original configuration or modified in accordance with TCTOs for operational equipment, and maintenance performed on it will be documented in accordance with instructions for the like operational equipment.

7.5.4 Vehicular SE. The AFTO FORM 244 will be used on Vehicular SE. Vehicular SE does not include those special and general purpose vehicles assigned to Transportation, Civil Engineer, fuels activities, and those towing vehicles assigned to maintenance activities. MXG/CC may waive the use of AFTO FORM 244/245 for selected items. Utilize AF Form 1806, Operators Inspection Guide and Trouble Report, to inspect deicers and high reach vehicles (Condor/Calavar). Reference AFMAN 24-307.

7.5.5 TMDE. Consult TO 33K-1-100-2 or AFMETCAL to determine if an item of equipment is TMDE. If the MIS is not used, the AFTO FORM 244/245 will be used on TMDE requiring scheduled inspections other than calibrations. MXG/CCs may determine additional specific uses of AFTO 244/245 to address unique requirements related to TMDE. PMEL is not authorized to clear a Red X. The owning/using organization of the TDME will ensure serviceability and clear the Red X condition after PMEL completed actions.

7.5.6 TRAINING EQUIPMENT. Training equipment includes aircraft, missiles, and ground communications-electronic (C-E) equipment, maintenance and operator training equipment in Federal Supply Group (FSG) 69; also included is all maintenance training equipment (trainers, bench training sets and standard Air Force material) used at resident training centers, training detachments, or used in operational organizations for training purposes. Trainers that are used as primary aerospace vehicle/aerospace vehicle system trainers or aircrew academic training devices in FSG6930, Group I, will use the AFTO FORMS 781 series which are maintained in accordance with this TO.

7.5.7 The AFTO FORM 244/245 is optional for use at Headquarters Aerospace Audio Visual units when using AFTO FORM 95 for designated ground photographic equipment.

7.5.8 Use AFTO Form 244 or automated equivalent to document inspection requirements for comfort pallets and portable latrines.

7.6 UNSAFE CONDITIONS OR MATERIEL FAILURES.

When an unsafe condition or materiel failure is discovered on SE, and potential exists that this condition may exist on other SE the following action will be taken by the MXG/CC or higher authority:

7.6.1 Immediately inspect a representative number of systems or units of the same type and model to determine if the condition exists on other SE. AF FORM 979 (Danger Tag) will be used to identify unsafe equipment (AFOSHSTD 91-45).

7.6.2 When warranted, restrict similar systems or units from further use, and submit a Deficiency Report (DR) in accordance with TO 00-35D-54.

7.6.3 Restrict the SE having the deficiency from use until corrective action is taken or instructions are received from the SM and/or the MAJCOM.

7.7 AFTO FORM 244, PART I.

Provides a means to identify the SE for which the form is maintained.

7.7.1 BLOCK 1. Enter the nomenclature/model number.

7.7.2 BLOCK 2. Enter the assigned AF registration/serial number. Leave blank if not applicable.

7.7.3 BLOCK 3. Enter the identification number (a locally defined equipment-type identifier), if assigned. Leave blank if not assigned.

7.7.4 BLOCK 4. Enter the field number (). Leave blank if not applicable.

7.7.5 BLOCK 5. Enter the Work Unit Code (WUC) if one is assigned. Leave blank if not applicable.

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7.7.6 BLOCK 6. Enter the assigned organization/workcenter or depot Resource Control Center (RCC).

7.7.7 BLOCK 7. Enter the date the form was initiated to the “left” of the word “TO.” Once the form is closed out or the equipment is turned into supply/salvage, and a new form initiated, enter the date to the right of the word “TO.”

7.7.8 BLOCK 8. Leave blank if not applicable. This block may be used for MXG/CC specific requirements.

7.8 AFTO FORM 244, PART II.

Provides a means to document the required servicing inspection. It will not be used to document prior to use inspections unless required by the MXG/CC.

7.8.1 TIME column. Enter the time (in 24-hour military time) the service/prior to use inspection was accomplished. If the unit is equipped with a running time meter, the metered time may be entered in place of the time of day. For SE inspected at hourly intervals, enter the daily/accumulated time.

7.8.2 INSPECTORS INITIALS column. Enter the first initial, last initial of the individual completing the inspection.

7.8.3 DATE column. Enter the date (YYYYMMDD) the inspection was accomplished.

7.9 AFTO FORM 244, PART III.

Provides a means to document scheduled inspections such as PE, special wheel bearing, and number if applicable.

7.9.1 INSPECTION REQUIREMENT - In this column, enter the type of inspection due, e.g., Phase 1, Phase 2, PE, special wheel bearing, wheel packing, lubing etc. If directed by the MXG/CC, include specific inspections for IPE, other than daily which are documented in Part II.

7.9.2 INTERVAL - In this column, enter the next scheduled inspection interval, e.g., 30-, 60-, and 180-day, or 500-hour, etc.

7.9.3 DATE DUE - In this column, enter the next inspection due in the next open date due block.

7.9.4 DATE COMPLETED. Enter the hour/date inspection was completed. Enter a new inspection due date in next DATE DUE block.

7.10 AFTO FORM 244, PART IV.

Provides a means to document a quality control or supervisory review of the form. The MXG/CC will determine the quality control criteria and the specific time interval between supervisory review. This section will not be used for documenting inspection of completed maintenance actions.

7.10.1 EMPLOYEE NUMBER. Enter reviewer’s employee number (or first name initial, last name and grade).

7.10.2 DATE. Enter the date the review was accomplished.

7.11 AFTO FORM 244/245, PART V.

Provides a means to document equipment discrepancies and corrective actions. The following conditions will be recorded in this part of the form:

7.11.1 Delayed discrepancies that cannot be corrected as part of the maintenance actions in progress will be scheduled for follow-on maintenance actions.

7.11.2 Use a Red X when an inspection renders the SE unsafe or unserviceable.

7.11.3 Overdue inspection, including portions of inspections not accomplished during the scheduled inspection (e.g., work card and/or work card items not completed by the end of the due period).

7.11.4 Overdue time change, Master Configuration List (MCLs) and TCTOs.

7.11.5 Discrepancies discovered by the operator during operation of the system/equipment.

7.11.6 PART V will be completed as follows:

7.11.6.1 BLOCK 9 - TO. Enter the TO number or manufacturer's manual number/title that covers the item identified in block 1.

7.11.6.2 BLOCK 10 - NSN. Enter the assigned national stock number or part number for item identified in block 1. Leave blank if not applicable.

7.11.6.3 BLOCK 11 and BLOCK 12. These blocks are left blank, unless approved for use by MAJCOM.

7.11.6.4 DATE DISCOVERED - In this column, enter the date the discrepancy is discovered. The original date is brought forward to the new form when entries are carried forward from an old form.

7.11.6.5 DISCOVERED BY - In this column, the individual discovering the discrepancy will print his/her minimum signature.

7.11.6.6 SUP DOC NUMBER. - In this column, enter the base supply document number(s). This block is not required for units using MIS or if directed by the MXG/CC. When two or more supply document numbers are needed to adequately define base supply support for repairing a discrepancy, add all additional supply document numbers needed to correct the discrepancy after the statement of the discrepancy. If necessary, use of the next open DISCREPANCY block is authorized. If the next block is used all adjacent blocks will be lined through. As these requisitions from base supply are received by the requester, draw a single line through the document number to show its receipt.

7.11.6.7 SYMBOL - In this column, enter the applicable Red symbol for the discrepancy.

7.11.6.8 DISCREPANCY - In this column, enter the discrepancy or maintenance action required. Only one defect will be entered in each block for each job control or work order number; however, use as many blocks as necessary to completely describe a single discrepancy.

7.11.6.9 JOB CON/W.O. NUMBER. - In this column, enter the job control or work order number assigned to the discrepancy.

7.11.6.10 CORRECTIVE ACTION - In this column, enter the description of the corrective action taken. For Red X and Red Dash discrepancies, include TO reference (including page and paragraph/figure number or function number), if applicable, or equivalent, in the "CORRECTIVE ACTION" block and enter the date in the "DATE CORRECTED" block. IPE is excluded from this requirement since the TO reference is listed on the equipment. MXG/CCs may specify additional minimum TO reference. If more space is needed to make this entry, use the next open block.

7.11.6.11 DATE CORRECTED - In this column, enter the date the discrepancy is corrected.

7.11.6.12 CORRECTED BY - In this column, the individual who corrects the discrepancy will sign his/her minimum signature in this block.

7.11.6.13 INSPECTED BY - In this column, the individual clearing a red - (dash) or the individual authorized by the MXG/CC to clear red X symbols will enter his/her minimum signature in this block and last name initial over the Red symbol in the symbol column.

7.12 AFTO FORM 245.

This form provides a continuation to PART V of the AFTO FORM 244. This form will be completed using the same instructions as provided for PART V of the AFTO FORM 244.

7.13 DISPOSITION INSTRUCTIONS.

After the AFTO FORM 244/245 is closed out, forward the old form to the responsible documentation activity for filing and disposition. (See AFMAN 37-139).

7.14 CLOSING OUT AFTO FORM 244/245.

The AFTO FORM 244/245 will be closed out and a new form initiated when additional recording space is required. The following procedures apply:

7.14.1 Enter the current date in block 7 and transcribe entries in block 1 through block 6 from the old form. Enter all carried forward inspections due in PART III from the old form. Enter all carried forward discrepancies and information in PART V of the new form. When carrying the discovered by block forward, print the minimum signature of the individual who originally discovered the discrepancy, this will indicate the information has been carried forward.

7.14.2 When closing out the AFTO FORM 244/245, the current date will be entered in block 7 (following the TO), and "CF" (carried forward) will be entered in the DATE COMPL block of PART III followed by your first name and last name initials. In PART V of the AFTO FORMs 244/245 for each open discrepancy, enter in the corrective action block CF and your minimum signature.

CHAPTER 8

TRANSIENT MAINTENANCE PROCEDURES

8.1 GENERAL REQUIREMENTS.

Transient maintenance includes servicing, inspection, and maintenance for transient aerospace vehicles. Transient aerospace vehicles are those aerospace vehicles not assigned to that base that are en route from one location to another that may require routine servicing. Aerospace vehicles visiting a base for the purpose of flying sorties or conducting training from the base, with or without the necessary maintenance support from the home base, are not considered transient aerospace vehicles. For off-station recovery procedures of AMC aerospace vehicles and aerospace vehicles on AMC missions, refer to AMCI 21-108, Logistics Support Operations, and command-to-command agreements.

8.2 PROCEDURES FOR MAINTENANCE OF TRANSIENT AEROSPACE VEHICLES.

The host base MXG/CC is responsible for TA (if established) and will establish procedures and furnish necessary personnel and facilities for handling transient aerospace vehicles to ensure that servicing, inspection, and maintenance are consistent with the mission of each transient aerospace vehicle. Give special consideration to medical or air evacuation aerospace vehicle, emergency missions, and special missions.

8.2.1 The host MXG/CC or his authorized representative may delegate this responsibility to the aircraft commander (A/C) or pilot if the aerospace vehicle is a new or experimental aerospace vehicle with which base maintenance personnel are not familiar, or when personnel qualified to provide the required services accompany the aerospace vehicle. In such cases, the host unit will provide assistance within their capability.

8.2.2 If TA cannot accomplish the required inspections, servicing, or repairs because of a lack of qualified personnel, facilities, or material, and the A/C does not wish to continue the flight without accomplishment of these items, the A/C will contact the home station of the aerospace vehicle to request assistance. If the A/C elects to proceed on the flight without accomplishment of these items, document the AFTO FORM 781A, including a brief entry describing the situation. The A/C will sign the exceptional/conditional release.

8.2.3 If the A/C desires omission of an inspection even though the required resources are available, the A/C will make an entry on the AFTO FORM 781A stating the reason for his/her decision. The A/C will sign the exceptional/conditional release. A duplicate of the AFTO FORMS 781A and 781H will be made, and will be retained by the TA supervisor for not less than 90 days and disposed of in accordance with AFMAN 37-139.

8.2.4 When Air Force aerospace vehicles land at locations where maintenance services are not available, the A/C will contact his/her home station for assistance. The A/C guards the aerospace vehicle until required assistance arrives.

8.2.5 The owning unit will advise appropriate en route bases and TDY locations of immediate or urgent action technical orders or immediate one-time inspections, and coordinate any action required.

8.2.6 TA completes and maintains the AF FORM 861, Base/Transient Job Control Number Register, in accordance with AFI 21-101, Aerospace Equipment Maintenance Management.

8.3 EXPENDITURES FOR TRANSIENT AEROSPACE VEHICLES.

8.3.1 Document all expenditures of USAF resources in support of transient aerospace vehicles. Commanders may authorize maintenance and services performed on non-Air Force aerospace vehicles. As a general rule, this maintenance and servicing is limited to that necessary to continue safe flight. The MXG/CC is responsible for placing stringent controls on recording maintenance actions performed so that reimbursements can be affected.

8.3.1.1 Home stations are responsible for reparable support for their aerospace vehicles requiring repair at a transient location when both the following conditions occur: (1) the spare part is not available at the transient location and (2) the exchange price for the reparable is greater than \$20,000. The movement of reparable parts under this criteria is accomplished through maintenance to maintenance. Serviceable and reparable parts originating from home station will return to home station. This allows for Due In From Maintenance (DIFM) control and associated financial transactions to be processed at home station. See AFMAN 23-110, Vol 1, Part 3, Chapter 7.

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8.3.1.2 If the spare part is not available at the transient station or home station, the home station base supply locates (through lateral support) the serviceable part, incurs the charge, and has the part shipped to the transient station "marked for" the aerospace vehicle tail number. The transient station returns the reparable part to the home station. This allows for DIFM control and associated financial transactions to be processed at home station. Contractor-supported aerospace vehicle units will follow procedures established in the contract.

8.3.1.3 Attach an AFTO FORM 350 to parts removed from non-Air Force aerospace vehicles and process through supply. Complete this form for stock listed items. Complete as much of the forms as possible for non-stock listed items. For non-USAF aerospace vehicles, clearly mark these forms in red to identify the agency or activity that owned the aerospace vehicle from which the item was removed, such as US Army, US Navy, or Delta Airlines. Write or print this information beside the tag number in the lower right hand corner of PART I of the form.

8.3.1.4 The maintenance officer provides the base Financial Management Office (FMO) with information, including DD FORM(s) 1348 and AFTO FORMS 349 or maintenance data collection listings, to support requests for transient aerospace vehicle service and maintenance reimbursement. Include information the pay grade and labor hours for each individual.

Table 8-1. Documentation Requirements for Transient Aerospace Vehicles

Transient Aerospace Vehicles Belonging to	Reimbursement Documentation Required By Accounting and Finance (A&F) For:				If Work is Performed or Discrepancy or is noted, Make an AFTO FORM 781 Entry	If Work is Performed, Prepare an AFTO FORM 349 In	If a Repairable Item is Removed, Prepare an AFTO FORM 350 In
	Labor for On-Equip Maint	Labor For Off-Equip Maint	Parts Lubricants Oxygen ADI etc.	Labor for Parking Follow Me Serving Launching			
USAF including ANG and AFRC	NO				YES	Two Copies, 1 for local use, 2nd for home station Note 1	One Copy
DoD Army Navy Marine AF/DoD	YES Note 4	YES	NO	One Copy For TA	Assist Crew In Completing Comparable Forms One Copy	Three Copies, 1 to FMO, 2nd to TA, 3rd to A/C	Two Copies, 1 for local use, 2nd to FMO
Non-DoD US Gov, FAA, NASA, USCG	YES						
CAP, at AF Request, IAW AFI 10-2701	NO						
AOS For FMS MAP, or EPAF	YES	YES		YES	YES	Two Copies, 1 copy to TA 2nd Copy to FMO Note 2	
Foreign Government Military	NO			NO Note 3	Assist Crew In Completing Their Comparable Forms	Two Copies, 1 to TA, 2nd copy to FMO	Two Copies, 1 For Local Use 2nd For FMO
Commercial/ Private, and CAP Contract	YES			YES		Three Copies 1 to FMO 2nd to TA, 3rd to A/C	

Note 1. When a transient maintenance base accomplishes TCTOs, the original AFTO FORM 349 will be placed in the 781 binder for home station use in updating historical files. Transit Maintenance uses the duplicate copy for production count and submission of data as prescribed in AFCSM 21-568, Vol. 2, Time Compliance Technical Order Subsystem.

Note 2. The AFTO FORMS 349 and 350 must include the delivery project number and military case number in the DISCREPANCY block.

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Note 3. Labor expended for on-equipment work such as follow-me service, parking, servicing and preparation for launch will not be charged unless otherwise specified in HQ USAF/CVAI message granting authorization for landing.

Note 4. Civilian labor only.

CHAPTER 9

TRANSFER, STORAGE, AND DEPOT MAINTENANCE

Programmed depot maintenance PDM intervals are listed in TO 00-25-4.

9.1 TRANSFERRING AEROSPACE VEHICLES.

Headquarters Air Force Materiel Command (AFMC) manages the assignment of aerospace vehicles as directed by HQ USAF. When a transfer is directed, it will be made within 30 days of receipt of notification by the MAJCOM to which the aerospace vehicle is assigned. If additional time is required to effect the transfer, forward a request for authority to delay the transfer for a specific number of days to the AF Aerospace Vehicle Distribution Office (AVDO) IAW AFI 21- 103, stating reasons for the delay. Refer to AFI 21-101 for additional requirements for aerospace vehicle transfer requirements.

9.1.1 Tactical movement of complete combat elements and temporary loans of aerospace vehicles between Air Force organizations do not come under the provisions of this technical order. Responsibility for condition, maintenance, and documentation, in the case of temporary loans, will be as agreed to by the commanders concerned.

9.1.2 After completing the pre-transfer maintenance, including Functional Check Flights (FCF) if required, the possessing activity will restrict the aerospace vehicle from further use. The aerospace vehicle will be maintained in suitable condition to prevent delay of the ferry or transfer flight.

9.1.3 After preparing the aerospace vehicle for transfer, notify the gaining unit of its availability for transfer.

9.1.4 List installed guns on AF FORM 2692 regardless of whether or not they are listed in the -21 technical order. When the losing maintenance activity is transferring aerospace vehicles with small weapon(s) (50 caliber or under), they will notify base supply, supply systems branch, document control section, of the weapon(s) serial number(s) being transferred.

9.1.5 When transferring aerospace vehicles to agencies outside the Air Force, AFMC will issue special instructions for TCTO compliance and maintenance requirements for the transfer. When Aeronautical Systems Center (ASC) or AFMC aerospace vehicles are placed on bailment to contractors, special instructions necessary for the preparation of the vehicle for delivery to the bailee (recipient) and its return to the Air Force will be included in the bailment agreement.

9.1.6 Aerospace vehicles, being prepared for return to service after removal from storage by MAJCOMs other than AFMC, will not be processed through AFMC depot facilities unless inspections indicate that depot maintenance is required. All required maintenance will be accomplished by the MAJCOM removing the aerospace vehicle from storage. Depot maintenance requirements will be negotiated with AFMC.

9.1.7 When aerospace vehicles are transferred from one Air Force unit to another, the gaining organization will:

9.1.7.1 Inventory equipment and records for completeness.

9.1.7.2 Perform normal after flight inspections if the vehicle was flown.

9.1.7.3 Perform inspections as required by the equipment TOs (e.g., assembly and check out) if the aerospace vehicle was shipped. When aerospace vehicles are missing -21 equipment, adjust the shortages IAW the procedures in AFI 21-103. When the condition of the aerospace vehicle indicates discrepancies on the part of the transferring organization, refer the matter to the MAJCOM having jurisdiction over the losing organization.

9.1.7.4 Perform a chart "A" inventory IAW the applicable -5 TO

9.1.8 Aerospace vehicles directed to be transferred while at a depot/contractor facility will be returned to the losing organization upon completion of the work for the accomplishment of the transfer inspection and maintenance, unless the using commands and the SM agree that transfer requirements will be accomplished by the depot facility. For missiles, the depot/contractor accomplishes the transfer inspection.

9.1.9 When AFMC depot/contractor facilities perform transfer requirements for a losing organization, they will report all accountable equipment shortages to the losing organization. The AFMC/contractor facility will include a copy of the reported shortages with the aerospace vehicle historical documents. The losing organization will be responsible for the shipment of shortages to the gaining organization without delay. All shipments will be clearly marked and identified as equipment

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shortages for the aerospace vehicle type and serial number transferred. When the losing organization is unable to supply all reported equipment shortages, corrective action will be the responsibility of the losing MAJCOM.

9.1.10 When an organization receives instructions to release an aerospace vehicle for transfer from other than AFMC storage, they will ensure that all correctable discrepancies are cleared.

9.1.11 The AFTO FORM 345, AEROSPACE VEHICLE TRANSFER INSPECTION CHECKLIST AND CERTIFICATION, (Figures 9-1 and 9-2 outlines requirements to be accomplished in conjunction with the transfer). Use of the AFTO FORM 345 is optional for missile units. Complete this form and forward the original with the aerospace vehicle and retain the duplicate. Form entries are self-explanatory and serve as a certification of the requirements listed. List any special requirements individually under item 14. If applicable, waivers outlined in subsequent paragraphs will be listed in block 15, "REMARKS," with a reference to the authorizing agreement.

9.1.12 The losing organization accomplishes the following in conjunction with the requirements listed on the AFTO FORM 345:

9.1.12.1 If over 50 percent of the inspection time has elapsed at the time of transfer, then accomplish the next scheduled hourly postflight, phase, periodic, minor or major inspection on the aerospace vehicle or missile. Accomplish inspections as prescribed in the applicable -6 TO, maintenance manual, or work card set, including scheduled/special inspections and TCIs as required.

9.1.12.2 Correct all discrepancies that are within the maintenance capability. If parts are not available and valid delayed discrepancies exist, include the AF FORM 2414, Verification Work Sheet, with the historical documents that are transferred.

9.1.12.3 Determine if depot maintenance is required, and if so, arrange for its accomplishment in accordance with paragraph 9.1.13.

9.1.12.4 Comply with all outstanding TCTOs for kits on-hand or obtainable. If the TCTO can not be accomplished by the established transfer date, or requisitioned kits have not been received, comply with the provisions of TO 00-5-15.

9.1.12.5 Change the engines as required under the provisions of TO 2J-1-18.

9.1.12.6 Accomplish a FCF when required in accordance with the MDS specific -6 TO, maintenance manual, or when required by a TCTO.

9.1.12.7 Ensure all associated equipment is transferred with the aerospace vehicle and properly account for equipment shortages.

9.1.12.8 Ensure open discrepancies requiring parts include the applicable TO references (e.g. illustrated parts breakdown technical order number, date, figure, and index).

9.1.12.9 Perform a complete document review of the transferring aerospace vehicle and associated equipment, to include historical records. Make corrections as required.

9.1.12.10 Due to varying circumstances and conditions, the following deviations are authorized:

9.1.12.10.1 A MAJCOM having jurisdiction over both the losing and gaining organization may waive or modify any or all of the above requirements.

9.1.12.10.2 For transfers from one MAJCOM to another, the gaining MAJCOM may waive any or all of the requirements stated above or modify them under agreement between the losing command and the gaining command.

9.1.13 If the aerospace vehicle requires unprogrammed depot/contractor work prior to transfer, or the losing organization requires maintenance assistance, arrangements will be made by the losing organization with the appropriate System Program Director (SPD) under the provisions of TO 00-25-107. In the event the aerospace vehicle must be delivered to a depot/contractor facility for work accomplishment, the losing organization will accomplish all of the requirements of paragraph 9.1.12, prior to delivery of the aerospace vehicle. The losing MAJCOM in coordination with the SM may waive or modify certain requirements of paragraph 9.1.12 to be accomplished by the depot/contractor facility.

9.1.14 Losing organizations preparing aerospace vehicles for overseas transfer will provide the AFMC facility, where aerospace vehicles will be staged or shipped, at least 30 days advance notification of each aerospace vehicle to be processed. This requirement is exempt from Report Control Symbol (RCS) licensing.

9.1.15 AFMC depot facilities preparing aerospace vehicles and missiles for transfer will accomplish all work necessary to ensure they are in a serviceable condition. If these aerospace vehicles are equipped with engines that have been in storage, the engines may be used, provided the depot facility complies with all existing technical orders applicable to the engine and engine accessories. Aerospace vehicles and missiles will not be reported as available for transfer until all applicable requirements are completed or until waivers have been authorized. Depot facilities preparing aerospace vehicles removed from storage for subsequent delivery to using activities initiate or complete the maintenance documents prior to delivery.

9.2 AFTO FORM 290 AEROSPACE VEHICLE DELIVERY RECEIPT.

Use the AFTO FORM 290 (Figure 9-3) to transfer aerospace vehicles and to furnish a record of selected equipment that will be transferred with the aerospace vehicles.

9.2.1 AFTO FORM 290 serves two purposes:

9.2.1.1 Vehicle receipt for delivery pilots or transporters.

9.2.1.2 Receipt for aerospace vehicles, selected equipment, and paperwork checklist.

9.2.2 The form:

9.2.2.1 Is not required if aerospace vehicles are moved by airlift or surface transportation.

9.2.2.2 May be used in addition to the (required) DD FORM 1149 if directed by AFMC.

9.2.2.3 Does not require the delivery A/C, transporter, or the gaining organizations to physically check items other than those on the form.

9.2.3 Prepare the form using the following guidelines:

9.2.3.1 The losing organization (such as the AVDO at factories, depots, modification centers, bases, etc.) or the delivery control officer prepares this form. The losing organization fills in the heading of the form, including:

9.2.3.1.1 The model number.

9.2.3.1.2 Serial number.

9.2.3.1.3 Account or contract number.

9.2.3.1.4 Project and priority.

9.2.3.1.5 Flight order number (if known).

9.2.3.1.6 Gaining organization

9.2.3.1.7 The losing organization (include MAJCOM, base, and organization unit number).

9.2.3.1.8 The location and date of release.

9.2.3.1.9 In column B of the checklist, list the quantity of each item placed on each vehicle.

9.2.3.1.10 List classified equipment installed on the vehicle in the space provided. Enter the word "none" in the "CLASSIFIED MATERIAL INSTALLED ON AIRCRAFT/MISSILE" block of AFTO FORM 290 if no classified material is installed.

9.2.3.2 Upon accepting the aerospace vehicle for delivery, including responsibility for paperwork and equipment listed in column B of the checklist, the authorized representative of the losing organization will sign the delivery receipt in the space provided. The representative indicates that each item has been checked by placing a check in column C and initials at the bottom of the column.

9.2.3.3 The gaining organization will not accept aerospace vehicles until the items specified in column B agree with the quantity in the vehicle.

9.2.3.3.1 In many cases, the A/C or transporter is the authorized representative of the gaining organization. In this case, he/she will complete the AFTO FORM 290 just before the aerospace vehicle departs.

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9.2.3.3.2 Delivery control or transportation officers at factories or modification centers are responsible for checking the items listed and signing the AFTO FORM 290.

9.2.3.3.3 At factories or modification centers, the delivery control or transportation officer may not have guards to keep close watch over aerospace vehicles received. Instead, the AVDO, a contractor, or other agency provides these services. In these cases, the delivery control transportation office is not responsible for items listed on AFTO FORM 290. As a result, the delivery A/C, transporter, or the delivery control or transportation officer will personally check all items and sign a receipt for them on AFTO FORM 290 before the vehicle departs.

9.2.3.3.4 Space is provided on AFTO FORM 290 for three intermediate stops, where the A/C or transporter does not stay with the aerospace vehicle or missile and needs to be relieved of the responsibility for the items on the checklist.

9.2.3.3.4.1 If more than three intermediate stops are made, use an additional set of forms and attach them to the first form. At these intermediate activities, the activity commander or his/her authorized representatives assume responsibility for the items after a check-in has been completed.

9.2.3.3.4.2 Immediately after the aerospace vehicle arrives at such an activity, the authorized activity representative and the A/C or transporter checks the items.

9.2.3.3.4.3 The activity representative places a check in the first open intermediate activity "in" column and initials at the bottom of the column if all items shown in column B, or subsequently noted, are present.

9.2.3.3.4.4 If an item is missing, the authorized activity representative enters the correct figure in the "in" column, and the A/C or transporter initials the corrected figure and explains in the remarks section of the form. After all items are checked, the activity commander is responsible for guarding against loss of such equipment or papers.

9.2.3.3.4.5 The A/C or transporter checks the items in the checklist before the vehicle leaves. The A/C or transporter checks the proper intermediate activity "out" column, and initials at the bottom of the "out" column. The activity representative also initials this column. Any difference must be explained by the activity representative in the remarks section of the form, together with his or her signature, grade, and activity.

9.2.3.3.4.6 When the aerospace vehicle arrives, the authorized representative of the recipient organization checks column J and initials at the bottom of the column if all items shown in column B, or subsequently noted, are present.

9.2.3.3.5 If an item is missing, the representative enters the corrected figure in column J and the A/C or transporter initials the corrected figure and explains in the remarks section of the form.

9.2.3.3.6 The authorized representative of the recipient organization then signs the receipt in the space provided on the form.

9.2.4 Copies are prepared by the releasing organization and distributed as follows:

9.2.4.1 Copy 1 - Home station.

9.2.4.2 Copy 9 - A/C or transporter.

9.2.4.3 Copy 9 - Recipient.

9.2.4.4 Copy 9 - Releasing organization.

9.2.4.5 Copy 9 - Air Force Plant representative or chief of the Defense Contract Administration Services Offices (DCASO) where the contractor facility is located, marked for the property administrator. This copy is required if aerospace vehicles are delivered to the contractor facility.

9.2.5 Reducing the number of copies is permissible according to the needs of the individual command or by mutual agreement between commands concerned.

9.3 PREPARATION OF AEROSPACE VEHICLES FOR DELIVERY TO A DEPOT/CONTRACTOR FACILITY.

9.3.1 The losing organization will prepare aerospace vehicles, scheduled for delivery to a depot/contractor facility for modification and/or maintenance, for delivery in accordance with the following guidance:

9.3.1.1 Perform all work necessary to place the aerospace vehicles in a airworthy or transportable condition for delivery to the facility. Remove munitions unless a specific agreement is established between the base and the facility.

9.3.1.2 If the aerospace vehicle is to be returned to the same MAJCOM, only that equipment affected by the modification and/or maintenance need accompany the aerospace vehicle. The losing organization will comply with AFI 21-103 requirements.

9.3.1.3 Comply with the requirements in the modification and/or maintenance work specification and workload agreement which apply to the possessing unit. The work specification and workload agreement are a negotiated contract between the possessing MAJCOM and the ALC responsible for establishing the work requirement. The depot/contractor accomplishes those items contained in the work specifications. Additional requirements are identified on AFTO FORM 103.

9.3.2 TCTO kits on hand at base level, which will be installed by the facility, (as agreed to between the SM and the using MAJCOM), will be forwarded to the facility. When kits are forwarded, they will either accompany the aerospace vehicle or be properly identified with the aerospace vehicle serial number and made available to the facility in time to avoid unnecessary delay in-processing.

9.3.3 Bases transferring aerospace vehicles that have been in storage to depot facilities may attach any local documents that were used during the aerospace vehicle's storage period for recording applicable TCTOs to the aerospace vehicle forms. If attached, it will be noted on the AFTO FORM 781A or other appropriate forms.

9.4 PREPARATION OF AEROSPACE VEHICLE FOR TRANSFER BY ONE-TIME FLIGHT.

When instructions are received for transfer of an operational or a stored aerospace vehicle by "one-time flight," the transferring organization will conduct a thorough inspection of the aerospace vehicle, installed engines, and equipment that is essential for a safe transfer flight. The activity preparing the aerospace vehicle will determine the extent of inspection requirements. The transferring organization will:

9.4.1 Accomplish the necessary work required to place the aerospace vehicles in an airworthy condition, including TCTOs for which the time limit has expired. If required, the transferring organization may request authority from the SM to waive compliance for TCTOs.

9.4.2 MXG/CC will consider an FCF to verify work accomplished under paragraph 9.4.1 and to verify the condition of all essential flight systems to ensure that the aerospace vehicle is airworthy for the intended one-time flight. Such FCFs will be accomplished under the provisions of TO 1-1-300 and the applicable portions of the FCF checklists, -6 TO, maintenance manual, and AFI 21-101.

9.5 PREPARATION OF AEROSPACE VEHICLE TO BE TRANSFERRED OR SOLD UNDER THE FOREIGN ASSISTANCE ACT OF 1961 AS AMENDED AND THE MILITARY SALES ARMS EXPORT CONTROL ACT.

9.5.1 The provisions of this paragraph apply to aerospace vehicle transferred under both the grant aid assistance and foreign military sales. Aerospace vehicle project directives will indicate the condition in which aerospace vehicle will be placed prior to delivery. The condition indicated should be either serviceable, or reconditioned, or completely rehabilitated.

9.5.2 Air Force Manual 19-101 will be used as a guide in determining what must be done to aerospace vehicle prior to delivery.

9.5.3 Unless a deviation is authorized, all aerospace vehicle for any one project will be of the same configuration. They will be of the same mission, design, and series and will have the same TCTOs accomplished.

9.5.4 All classified equipment will be removed from the aerospace vehicle unless specifically authorized in the project directive.

9.5.5 Modification kits, accountable equipment, and supporting maintenance forms will be provided as prescribed in the project directives.

9.6 PREPARING AEROSPACE VEHICLES FOR DISPOSAL.

The provisions of subsequent paragraphs are applicable to aerospace vehicles being disposed of through transfer to other services or independent agencies of the government, by donation to authorized recipients, or by sale to the general public.

9.6.1 Remove the following equipment from aerospace vehicles being prepared for transfer to other military services or independent agencies in accordance with instructions from AFMC prior to transfer:

9.6.1.1 All classified equipment which AFMC determines as not releasable to the requesting service or agency.

9.6.1.2 All classified papers, except those required for specific operation of the aerospace vehicle and installed or associated equipment.

9.6.1.3 Items of equipment specifically directed by AFMC.

9.6.2 Remove the following equipment from aerospace vehicles being prepared for donation to service education activities, tax-supported educational institutions, and other authorized recipients prior to release:

9.6.2.1 All classified material.

9.6.2.2 All guns, ammunition, explosive charges (except for explosive devices essential for egress or for safety of flight), and kits containing narcotics.

9.6.2.3 Items of equipment specifically directed by AFMC.

9.6.3 Unless otherwise specified, aerospace vehicles directed for flight delivery to a civilian or federal agency will be prepared for "one-time flight" in accordance with the provisions of paragraph 9.4.

9.6.4 Aerospace vehicle which are determined commercially saleable by AFMC, and are being prepared for transfer to the local disposal officer for sale will have the equipment specified in paragraph 9.6.2 removed prior to release.

9.6.5 Prior to final disposition, local Air Force supervisory personnel will ensure equipment indicated in the preceding paragraphs is removed.

9.6.6 Prepare and distribute documents concerning transfer of aerospace vehicles to other services or independent agencies or to the disposal officer as specified in AFMAN 29-110, Volume 2CD.

9.6.7 Accomplish disposition of aerospace vehicles in the possession of redistribution and marketing activities as prescribed in AFMAN 29-110.

Figure 9-1. AFTO FORM 345, Aerospace Vehicle Transfer Inspection Checklist and Certification (Front)

AEROSPACE VEHICLE TRANSFER INSPECTION CHECKLIST AND CERTIFICATION		1. MDS	2. SERIAL NUMBER	3. TRANSFERRING ORGANIZATION	4. DATE COMPLETED
ITEM NO A	TASK OR FUNCTION B	DATE ACCOMPLISHED C	ACCOMPLISHED BY (Signature and Grade) D	INSPECTED OR CERTIFIED BY (Signature and Grade) E	
1	PERFORM TRANSFER INSPECTION AS REQUIRED BY TO 00-20-1 OR OBTAIN AUTHORITY FOR DEVIATION FROM HIGHER HEADQUARTERS.				
2	CHANGE ENGINES WHEN REQUIRED (TO 2-1-18).				
3	COMPLETE TRANSFER INSPECTION (TO 00-20-1).				
4	PREPARE LOOSE EQUIPMENT FOR SHIPMENT. LIST ITEMS ON DD FORM 1149. FORWARD COPIES 1 THRU 7 TO THE TRANSPORTATION OFFICE. SHIPPING ACTIVITY TO RETAIN COPY OF DD FORM 1149 (AFR 66-12).				
5	KUST TCTO KITS SHIPPED WITH AIRCRAFT ON AF FORM 2692 FOR TCTO KITS SHIPPED SEPARATELY. LIST ON DD FORM 1348-1 (TO 00-5-15).				
6	SIGN TRANSFER BLOCK ON AF FORM 2692 (AFR 66-12).				
7	FORWARD ALL HISTORICAL DOCUMENTS IN ACCORDANCE WITH TO 00-20-1.				
8	REMOVE COMMAND INSIGNIA IF THE VEHICLE IS BEING TRANSFERRED OUT OF THE COMMAND (TO 1-1-4).				
9	AIRCRAFT TECHNICAL ORDER FILE. -1 TO AND 06 WORK UNIT CODE MANUAL. ALSO -2, 04, -6, AND -9 IF BEING MAINTAINED (TO 00-5-1).				
10	COMPLETE AFTO FORM 290 LISTING ALL DOCUMENTS, AND TCTO KITS. HAVE PILOT SIGN AND RETAIN ONE COPY AT TIME OF PICK UP (TO 00-20-1).				
11	INITIATE COORDINATION MESSAGE AT THE TIME AND DATE THAT AIRCRAFT IS PICKED UP BY DELIVERY CREW (AFR 65-110).				
12	SUBMIT "AEROSPACE VEHICLES MOVEMENT REPORT" WHEN MOVEMENT OR ASSIGNMENT TO ANOTHER MAJOR COMMAND IS DIRECTED BY HQ USAF ESTABLISHED PROJECTS (AFR 65-110).				
13	FORWARD AF FORMS 2414 FOR ALL PARTS ON REQUISITIONS.				
14	COMMAND AND LOCAL REQUIREMENTS (Identify).				

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ITEM NO A	TASK OR FUNCTION B	DATE ACCOMPLISHED C	ACCOMPLISHED BY (Signature and Grade) D	INSPECTED OR CERTIFIED BY (Signature and Grade) E
14.				
(Cont'd)				

15. REMARKS

AFTO FORM 345, 19830101 (EF-V3) (Reverse)

Figure 9-2. AFTO FORM 345, Aerospace Vehicle Transfer Inspection Checklist and Certification (Reverse)

CHAPTER 10

MAINTENANCE HISTORICAL DOCUMENTATION

10.1 GENERAL MAINTENANCE HISTORICAL DOCUMENTATION REQUIREMENTS.

10.1.1 This chapter prescribes the requirements for historical documentation. Historical Documentation is the permanent record of significant maintenance actions on AEROSPACE EQUIPMENT, including engines, engine modules, and designated MDS specific -6 TO components. This information will accompany the equipment upon transfer, and in the case of Flight Safety Critical Aircraft Parts (FSCAP), into the disposal system.

10.1.2 Item Managers determine which items in the MDS specific -6 TO need historical reporting, and inform the SM so they can be identified for reporting.

10.1.3 Historical documentation requirements are applicable to field, organic, and contractor depot-level activities.

10.1.4 Ship historical documents with the AEROSPACE EQUIPMENT or component to disposal, storage activity, next using activity, or depot, unless otherwise directed.

10.1.5 Use the following guidelines for the documentation of historical events:

10.1.5.1 Document TCTO compliance if not recorded in the MIS. Document TCTO non-compliance due to modified or removed systems in which an AF FORM 1067 was approved by MAJCOM. All AF FORMS 1067 must be maintained in the AEROSPACE EQUIPMENT's historical files.

10.1.5.2 TCIs when not recorded in a MIS.

10.1.5.3 Removal and replacement of AEROSPACE EQUIPMENT fracture critical structure including fixed wings and stabilizers.

10.1.5.4 Remarks concerning special service test equipment installed or removed.

10.1.5.5 Data on severe corrosion, its location, extent, and treatment accomplished or required.

10.1.5.6 Circumstances regarding mishaps, the extent of damage, and repairs accomplished.

10.1.5.7 Weather damage to AEROSPACE EQUIPMENT.

10.1.5.8 Data on overstresses and hard landings.

10.1.5.9 Data on damage to fracture critical structure including fatigue-related damage, the location and extent of the damage, repairs accomplished, repair authority, repairing activity, and date of repair. Include data concerning special requirements, procedures, and intervals.

10.1.6 AEROSPACE EQUIPMENT Unique Reporting Requirements. The following reporting requirements are specific to various weapon systems.

10.1.6.1 The following engine reporting requirements will be accomplished manually if MIS is not available. (Historical documentation for parts-tracked engines (includes modular engines) will be in accordance with the 00-20-10-1 series TOs).

10.1.6.1.1 Enter the aerospace vehicle serial number, vehicle total time, and engine position on the engine record at time of installation. If the engine is not zero time, include the previous operating time.

10.1.6.1.2 Upon engine removal, enter the new vehicle total time and Time Since Overhaul.

10.1.6.1.3 The engine record contains the engine time at removal, or the time at transfer if different.

10.1.6.1.4 Bases with modular engines record the Total Operating Time and a new total low cycle fatigue. Report the engine cycles when the compressor or compressor disks are removed. Cycle records are only applicable to those engines noted in the MDS specific -6 TO. The method for determining cycles is outlined in the -1 or -2 manuals.

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10.1.6.1.5 Record the replacement of time recording devices on the historical record. Record the operating time from the removed meter, and the time on the new meter if more than zero.

10.1.6.1.6 Set the engine time to zero on the historical records for engines processed through the organic or contractor depot for overhaul.

10.1.6.1.7 Do not zero engine components having a maximum life based on cycles or time in the MDS specific -6 TO.

10.1.6.1.8 Engine historical records must contain entries for foreign object damage, internal damage, overspeed, overtemperature, or removal of components for maximum service life.

10.1.6.1.9 Record removal and replacement of engine accessories, defined as class A-2 and B-2 accessories in TO 00-20-1, the history record of the engine.

10.1.6.1.10 Supplemental historical records are required for engine components listed in the MDS specific -6 TO. These supplemental records must remain with the engine while the components are installed and must be updated and forwarded when the component is removed. These records must contain the total operating time for the component and the cycles, as applicable. The supplemental record must contain the engine serial number as well as the component serial number.

10.1.6.1.11 Document the total accumulated cycle entry for each record immediately following, and on the same line as the total time. This line should read as follows: TT _____, TSO _____, Cycles _____.

10.1.6.1.12 For modular engines, record a line entry indicating the reason for a test stand run and results historical record.

10.1.6.1.13 Initiate a history record for Quick Engine Change (QEC) kits for applicable aerospace vehicle.

10.1.7 As a minimum, document the following information for in-flight shutdowns on the engine AFTO FORM 95. Debriefing, flight crew, or maintenance aircraft coordination center will provide this information:

10.1.7.1 Low oil pressure-Include how long the engine operated at that pressure and how long engines wind milled.

10.1.7.2 Overtemps - Include maximum temperature and how long the engine operated at that temperature.

10.1.7.3 Compressor stalls, rollbacks, seizures, and flameouts-Describe under what conditions they occurred.

10.1.8 When transferring engines between units or to two-level maintenance facilities, document acceptance inspection and document all basic engine components accounted for as prescribed in TO 2J-1-24, to include quick engine change (QEC) kit items accounted for in the applicable -10.

10.1.9 C-5 Pylon reporting requirements: Enter the total accumulated equivalent power cycles (TO 1C-5A-6) at the time of pylon removal. Enter all other significant data concerning inspection results, waivers, repairs, and configuration changes when not recorded in automated systems. Equivalent power cycles are cumulative for the life of the pylon and are carried forward at overhaul or modification.

10.1.10 Propeller reporting requirements:

10.1.10.1 For propeller components indicated by the -6 TO, document the following information when installed on the aircraft: aircraft serial number, aircraft time, and engine position.

10.1.10.2 For propeller blades: record the hub serial number at time of assembly.

10.1.10.3 For all installations and removals: record the propeller end item serial number, end item time since overhaul, and time since overhaul for all components.

10.1.10.4 Record any TCTOs, special inspections, or maintenance actions performed that could have a future bearing on propeller or propeller component operation.

10.1.11 Landing gear and strut reporting requirements.

10.1.11.1 For gear installation, show the aircraft serial number, gear position, date installed, airframe time, and airframe landings.

10.1.11.2 For strut installation, show total hours installed, landings accumulated, and total time since overhaul.

10.1.11.3 Field level seal replacement, assembly and disassembly of landing gear struts/oleos are considered historical events and must be annotated on the AFTO FORM 95.

10.1.12 The historical documentation for specified helicopter components will contain both the operating time for the aircraft and the components.

10.1.13 KC-135 boom reporting requirements: Whenever a MDS specific -6 TO inspection is required, document inspection and results on boom AFTO FORM 95. Upon installation of boom, document new boom serial number on aircraft AFTO FORM 95, and aircraft tail number on new boom AFTO FORM 95

10.1.14 KC-135 MPRS pod reporting requirements:

10.1.14.1 Document all LRU changes, TCTOs, installation/removal on aircraft, etc. on pod AFTO FORM 95 (G081-9035)

10.1.14.2 Document all off-equipment maintenance on AFTO FORM 244 (GO81 8066, 9111).

10.1.14.3 Document all on-equipment maintenance, including installation on aircraft, in aircraft 781As.

10.1.14.4 Utilize local pod data sheet in aircraft forms. Complete sheet after each flight or ground maintenance.

10.1.15 For guns and gun barrels, the history record will contain the number of rounds fired.

10.2 NON-AUTOMATED PROCEDURES.

10.2.1 When MIS is not available, use the AFTO forms described in this section to collect data manually. Use enough detail to update the MIS.

10.2.2 Aerospace vehicles and engines maintained under FAA rules may use Airframe and Engine Log Books in lieu of automated history or AFTO FORM 95 as long as use is consistent. When any system or item is being shipped off-base or to DRMO, include a hard copy of the historical documentation. A historical printout from REMIS or CEMS suffices for this requirement. Applicable information provided in non-USAF log books or documents not prescribed for Air Force use will be verified and transferred to appropriate Air Force documents. Aerospace vehicles maintained to FAA certification may use FAA log books. Except when directed by SM, Air Force organizations are not required to maintain Navy log books.

10.2.3 Document engine removal or installation for fuel contamination in both aircraft and engine AFTO FORM 95, Significant Historical Data, with amount, kind of contamination, and applicable special inspection requirements.

10.3 FLIGHT SAFETY CRITICAL AEROSPACE VEHICLE PARTS (FSCAP) PROGRAM.

10.3.1 FSCAP is a joint DoD, FAA, and Coast Guard program designed to provide maintenance history with selected parts that are sent to the Defense Reutilization and Marketing Office (DRMO). The program is designed to prevent questionable parts from reentering the government or civilian aerospace vehicle market as fully serviceable items.

10.3.2 Once a part has been designated as a FSCAP item, it must be either in its original package or have the acceptable maintenance history with it when it goes to DRMO.

10.3.3 If the part is not serviceable, the owner will mutilate it beyond further use before turn-in.

10.3.4 FSCAP designated items must have either an AFTO FORM 95 or its equivalent when being sent to DRMO. If the maintenance history is not available, so indicate in the "REMARKS" section of the condition tag so supply will not request the information from maintenance. Maintenance will ensure this information is shipped with the item, if available.

10.4 AFTO FORM 95, SIGNIFICANT HISTORICAL DATA RECORD (FIGURE 10-1).

10.4.1 The AFTO FORM 95 is a document for maintaining a permanent history of significant maintenance actions on end items of equipment including but not limited to AEROSPACE EQUIPMENT. As a minimum, annotate the installation/removal dates and component accumulated hours, reason for removal and a brief narrative as to the maintenance performed on the component (e.g., unit overhauled; unit cleaned, inspected and repaired; replaced minor parts, TCTOs completed, and scheduled maintenance complied with). This information will portray those conditions that could have a bearing on future maintenance or tracking of the AEROSPACE EQUIPMENT. For engines, printed copies of AFTO FORMS 95 are not required to accompany end items upon transfer to/from locations that have access to the necessary MIS to retrieve the historical information. In the case of helicopter blades and tail rotor blades, a printed copy is required to

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accompany them into the disposal system. Enter specific information concerning maintenance actions on the 781 series forms prescribed in other chapters of this TO, however, these forms are of a temporary or specialized nature. For Communications Electronics equipment requirements see paragraph 11.6.

10.4.2 The AFTO FORM 95 or other historical records are not required on COMSEC equipment identified for limited maintenance. A limited maintenance activity is restricted to replacing plug-in elements, assemblies, or end item equipment. This equipment is identified in the applicable limited maintenance cryptographic maintenance manual. Using MAJCOMs are not authorized to perform modification on this COMSEC equipment beyond replacing complete line replaceable units or applying decals. All modifications and significant maintenance actions are performed at the depot maintenance activity. The official record of all modifications is the Mod Record Plate affixed to each component, and supportive data contained in the TCTO data files.

10.4.3 When engines are shipped to or from the depot, the maintenance facility that preserves the engine ensures that all basic engine components have been accounted for. Make an entry on the AFTO FORM 95 verifying that the basic items listed in TO 2J-1-24 have been included. This will include the name, rank, base, office symbol, and telephone extension of the person making the verification. Make a separate entry for all missing items listing the National Stock Number (NSN), nomenclature, disposition of the removed part, and justification for the missing part not being included. When MIS is used, this requirement still applies. In addition, when an engine is shipped to a depot, CAMS Transaction Identifier Code (TRIC) "SHD" will be used to obtain the automated record to accompany it.

10.4.4 Use the AFTO FORM 95 to document accumulated cycles, operating time, and maintenance history, as well as pertinent manufacturing data for jet engine turbine wheels. The manufacturer will accomplish the AFTO FORMS 95 upon delivery of turbine wheels or engines in accordance with contractual requirements. Using organizations will initiate and maintain the AFTO FORM 95 for all turbine wheels assigned. The documentation section supervisor in conjunction with the supervisor of the facility performing maintenance on the engines in which the turbine wheels are installed, will maintain the AFTO FORM 95.

10.4.4.1 The use of the AFTO FORM 95 is mandatory for certain selected afterburner/augmentors/jet engines as indicated by the applicable MDS specific -6 TO scheduled inspection and maintenance. Use the form in units where jet engines, jet engine adjustable nozzles or thrust reversers are involved in frequent rotation from one aerospace vehicle to another. When documenting afterburner data for the J-79-15/17, the installation and operating time data section will reflect sorties rather than time in the applicable blocks.

10.4.4.2 This form will normally serve as a cover sheet for the AFTO FORM 781E. However, when the type aerospace vehicle and mission dictates a different forms management procedure, carry the AFTO FORM 95 in the AFTO FORM 781 binder. When the AFTO FORM 95 is used, a new AFTO FORM 781E is not required each time the affected components are changed. This form will provide a history of previous operating time for reference use during intermediate repair when the engine documents are separated from any aerospace vehicle documents, and will facilitate updating the AFTO FORM 781E. Make entries in columns F, G, and H of the related AFTO FORMS 781E in terms of engine operating time when the AFTO FORM 95 is attached.

10.4.4.3 Use the AFTO FORM 95 to record the built-up engine weight and the weight of afterburners/ augmentors. Consult TO 1-1B-50 for the listing of certain aerospace vehicles that do not require an entry in CHART C of the weight and balance book for engines or afterburner/augmentors.

10.5 AFTO FORM 95, ENTRIES.

10.5.1 "PAGE OF PAGES." Enter the appropriate page numbers.

10.5.2 BLOCK I, "MISSION DESIGN SERIES/TYPE, MODEL AND SERIES." Enter the mission, design, series (MDS) or type designator of the AEROSPACE EQUIPMENT. Enter the part number assigned to the item. For quick-engine change kits, enter the term "QEC." For helicopter blades and tail rotors enter the NSN and part number.

10.5.3 BLOCK 2, "MANUFACTURER." Enter the name of the manufacturer. For helicopter blades and tail rotor blades, the date of manufacture will follow the name.

10.5.4 BLOCK 3, "SERIAL NUMBER." When assigned, enter the serial number of the item identified in block 1. Example: 95-1428, 89-1429.

10.5.5 BLOCK 4, "ACCEPTANCE DATE." Enter the date the equipment was accepted by the Air Force. If unknown, enter "unknown."

10.5.5.1 COLUMN A, "DATE." Enter the date the maintenance action or inspection is accomplished.

10.5.5.2 COLUMN B, "REMARKS." Enter the applicable information, using as many lines as necessary, to document significant data.

10.6 AFTO FORM 95, SPECIAL APPLICATIONS.

The MAJCOM or MXG/CC may prescribe additional uses of the AFTO FORM 95. Forms prepared and maintained for MAJCOM or MXG/CC requirements will accompany the equipment upon transfer. However, upon review of the forms package, dispose of these forms IAW AFMAN 37-139, if not required. When such forms are forwarded with the equipment to overhaul facilities, update by the overhaul facility is not mandatory.

10.6.1 Document data on the AFTO FORM 427 OR 428, AEROSPACE VEHICLE INTEGRAL FUEL TANK REPAIR HISTORICAL DATA, regarding temporary repair of fuel leaks in integral wing tanks on the forms as prescribed in TO 1-1-3.

10.7 MAINTENANCE AND DISPOSITION OF HISTORICAL RECORDS.

10.7.1 Overhaul activity personnel will, at the completion of a weapon system or component overhaul, initiate an appropriate historical record or bring the existing form up to date in accordance with the instructions outlined in this chapter. Enclose the historical records with the weapon system or component for forwarding, or attach it to the system or component.

10.7.2 If a system or component is received without the correct historical records, initiate a new form. Request the missing form in accordance with TO 00-20-1. If historical records are found separated from the AEROSPACE EQUIPMENT to which it belongs and the location of the AEROSPACE EQUIPMENT is unknown, mail the records immediately to the managing ALC IM. No historical records will be destroyed by any activity or person except when specifically authorized to do so by ALC IM.

10.7.3 Retain completed historical records on file and forward with the weapon system documents when the aerospace vehicle is transferred or the component is removed and shipped to an overhaul facility. Dispose in accordance with AFMAN 37-139.

10.7.4 Review automated and manual historical records annually and document completion. When automated records exist, the annual review will be documented in the MIS with the name of the individual performing the review. For manual records, an entry will be made stating that a review has been performed, the entry will include the printed name of the individual performing the review.

SIGNIFICANT HISTORICAL DATA			PAGE	OF	PAGE
1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE		
DATE A	REMARKS B	ORGANIZATION C			

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 95, 20020617 (EF-V2)

Figure 10-1. AFTO FORM 95, Significant Historical Data

DATE A	REMARKS B	ORGANIZATION C
<p style="font-size: 48px; opacity: 0.3; transform: rotate(-30deg);">SAMPLE</p>		

AFTO FORM 95, 20020617

Figure 10-2. AFTO FORM 95, Significant Historical Data (Reverse)

CHAPTER 11

COMMUNICATIONS-ELECTRONICS EQUIPMENT

11.1 GENERAL.

This chapter prescribes general requirements and procedures for the administration of maintenance documents, C-E equipment inspection, equipment transfers, equipment historical data, and managing maintenance of telephone and wire communications equipment.

11.2 SCOPE.

This section is applicable to all communications-electronics maintenance activities.

11.3 PRESCRIBED FORMS.

NOTE

C-E maintenance facilities with automated record systems are not required to maintain paper forms unless prescribed by other directives.

11.3.1 AFTO FORM 95, SIGNIFICANT HISTORICAL DATA

11.3.2 AFTO FORM 121, LINE RECORD

11.3.3 AFTO FORM 224, CABLE RECORD

11.3.4 AFTO FORM 233, CABLE TRANSFER WORK SHEET

11.3.5 AFTO FORM 376, CIRCUIT LAYOUT RECORD/TROUBLE REPORT

11.4 GENERAL ADMINISTRATIVE DOCUMENTATION PROCEDURES.

11.4.1 USE OF PRINTED CHARACTERS. All entries on maintenance and historical documents, with the exception of signatures or personal stamps, will be typed or printed when available, electronic signatures are authorized. Signatures will also be typed or printed if copied by an individual other than the original signer. The handwritten entries on maintenance documents will be made in black (pencil or ball point pen), unless otherwise specified. Maintenance documents will be legible, complete, correct, and clean. Manual forms entries require a minimum signature for maintenance personnel certifying entries on forms governed by this Technical Order (TO). The minimum signature will be first name initial, last name, and employee number or equivalent. AFMC Depots may use a production stamp in place of the employee number. Electronic signatures may be used in lieu of the above requirements.

11.4.2 USE OF ABBREVIATIONS. Abbreviations in this series TOs may be used for any word or term frequently used in making entries on documents.

11.4.3 TRANSFER OF DOCUMENTS. When equipment is transferred to another organization, the responsible maintenance or supply supervisor will ensure that all current maintenance and historical documents or computer generated equivalents accompany the equipment or are forwarded to the new activity in hard copy or electronically, no later than the same day that the transfer is affected. When end items which require separate historical files are transferred as separate units, the applicable documents will be placed in a waterproof envelope and will be securely attached to the component, item, or container. If the item is not packaged or crated, the waterproof envelope will be securely attached to the item in a location that will provide the best protection from exposure to the elements and prevent loss during handling. Computer to computer document transfer is preferred.

11.4.4 FILING.

11.4.4.1 Establish and maintain an individual historical file, in accordance with AFMAN 37-139, for each designated equipment end item per applicable Air Force directive. Centrally locate historical document files in the documentation activity of the unit possessing the equipment. Online computer systems are considered centrally located files in the 00-20-

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series TOs. The Chief of Maintenance (CoM) may authorize decentralized files. When files are decentralized the documentation supervisor will provide assistance to the work centers as prescribed in applicable 21-series instructions.

11.4.4.2 Include hard copy or electronic historical document files for subsystems and components in equipment end item files, or maintain them in a separate file. Consolidate files for non-complex items into a single folder or a series of folders. Each individual file will contain historical documents, operational data, maintenance status documents, and reports that reflect current status.

11.4.4.3 Computer generated forms in these files may contain a difference in format, but must contain all required information.

11.4.5 DISPOSITION OF DOCUMENTS. Dispose of maintenance documents in accordance AFMAN 37-139 and this technical order. To support preparation of Deficiency Reports (DR), TO 00-35D-54, DD FORMs 1574, SERVICEABLE TAG-MATERIEL for items having a high failure rate, may be retained IAW AFMAN 37-139 for a period of 30 days. Establish local procedures for the selection of the items and for the location, filing, and maintenance of supporting documents.

11.4.6 MISSING DOCUMENTS. When equipment is received and the historical documents are missing or contain incomplete information, the receiving organization will immediately notify the shipping/losing organization. The shipping/losing organization will promptly forward the missing documents or provide all available information for completion of the documents or for initiation of new documents. When the documents cannot be located, and the asset serviceability cannot be readily assessed, contact the applicable ALC SM through the MAJCOM for disposition instructions.

11.4.7 DOCUMENTING MAINTENANCE DURING EXTENDED EQUIPMENT STORAGE.

11.4.7.1 Maintain documents with the equipment or in the appropriate documentation activity or system. Prepare up-to-date maintenance and historical files for each piece of equipment being returned to service.

11.4.7.2 When equipment is in extended storage at a depot facility, the responsible inspector will record all applicable technical orders released during the storage period. Equipment containers need not be opened solely to make entries on the maintenance or historical documents.

11.4.7.2.1 For equipment, post these entries on the applicable condition tag, or label attached to the item or container for subsequent transfer to the maintenance and historical documents. Forward the TCTO data reflecting current applicability.

11.4.7.2.2 When equipment is removed from storage, the removing organization will review TCTO data, or the maintenance and historical documents, as required, to ensure that they are current and accurate, and that all outstanding TCTOs are listed on the applicable forms.

11.4.7.3 When equipment is maintained in extended storage at an organization or activity, the CoM may request a waiver from the TCTO manager on a case-by-case basis. All waivers must be maintained in the equipment's historical documents.

11.4.8 PROCESSING OF DOCUMENTS DURING DEPOT MAINTENANCE. Documents will be processed in accordance with TO 00-25-108 and the 00-20-series TOs. Personnel preparing organic or contract work statements will assure that the provisions of these TOs are included in all applicable maintenance contracts.

11.4.9 DATE ENTRIES. Manually record all dates on the forms prescribed in the 00-20-series TO by eight digits in the order of year, month, and day. Example: YYYYMMDD, 20001208 for 8 Dec. 2000. Approved automated forms in information systems may deviate from this procedure based upon system standards. Hand written formats may follow the format of the automated system.

11.4.10 ELECTRONIC SIGNATURES. Electronic signatures to sign off maintenance documentation are approved for maintenance automated systems where the records are protected with passwords and IDs, and authorization is password limited to those individuals as outlined in the 00-20-series TOs or other directives.

11.5 MAINTENANCE INSPECTION POLICY.

11.5.1 PLANNED INSPECTION AND MAINTENANCE CONCEPT. The planned inspection and maintenance concept provides a method of performing required inspections and repairs on a scheduled and planned basis. This planning and scheduling is required for periodic inspections and major maintenance to effectively use assigned manpower. Publication of inspection workcards, if applicable, also provide a degree of planning and scheduling for other inspections.

11.5.2 DESCRIPTION AND MAINTENANCE OF INSPECTION WORKCARDS. The inspection workcards outline the minimum inspection requirements and provide technicians with a convenient inspection guide. They list the requirements to be performed and reflect the most logical sequence for accomplishment. Each workcard also contains other pertinent information to indicate, when the work is scheduled, how much time is allotted, the work area, and electrical power requirements. The use of workcards permits work to be programmed for uninterrupted task accomplishment. This affords planned use of personnel, early detection of discrepancies, and more accurate planning for the accomplishment of the required repair work.

11.5.2.1 Each SM determines the minimum scheduled inspection requirements for assigned weapon systems and is responsible for ensuring these requirements stay current. The requirements are published in the MDS specific -6 TO and are prepared and maintained by the SM in collaboration with the Lead and MAJCOMs. TO 00-5-1 classifies workcards as technical publications, requisition and distribution of workcards will be in accordance with TO 00-5-2.

11.5.2.2 AFTO FORM 26D, INSPECTION WORKCARD (Figure 6-1) are available through normal publication channels to permit local preparation of replacement workcards for those that become unserviceable. Local reproduction of the forms is authorized. The AFTO FORM 26 is intended to be a 5"x 8" document, printed two to a page. This document should be trimmed to appropriate size to fit the needs of the user. These forms are also provided to permit the preparation of additional workcard sets for equipment that does not have published inspection workcard sets. Activities possessing equipment without workcard sets must contact the SM through their MAJCOM to determine whether they will or will not be provided before any action is taken to prepare inspection workcard sets locally.

11.5.2.3 When inspection requirements pertain to systems or components that are not installed on locally maintained equipment, QA may line out the nonapplicable requirements and enter "NA" in the margin. Adjust the "CARD TIME" block as necessary when such changes are made. When entire cards do not pertain to locally maintained equipment, QA may authorize the deletion of non-applicable workcards for all sub-accounts.

11.5.2.4 Scheduled inspection requirements specified in publications other than the MDS specific -6 TO are not applicable to components in an installed status and may be disregarded. Inspection requirements for components not installed are contained in the commodity and equipment manuals. If inspection requirements for installed items are listed in publications other than the MDS specific -6 TO, bring them to the attention of the SM, who will take action to delete the inspection requirements from the commodity and equipment manuals or have them transferred to applicable MDS specific -6 TO scheduled inspection and maintenance.

11.5.2.5 Enter additional inspection requirements necessary due to local conditions, such as mission types, special utilization, or geographic locations, on locally prepared inspection workcards.

11.5.3 SCHEDULED MAINTENANCE INSPECTIONS.

11.5.3.1 Scheduled maintenance inspections for communications-electronics equipment include periodic, programmed depot maintenance (PDM), and transfer inspections. They are accomplished in accordance with the applicable inspection manuals, inspection workcards, Air Force Communications Electronic Maintenance Instructions (AFCEMI), or repair manuals

11.5.3.2 The scheduled inspection intervals are used to develop user level master inspection schedules. All requirements pertaining to inspections will normally be accomplished concurrently to avoid complications in scheduling and controlling the required maintenance.

11.5.3.3 The intervals specified for scheduled maintenance inspections and recurring supplementary inspection requirements represent the maximum interval between accomplishment of such requirements. Therefore, these intervals will not be exceeded without authority from the SM. The Chief of Maintenance establishes the necessary controls to assure that periodic inspections are accomplished at or near the scheduled due time and is only authorized to deviate from the unit inspection schedules in accordance with AFI 21-116. The SM will, in coordination with the using command, schedule the PDM inspections at, or prior to, the scheduled due time in accordance with TO 00-25-108.

11.5.3.4 MAJCOMs may authorize certain C-E equipment to use modified inspection workcards during contingencies and increased readiness conditions. The SM approves these deviations in collaboration with the Lead Command, for use only during specified periods. Care must be taken to ensure that all items that would impact equipment or personnel safety, or reduce equipment reliability are inspected. These workcards will be designed for use during a limited period of time as authorized by the MAJCOM. The normal inspection workcards will be accomplished upon termination of the contingency, increased readiness, or at the expiration of the authorized usage period as directed by the MAJCOM.

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11.5.3.5 The CoM may increase the frequency or scope of scheduled inspections or individual inspection requirements when required. This may involve special utilization, short-duration special missions, or environmental conditions. Permanent changes to prescribed inspection requirements, as well as changes to inspection intervals or concepts, will be accomplished through analysis of maintenance data collected. In these cases, prepare and submit recommendations through the MAJCOM to the applicable SM for approval and inclusion in appropriate technical orders.

11.5.3.6 Maintenance personnel will assure that equipment is properly serviced and safe for use prior to dispatch and operation. It is the responsibility of the work center supervisor in conjunction with Maintenance Control to ensure the accuracy and completeness of the documents prescribed by this technical order.

11.5.3.7 Inspection of equipment for which no inspection workcards are published will be based on sound maintenance practices. (Shelters used as radomes and vans requiring cursory inspections as reflected in applicable maintenance TO will be used in lieu of dash 6 inspections.) The CoM will determine if local checklists and/or workcards are required for this equipment, and if so, ensure that they are developed in accordance with the instructions contained in the AFI 21- 116, TO 00-5-1, and the 00-20- series TOs.

11.5.3.8 The equipment status may be upgraded to a Red Condition (Not Mission Capable (NMC)) for a deficient condition not corrected prior to the next periodic inspection due date.

11.5.3.9 PERIODIC INSPECTION (PI).

11.5.3.9.1 The PI is due upon accrual of the number of operating hours, or at the expiration of a calendar period as specified in the applicable AF directive. A periodic inspection may take one of the following forms servicing, operator, special, or scheduled lubrication.

11.5.3.9.2 SERVICING INSPECTION. This inspection is basically an equipment condition inspection outlined by the workcards. This inspection usually is accomplished in conjunction with equipment servicing, following major/minor maintenance (except bits and pieces and/or hardware that do not affect serviceability) or prior to placement on the ready-line

11.5.3.9.3 OPERATOR INSPECTION. This inspection is accomplished to ensure serviceability and safety of the equipment prior to use. It consists of general visual inspections and/or reviews of system monitoring devices. The operator inspection is the responsibility of the user. The operator inspection may be documented at the option of the CoM, however, defects discovered will be recorded on the applicable maintenance forms.

11.5.3.9.4 SPECIAL INSPECTION. Special inspections are prescribed in the applicable inspection workcards. Special inspections of a one-time or short duration nature may also be directed through TOs, TCTOs, MAJCOM or local directives.

11.5.3.9.5 SCHEDULED LUBRICATION. The periodic lubrication requirements are accomplished upon accrual of specified operating hours or at expiration of a calendar period. Scheduled lubrication requirements that are separate from scheduled inspections will be recorded. These requirements are included in the applicable inspection manuals or workcards.

11.5.3.10 PROGRAMMED DEPOT MAINTENANCE (PDM). PDM is an inspection requiring skills, equipment or facilities not normally possessed by operating locations. Individual areas, components and systems are inspected to a degree beyond MDS specific -6 TO inspections. Field level tasks may be accomplished at PDM if their accomplishment is economically feasible. PDM is normally accomplished at the recommended interval established in TO 00-25-108, Table 2-1. PDM primarily occurs through one of four basic methods: Cyclic Exchange, Mobile Depot Maintenance, Technology Repair Centers, or Shelter Corrosion Prevention Mobile Depot Maintenance.

11.5.3.11 EQUIPMENT TRANSFER INSPECTION REQUIREMENTS.

11.5.3.11.1 IN-PROCESS INSPECTIONS. An inspection performed during the assembly or reassembly of systems, subsystems, or components. Use in-process inspections as a local management tool to ensure quality maintenance. MAJCOMs will establish an effective in-process inspection program, to include documentation procedures, in their maintenance directives.

11.5.3.11.2 ACCEPTANCE INSPECTIONS. The receiving organization will perform an acceptance inspection on all newly assigned equipment prior to placement into service. Accomplish the inspection on all equipment received from depot maintenance, either organic or contract, prior to being placed in service. These inspections will be of sufficient depth to determine the equipment's serviceability including the condition of the equipment documents. Record this inspection on the appropriate documents and ensure the appropriate information system, CAMS, or IMDS is updated. The discrepancies will also be entered into the Deficiency Reporting Base IAW TO 00-35D-54.

11.5.3.11.3 TRANSFER INSPECTION. When equipment is transferred, the transferring organization will accomplish all inspections necessary to assure that the equipment is operational, has not exceeded the uniform repair/replacement criteria, and that the equipment and documents are complete. The transfer inspection will include a functional check to assure proper performance and a physical inventory. If more than seventy-five percent of any inspection interval has elapsed since the last periodic inspection, the transferring organization will accomplish the next inspection due unless the equipment is being transferred to the Depot. Completion of the transfer inspection will be entered in the equipment historical records and a copy of the inspection will also be placed in the equipment historical file.

11.5.3.12 WRM/MOBILITY INSPECTION. Perform all inspections on equipment to be included in war reserve material (WRM) or mobility kits prior to storage. Reinspect at 18-month intervals on equipment kept outside and 24-month intervals on equipment kept inside.

11.5.3.13 INSPECTING EQUIPMENT IN STORAGE OR NOT IN USE

11.5.3.13.1 Mandatory scheduled inspections due at intervals of less than 56 days are waived for all equipment that is in a stored and/or inactive status. Instead, these inspections will be accomplished at a minimum of once every 56 days.

11.5.3.13.2 PMIs due at intervals of 56 days or greater, will continue to be performed at their designated interval. When an item of equipment requires multiple interval inspections on the same day, such as a 7-, a 14-, and a 28-day inspection, the inspections of lesser intervals will be accomplished as part of the longer interval and documented as one inspection.

11.5.3.13.3 All equipment that has a maintenance suspension caused by a Class T-1 or T-2 modification that renders the equipment non-operational is granted a waiver from performing PMIs when the following conditions are satisfied.

11.5.3.13.3.1 Not economically feasible to remove by modification.

11.5.3.13.3.2 No foreseeable operational requirement.

11.5.3.13.3.3 No requirement for like equipment in other operational systems.

11.5.3.13.3.4 Periodic cleaning and corrosion control are still required and procedures will be established in accordance with AFI 21-116, paragraph 6.6.9.

11.5.3.14 CONDITIONS FOR WAIVING C-E EQUIPMENT INSPECTIONS

11.5.3.14.1 The CoM may waive the accomplishment of scheduled inspections under the conditions listed below. When daily scheduled inspections are not performed the MDC Master ID Listing will be annotated to reflect the exemption.

11.5.3.14.1.1 Work centers responsible for maintenance in facilities at locations where 24-hour manning is not authorized and those locations that are manned for a 40 hour work week:

11.5.3.14.1.1.1 May waive daily PMIs on Saturday, Sunday, holidays, and at unmanned communications sites.

11.5.3.14.1.1.2 Seven-day or higher interval PMIs may be performed on the last day preceding or the next working day following a PMI scheduled on a holiday. Under these circumstances, the MIS PMI schedule will not have to be readjusted.

11.5.3.14.1.1.3 Inspection requirements with an interval of less than 168 days may be done as determined by the MAJCOM if manpower or equipment constraints exist.

11.5.3.14.1.2 At ANG or AFRC activities where equipment is used, strictly for training purpose (no operational requirement exists) the maintaining organization need only perform the scheduled inspections at 168 day intervals.

11.5.3.14.1.3 During deployments of 56 days or less, scheduled PMIs of 168 days or less may be waived when the inspection is accomplished during the pre-deployment inspection.

11.5.3.15 APPLICABILITY OF CONTRACTOR'S ACCEPTANCE MARKINGS AND DECALS. In many instances, inspection acceptance markings and decals are used by contractors during the manufacture, repair, and assembly of weapon systems and equipment. Those commonly used markings are in the form of decals placed over the edges of inspection openings, plastic materials formed over hose and line fittings, and paint stripes on bolts and studs. After the equipment is delivered to an Air Force activity, these markings and decals will be considered meaningless. In no case will they be considered as authority or reason for noncompliance with Air Force technical publications that direct inspection and maintenance.

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11.5.3.16 INSPECTION RESPONSIBILITY FOR WORK ACCOMPLISHED AT OPERATING LOCATIONS OR STATIONS BY DEPOT OR CONTRACTOR TEAMS. When modifications are accomplished on equipment items at the operating organization by depot or contractor teams, the following policies apply in respect to inspection of work accomplished:

11.5.3.16.1 Inspection of work performed by a depot field team is the responsibility of the ALC responsible for the work. However, a support ALC may assign the responsibility to the depot team that performs the work. If depot QA personnel do not accompany depot field teams, the ALC negotiates with the using MAJCOM for QA inspections and will include this in the workload agreement.

11.5.3.16.2 Inspection and acceptance of contractor field team work by base maintenance personnel is in accordance with agreements made between the ALC and the using MAJCOM. When the base does not have the capability to perform QA and acceptance inspections, the ALC provides or arranges for support.

11.5.3.17 TIME COMPLIANCE TECHNICAL ORDERS (TCTO).

11.5.3.17.1 The CoM is responsible for ensuring the timely accomplishment of TCTOs affecting assigned equipment and will establish controls to ensure equipment is removed from service IAW TO 00-5-15.

11.5.3.17.2 Additional procedures for processing TCTOs are contained in AFI 21-116 and TO 00-20-2.

11.5.3.18 TIME-CHANGE ITEM (TCI) REPLACEMENT POLICIES.

11.5.3.18.1 Items designated as TCIs are replaced at specified intervals. The primary objective of the time-change replacement program is to achieve maximum utilization of components consistent with the economic operation of equipment without jeopardizing operational safety.

11.5.3.18.2 Time-change replacement requirements are prescribed only for those items that have a measured service life expectancy and that display an age related failure pattern, (e.g. a failure pattern that rises sharply at some given operating time or age of an item). Additionally, the item must fall into one or more of the following categories to be a valid candidate for time-change replacement:

11.5.3.18.2.1 Items whose failure due to location or function within a system would compromise the operational safety of ground equipment.

11.5.3.18.2.2 Items whose failure due to location or function within a system would definitely cause ground equipment failures that would create excessive downtime for mission critical items.

11.5.3.18.2.3 Items for which a failure might cause damage beyond economical repair.

11.5.3.18.2.4 Items whose physical characteristics allow an accurate prediction of deterioration from calendar time or hours in operational use.

11.5.3.18.3 The replacement schedule of the MDS specific -6 TO scheduled inspection and maintenance, or inspection workcards are the only authority for the scheduled replacement interval of accessory and components, except for the following deviations:

11.5.3.18.3.1 The MDS specific -6 TO or inspection workcards will make note of each listed item and reference the applicable commodity series TOs which will serve as authority if in conflict with the MDS specific -6 TOs or workcards.

11.5.3.18.4 Replacement intervals for any specific item are based on the equipment installation and utilization, rather than being a general replacement interval for all applications. Therefore, the replacement interval for an identical item may vary considerably across equipment end items.

11.6 MAINTENANCE HISTORICAL DOCUMENTATION.

11.6.1 **NON-AUTOMATED PROCEDURES.** When automated data systems are not available, collect data manually in such detail that automated systems may be updated, when practical. Only if an automated system is not available, use the AFTO FORMS described in this section. When any system or item is being transferred include a hard copy of the historical documentation.

11.6.2 **C-E MAINTENANCE HISTORICAL DOCUMENTATION.**

11.6.2.1 **APPLICABILITY.** The AFTO FORM 95 is a document for maintaining a permanent history of significant maintenance actions on end items of equipment including designated MDS specific -6 TO components. The AFTO FORM 95 will be maintained on specifically identified end items listed in CAMS (screen 126 TRIC:QCC) and command supported equipment designated by MAJCOMs. In addition, an AFTO FORM 95 will be initiated upon issuance of the first TCTO or the occurrence of the first maintenance condition or incident requiring data entries.

11.6.2.2 The following additional instructions apply to C-E equipment maintained by units with mobile communication equipment and mobile communications groups.

11.6.2.2.1 One AFTO FORM 95 will be maintained on each mobile facility to record significant historical data; however, in cases where a facility is comprised of more than one van, an AFTO FORM 95 will also be maintained on each van. An AFTO FORM 95 will be maintained on each end item of equipment not permanently assigned to a van or facility and should these items be permanently transferred to a van, all entries will be transcribed to the document for the assigned van. Items permanently removed from a van will require initiation of new documents and transfer of pertinent information.

11.6.2.2.2 When a centralized file is maintained, a duplicate copy of historical documents will accompany all deployed equipment and appropriate entries will be accomplished on the documents while deployed. When the equipment is returned to the home station, the original documents will be updated. If job control, maintenance control, or the work center maintaining the centralized files deploys with the equipment, then the centralized original files may be taken and not duplicated. When a decentralized system is maintained, the duplication process is not required if the original historical documents accompany the equipment when deployed.

11.6.3 At a minimum, the following actions require entries on an AFTO 95.

11.6.3.1 Accomplishment of depot level maintenance. A responsible agent at the depot repair facility or the team chief of an on-site maintenance team will enter a description of depot level maintenance performed. For non-operational COMSEC equipment in storage at the USAF Cryptologic Depot. The following policies apply:

11.6.3.1.1 When historical documents don't exist on equipment to be placed in storage, they need not be initiated.

11.6.3.1.2 Historical documents for items placed in storage need not be maintained if maintenance or modification of the equipment does not occur.

11.6.3.1.3 When items are removed from storage for return to the active inventory or are forwarded to another agency or country for use. The historical documents must be completed to reflect the current configuration of the item. Any maintenance or modifications required to return the item to service should be indicated on appropriate historical documents at that time.

11.6.4 The installation of end items of equipment together with any variances from the installation criteria specified in the equipment technical orders of installation manual. If the facility or equipment requires a flight check before commissioning, the initial flight check data will be entered, together with any significant maintenance actions that were required to pass initial flight check.

11.6.4.1 The removal or decommissioning of end items of equipment and the date the equipment was packed for shipment or the date the equipment was placed in storage as applicable.

11.6.4.2 The removal and replacement of items resulting from excessive contaminants discovered through the Spectrometric Oil Analyzed Program (SOAP).

11.6.4.3 Remarks concerning special service tests, and special test equipment installation and removal are required.

11.6.4.4 Information concerning severe corrosion, its location, extent, and treatment required or accomplished.

11.6.4.5 All circumstances regarding accidents or incidents. The extent of damage and repairs accomplished.

11.6.4.6 Significant maintenance action and circumstances involving emergency maintenance accomplished by depot, Engineering, and Installation (E-I) or contractor maintenance personnel.

11.6.4.7 Maintenance action performed that may have historical value to a unit gaining the equipment i.e., chronic maintenance problems and all equipment rehabilitation actions. The replacement of work unit coded subassemblies may be recorded if considered historical significance.

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11.6.4.8 Time Compliance Technical Order (TCTO) actions, when not under the mechanized system (TO 00-5-15. Section II).

11.6.4.9 An annual review of historical records will be conducted on AFTO FORM 95 to indicate that they are accurate and current.

11.6.5 AFTO FORM 95, SIGNIFICANT HISTORICAL RECORD (FIGURE 11-1).

11.6.5.1 As a minimum, annotate the installation/removal dates and component accumulated hours, reason for removal and a brief narrative as to the maintenance performed on the component (i.e., unit overhauled; unit cleaned, inspected and repaired; replaced minor parts, TCTO's completed, and scheduled maintenance complied with. This information should portray those conditions that could have a bearing on future maintenance or tracking of the equipment/component. The AFTO FORM 95 is a permanent document of those significant actions and provides the maintenance organization with a life profile of the item. As a minimum, this information should portray those conditions that could have a bearing on future maintenance of the equipment.

11.6.5.2 (MDS) or type designator of the weapon system or equipment. Enter the part number assigned to the item.

11.6.5.3 BLOCK 2, "MANUFACTURER." Enter the name of the manufacturer.

11.6.5.4 BLOCK 3, "SERIAL NUMBER." When assigned, enter the serial number of the item identified in block 1. Example: 85-1428, 64-14828.

11.6.5.5 BLOCK 4, "ACCEPTANCE DATE." Enter the date the equipment was accepted by the Air Force. If unknown, enter "unknown."

11.6.5.6 COLUMN A, "DATE." Enter the date the maintenance action or inspection is accomplished.

11.6.5.7 COLUMN B, "REMARKS." Enter the applicable information, using as many lines as necessary, to document significant data.

11.6.6 AFTO FORM 95, SPECIAL APPLICATIONS.

11.6.6.1 The MAJCOM or Chief of Maintenance may prescribe additional uses of the AFTO FORM 95. Forms prepared and maintained for MAJCOM or CoM requirements will accompany the equipment upon transfer. However, upon review of the forms package, dispose of these forms IAW AFMAN 37-139, if not required. When such forms are forwarded with the equipment to overhaul facilities, update by the overhaul facility is not mandatory.

11.6.6.2 Overhaul activity personnel will, at the completion of an equipment or component overhaul, initiate an the appropriate historical record or bring the existing form up to date in accordance with the instructions outlined in this chapter. Enclose the historical records with the weapon system or component for forwarding, or attach it to the system or component.

11.6.6.3 If a system or component is received without the correct historical records, initiate a new form. Request the missing form in accordance with TO 00-20-1. Refer to Figure 10-1, AFTO FORM 95, Significant Historical Data

11.7 TELEPHONE AND WIRE MAINTENANCE DOCUMENTS.

11.7.1 AFTO FORMS 224, 224A, AND 224B CABLE RECORD (Figures 11-1 and 11-2). AFTO FORM 224 series will be maintained for each cable plant and will contain both permanent and temporary entries. The only differences between the forms of the series are in the location of tabs and in the pair numbers printed on the forms. Entries are:

11.7.1.1 PERMANENT ENTRIES. The following are permanent entries:

11.7.1.1.1 PAIRS. Enter the cable count in the PAIRS block of the tabs.

11.7.1.1.2 CABLE. Enter the cable number at the top of the form.

11.7.1.1.3 OFFICE. Enter the name or number of the office.

11.7.1.1.4 TER LOC. Enter the terminal locations. Terminals should be entered consecutively by cable pair counts beginning with the terminal with the lowest count which is normally most distant from the central office and continuing through the cable record to the terminal with the highest count which is normally nearest the central office.

11.7.1.1.5 TERM NUMBER. Enter the terminal number.

11.7.1.1.6 TERMINAL LOCATION. Draw a solid line to show the terminal count distribution for each terminal. The solid lines from pair 1901 to pair 1950 show the terminal count distribution for terminals P01C132 and P01C133. When terminal information is continued to succeeding pages, draw arrows to indicate information for that terminal is covered on another form. For example, terminal P01C133 extends beyond pair 1950.

11.7.1.1.7 PAIR COLUMN. Enter the appropriate hundred digits in the first and last cable pair number of the Page.

11.7.1.1.8 CABLE TRANSDUCER SYSTEMS. On cable pairs used in conjunction with a transducer, draw a horizontal line (in ink) from the pair number block through column 21. Document location of transducer in remarks column 22, 23 and 24.

11.7.1.2 TEMPORARY ENTRIES. The temporary entries will be printed in pencil and are as follows:

11.7.1.2.1 DATE VERIFIED. When a survey is completed, enter the date of the survey.

11.7.1.2.2 HELD ORDERS. Enter any service orders being held for facilities in the cable count covered by this page. The entries made should consist of the date of the work order, the order number, the terminal number and the class of service requested.

11.7.1.2.3 WIRED OUT OF LIMITS. Spaces are provided for recording those cases where, because of congested facilities, a station is wired out of limits and is being served from a terminal other than the one nearest the address. When the station is served either by a different cable or from a terminal that is covered on another form, it is necessary to make the same entries on the two forms concerned. Enter the cable number and pair number of the circuit as wired and enter the cable number, pair number and terminal number, as it should be wired.

11.7.1.2.4 CONNECTED TO. When cables are cross-connected, enter in the column the subsidiary cable number to which the cable has been cross-connected. In the PAIR column, enter the number of the pair in the subsidiary cable number to which the primary cable has been connected.

11.7.1.2.5 SERVICE. Enter the class of service used. The type of service shall be shown by an entry in the SERVICE column in all cases using AFI 33-111 definitions. The following abbreviations are for general use. BAT - Battery feed GEN - Generator feed TRK - Trunk circuit LD - Toll circuit TWX Teletypewriter exchange

11.7.1.2.6 TELEPHONE NUMBER. Enter the telephone number or circuit number on the line in the left TELEPHONE NUMBER. column, opposite the cable pair of the terminal to be used. The right column will be used for the second number of two party services. If additional space is required for a cable pair entry, use the remarks column. For unusable cable pairs, enter the trouble in the left number column and the date declared bad in the right number column.

11.7.1.2.7 TERM NUMBER/TERMINAL LOCATION. The terminal out of which the pair works will be indicated by placing an "X" in the terminal location column opposite the proper pair entry. The cross connect will be indicated by placing a slash in the terminal location opposite the proper pair entry. When a telephone number or circuit is disconnected, erase the telephone number or circuit number and all related information concerning it, including the "X" in the terminal location column.

11.7.1.2.8 Explanation of the sample entries under the heading TELEPHONE NUMBER. in figure 3 showing class of service entries, are listed below.

11.7.1.3 Telephone number 2716 assigned on pair 01 with class A1A telephone service.

11.7.1.4 Telephone number 4112 assigned on pair 02 with class A1A telephone service is wired out of limits as indicated by the abbreviation "WOL" (wired out of limits) in the remarks column and by the entries in the WIRED OUT OF LIMITS block.

11.7.1.5 Telephone number 3275 assigned on pair 03 with class C1 telephone service.

11.7.1.6 Telephone numbers 8103 and 8303 are two-party stations with class B2 telephone service.

11.7.1.7 A generator is assigned on pair 05 as circuit number 2G5738.

11.7.1.8 A battery is assigned on pair 06 as circuit number 2G5738.

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11.7.1.9 A trunk number 62GX1 is working on pair 07 out of terminal PO1C133.

11.7.1.10 Common Batt. 3029 is working through pair 08 and a slash (/) symbol is entered. Note that entries made on the AFTO FORM 224 for the 0807 cable, pair 17, will reflect that the pair is working out of that terminal.

11.7.1.11 Fire phone number 30 is on pair 09.

11.7.1.12 Teletypewriter circuit 8079 is on pair 10.

11.7.1.13 Speaker number 1 is working on tip, and number 2 is working on ring of pair 12.

11.7.1.13.1 Defective pairs are indicated by entering the nature of the trouble in the TELEPHONE NUMBER. column or terminal location. A circle indicates a defective binding post which may be repairable and a dot indicate a defective binding post which is beyond repair. Examples of defective pair entries are described in the following paragraphs and shown in figure 3-4.

11.7.1.13.1.1 PAIR 21. Grounded pair on the tip side, T-GND. (R-GND is used for grounded on the ring side. GND is used for grounded on both sides.)

11.7.1.13.1.2 PAIR 22 and PAIR 28. Pair 22 is crossed with pair 28.

11.7.1.13.1.3 PAIR 23. Pair 23 is shorted.

11.7.1.13.1.4 PAIR 24. Universal bad pair.

11.7.1.13.1.5 PAIR 25. Open.

11.7.1.13.1.6 PAIR 26. Pair 26 is split with Pair 35.

11.7.1.13.1.7 PAIR 29. Open in the terminal indicated but it does not affect the pair in the other terminals. This entry may be made in the REMARKS column.

11.7.1.13.1.8 PAIR 32. This is a defective binding post which may be repairable.

11.7.1.13.1.9 PAIR 37. This defective binding post is beyond repair.

11.7.2 MAINTENANCE OF CABLE DOCUMENTS. It is essential that the cable documents be kept current and that discrepancies be investigated and corrected without delay. This will prevent difficulties in fault finding and preclude incorrect repairs caused by erroneous records.

11.7.3 AFTO FORM 376, CIRCUIT LAYOUT RECORD/TROUBLE REPORT (FIGURES 11-3 and 11-4). This form will be used to record information on all special circuits such as fire reporting telephones, sirens telegraph or teletypewriter circuits or sprinklers. For some circuits it may be desirable to include a sketch to indicate its detailed layout. The front and back of the card have space for this purpose. Form entries are as follows:

11.7.3.1 CCT. Enter the circuit number or circuit designation in ink.

11.7.3.2 OPERATION. Enter the method of operation, such as 2-way ringdown, dial line and so forth.

11.7.3.3 CLASS. Enter the class of service or the type of circuit, such as TWX, MAG, CB. Classes of service and abbreviations are contained in AFI 33-111.

11.7.3.4 CARD NUMBER. When the record for a circuit requires the use of two or more forms, the forms comprising the record will be numbered in numerical sequence beginning with 1 and showing the total number of forms used, i.e., 1 of 4, 2 of 4.

11.7.3.5 USER. Enter the name of all users of the circuit.

11.7.3.6 LOCATION. Enter all building numbers where the circuit/equipment is located.

11.7.3.7 DATE IN EFFECT. Enter the date the circuit was placed in service.

11.7.3.8 AUTHORITY FOR INSTALLATION. Enter the service order number and/or other authority, which authorized this circuit, such as, Telecommunications Service Order (TSO).

11.7.3.9 CONTROL OFFICE. Enter the name and telephone number of the office having service responsibility for the entire circuit.

11.7.3.10 NOTES OR DRAWINGS. Enter any information that would be useful for establishing and maintaining the circuit.

11.7.3.11 FROM AND TO. Enter the points where the circuit is run. The first entries should be in consecutive order beginning with the first user station.

11.7.3.12 CABLE. Enter the designation of the cable or line over which the circuit is routed.

11.7.3.13 PAIR. Enter the cable pair used in completing the circuit for the cable designation shown in the preceding column.

11.7.3.14 Enter all reported troubles and repair action on the reverse side of the form. This data will include the date (day, month and year), time and location of the reported trouble and the name of the person who reported the trouble. It will also contain the date (day, month and year), time, and initials of the repairman when the required maintenance actions are completed.

11.7.4 AFTO FORM 233, CABLE TRANSFER WORK SHEET (FIGURE 11-5). This form will be used to record information pertinent to cable and terminal transfer work. It may also be used to record the buildup/teardown of complex facilities. Entries are as follows:

11.7.4.1 Enter the cable number.

11.7.4.2 CROSS CONNECTION LOCATION. Enter the location of each cross-connect in sequence.

11.7.4.3 COUNT. Enter the cable pairs affected by the transfer.

11.7.4.4 WORK BY. Enter the initials of the person doing the work at the corresponding cross-connect location.

11.7.4.5 TEST OFFICE and TELEPHONE NUMBER. Enter the name and telephone number of the control office that will perform the necessary test function.

11.7.4.6 CSA. Enter the communication service authorization number or other contract number.

11.7.4.7 WORK ORDER NUMBER. Enter the work order identification number.

11.7.4.8 WRITTEN BY. Enter the initials and the telephone number of the person originating the cable transfer work sheet.

11.7.4.9 DATE. Enter the date the cable transfer work sheet is prepared.

11.7.4.10 PAGE NUMBER. Enter applicable page number in sequence.

11.7.4.11 COMPLETE (BEFORE-AFTER). Cross out either before or after and enter the appropriate date.

11.7.4.12 FLD START DATE. Enter the date the work will start.

11.7.4.13 FRAMEWORK. Indicate whether or not framework is required.

11.7.4.14 DESCRIPTION OF WORK. Enter an abbreviated description of the work to be performed.

11.7.4.15 ITEM NUMBER. Enter the applicable item number in numerical sequence.

11.7.4.16 CLASS OF SVC. Enter the class of service or an abbreviation of the type of circuit.

11.7.4.17 TELEPHONE OR CIRCUIT NUMBER. Enter applicable telephone or circuit number.

11.7.4.18 CIRCUIT DESCRIPTION. Enter a brief description of the circuit or other useful information.

11.7.4.19 SPECIAL EQUIPMENT. Enter the assignment of special equipment; such as long line repeaters, direct line units, or central office equipment

11.7.4.20 FROM.

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11.7.4.20.1 CABLE REF. Enter the applicable cable reference.

11.7.4.20.2 PAIR. Enter cable pair number.

11.7.4.20.3 BP. Enter the binding post number, as applicable.

11.7.4.21 FROM-TO. Cross out the word that is not applicable and perform the entries red by paragraph 3.20.

11.7.4.22 TESTER INIT. Enter the initials of the person performing the test on the corresponding circuit.

11.7.4.23 REMARKS. Enter remarks as necessary. Example: Pair 301 to 500 clear capped.

11.7.4.24 SIGNATURE. Enter the signature of the person accomplishing the work after completion of the transfer.

11.7.4.25 DATE AND TIME. Enter the date and time the work was completed.

11.7.4.26 SIGNATURE OF INDIV WHO POSTED RCRD. Enter the signature of the person completing the posting to applicable records.

11.7.4.26.1 DATE POSTED. Enter the date the record is posted.

11.7.5 AFTO FORM 121, TELEPHONE EQUIPMENT LINE RECORD CARD (FIGURES 11-6 and 11-7). The purpose of the AFTO FORM 121 is to provide a historical record of each telephone line as identified by the telephone number. Use pencil only in Items 2 through 15. Entries are as follows:

11.7.5.1 KEY SYS NUMBER. Enter the key system designator when the line terminates on a key system.

11.7.5.2 LINE NUMBER. Enter the line number in ink or use a numbering machine (entry is required in one block only, depending on whether cards are filed vertically or horizontally).

11.7.5.3 BLOCK 1. TELEPHONE NUMBER. Enter the applicable telephone number in ink or use a numbering machine.

11.7.5.4 BLOCK 2. RING, NUMBER. Enter the ring code when applicable; e.g., 1, 2, etc. Enter the Hz when frequency selective ringing is used. Leave blank when no special ringing codes/features are used.

11.7.5.5 BLOCK 3. CLASS. Enter class of service.

11.7.5.6 BLOCK 4. DATE INSTALLED. Enter the date this number was placed in service for the current subscriber. When unknown, enter UNK.

11.7.5.7 BLOCK 5. PARTY NUMBER. Enter a "0" if the telephone number is for a single party line. Enter the appropriate party number if it is a multi-party line, i.e., "1" for first party, "2" for second party.

11.7.5.8 BLOCK 6. USER. Enter the name/unit/office of the subscriber as applicable. This entry would normally be the name of the subscriber for class B quarters service, the name of the agency/company for class B business service, or the unit/office designation for official service. Local conditions may render other entries more appropriate.

11.7.5.9 BLOCK 7. INST AUTH. Enter the service order number from the AF Form 3215, C4 Systems Requirement Document or locally generated requirement document.

11.7.5.10 BLOCK 8. ADDRESS. Enter the address where the telephone is located, when street addresses are used.

11.7.5.11 BLOCK 9. BUILDING NUMBER. Enter the building number where the telephone is located.

11.7.5.12 BLOCK 10. ROOM NUMBER. Enter the room number in which the telephone is located. If no room number is available, enter any data that will aid in finding the location of the telephone.

11.7.5.13 BLOCK 11. LOOP RES. Enter the loop resistance for special circuits or when it will aid in the maintenance of the line. Read the resistance from the vertical side of the main frame to the arrester, if installed, or to the first building terminal.

11.7.5.14 BLOCK 12. NUMBER. Enter the applicable cable and pair number(s) of all cable/pairs used in the line. Enter the terminal and pin number(s) when significant.

11.7.5.15 BLOCK 13. TELEPHONE. Enter in this block the type of telephone in use, such as WECO 500, WECO 554, etc. Also enter the number of extensions and their codes. When the telephone number is installed on a key system, entries in this block are optional for command or local use.

11.7.5.16 BLOCK 14. LINE RELAY. Enter the line equipment number or terminal number associated with the telephone number.

11.7.5.17 BLOCK 15. MISCELLANEOUS. Enter any useful data pertaining to the telephone e.g., in-dial only, external bells installed, and beehive lamp installed.

11.7.5.18 Enter all reported troubles and service actions on the reverse side of the form in ink. This will include the date, time, nature of reported trouble and the name of the person reporting the trouble. It will also include test results, trouble found, action taken, date, time, and name of the repairman when the required maintenance actions are complete. All service actions directed by AF FORM 3215 or locally generated requirements document, are historical data and will be recorded on the reverse side of the AFTO FORM 121. This will include the date of the service order, person receiving the service order, the telephone work order number (TWO), work to be accomplished, work completed, date completed, and the name of the repair man who completed the work order.

11.7.6 COMBINATION ASSIGNMENT - REPAIR DESK. This desk is listed in T/A006 and should be used in telephone central offices for the filing of line record cards and trouble report envelopes containing circuit layout record cards.

11.7.7 AFTO FORM 781L, RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI) (FIGURE 5-22). This Form provides control for serial number controlled CCI items. The Form is used to aid in serial number accountability.

11.7.7.1 Generally, ground communications-electronics mobile equipment scheduled for depot maintenance will have its CCI asset removed. In those instances where serial number controlled CCI assets remain with the equipment being sent to the depot the owning unit generates an AFTO FORM 781L to indicate loss of a serial number controlled CCI asset. One copy of the form is forwarded to base supply and one copy is included as part of the equipment's records. If a US citizen is not in control of the equipment during transit to the depot, the CCI asset must be removed. When equipment is scheduled to go to a depot that employs foreign nationals and a US citizen is not available to control the CCI asset then the CCI asset, will be removed prior to the equipment going to the depot.

11.7.7.2 Use the form to report serial number changes to base supply (Document Control). The form is used when CCI equipment is replaced and a serial number controlled asset from another organization is installed. Maintenance technicians performing replacement actions initiate the form. The following entries are required:

11.7.7.2.1 PART I, UNIT, BASE, AND EQUIPMENT INFORMATION: Complete all applicable items.

11.7.7.2.2 PART II, CCI INFORMATION:

11.7.7.2.2.1 SECTION A, REMOVED CCI INFORMATION: Complete all items with the exception of optional items "ACCOUNT/DOCUMENT NUMBER" and "CUSTODIAN." MAJCOMs may direct entries for these optional items.

11.7.7.2.2.2 SECTION B, INSTALLED CCI INFORMATION: Complete all items with the exception of optional item "ACCOUNT/DOCUMENT NUMBER." MAJCOMs may direct entries for this optional item.

11.7.7.2.3 PART III, GENERAL COMMENTS: MAJCOMs determine their requirements for entries in this section.

11.7.7.3 AFTO FORMS 122, 122A and 226 have been rescinded/deleted from the Air Force Inventory. Forms may be used until exhausted. Use of locally developed forms are authorized.

CHAPTER 12

DECONTAMINATION PROCEDURES

12.1 DECONTAMINATION PROCEDURES AND DOCUMENTATION.

When an aerospace vehicle or its components or parts are suspected to have been contaminated the following actions will be taken:

Table 12-1. Decontamination Procedures and Documentation

STEP	A	B
	WHEN	THEN
1	an aerospace vehicle, installed components or parts are suspected to have been contaminated	the A/C advise the tower of the known or suspected contamination and request that isolated parking be provided for the aerospace vehicle
2		a security police team will establish a cordon around the aerospace vehicle.
3		the ground crew and maintenance personnel will not be permitted to approach the aerospace vehicle or to begin servicing or maintenance until after the aerospace vehicle is completely inspected and decontaminated, if necessary.
4		the Disaster Preparedness Support Team will perform detection in accordance with prescribed procedures to determine the type, amount, and location of contamination.
5		the Disaster Preparedness Support Team will direct maintenance personnel to enter the red X on the AFTO FORM 781A and describe the extent and type of contamination (nuclear, biological or chemical)
6	Isolated parking is necessary, a security police team will secure the area and the organizational section	decontaminate the aerospace vehicle, component or parts in accordance with prescribed procedures
7		in the event an aerospace vehicle part cannot be acceptability decontaminated, the component or part will be removed and disposed of as contaminated waste.
8	contamination occurs with a chemical agent	a special entry will be made in the "CALENDAR INSPECTION" section of the AFTO FORM 781K to indicate that a special detection re-inspection is required at the next three scheduled hourly post-flight, periodic, phase, minor or major inspections.
9		the signature of the aerospace vehicle maintenance decontamination team chief will be entered in the "INSPECTED BY" block, and the last name initial placed over the symbol.
10	the aerospace vehicle, its components or parts have been decontaminated and released by the Disaster Preparedness Support Team	maintenance personnel will perform corrosion control as required, since some decontaminants are highly corrosive.

STEP	A	B
	WHEN	THEN
11		maintenance personnel will make an entry on the AFTO FORM 95 to describe the type and extent of contamination including the unclassified designator of the contaminate involved and the decontamination used.
12	the local commander has established necessary administrative procedures related to accomplishing decontamination of the aerospace vehicle	the signature of the aerospace vehicle maintenance decontamination team chief will be entered in the "INSPECTED BY" block, and the last name initial placed over the symbol.
13		there will be plans for establishing isolated areas.
14		there will be assurance that required decontamination is accomplished and verified by qualified personnel.
15		there will be procedures for returning the aerospace vehicle to service after decontamination is performed.
16		there will be plans and procedures for providing maintenance guidance and/or assistance to the disaster preparedness team.

APPENDIX A MAINTENANCE TERMS

A.1 DESCRIPTION OF FREQUENTLY USED MAINTENANCE TERMS.

A.1.1 **ACCESSORY.** A self-contained unit mounted on a higher assembly or is installed in a weapon system or end item of equipment. It is designed to perform a specific function; such as, generating electrical power, producing hydraulic or oil pressure or to apply these sources of power for actuating doors, mechanisms, and flight control surfaces.

A.1.2 **AEROSPACE VEHICLE.** Any vehicle that is designed to operate in the atmosphere and/or space environment.

A.1.3 **AEROSPACE EQUIPMENT.** Weapon systems and equipment including aerospace vehicles, equipment, missiles, nuclear weapons, Test Measurement and Diagnostic Equipment (TMDE), ground Communications-Electronics (C-E) equipment, trainers, equipment, and all related support equipment (SE).

A.1.4 **Aircrew Life Support Equipment (ALSE).** Individual items worn by, attached to, used by, or provided for aircrew and passengers to maintain life, health, function, and safety during flight and to provide for escape, descent, survival, and recovery.

A.1.4.1 **ALSE, life sustaining equipment** is that part of ALSE, such as oxygen regulators, pressurization components, egress or jettison system components, etc. which are aerospace vehicle installed. Life sustaining time change items are identified with an asterisk in Section III of the applicable -6 TO.

A.1.5 **ASSEMBLY.** A unit which is normally removed and replaced as a single item, consisting of accessories and components that collectively perform a specific functional operation. Examples of assemblies are: engines, guidance and control packages, gearboxes, hydro-electrical, mechanical actuators, and communications equipment operating assembly (OA) groups.

A.1.6 **BENCH CHECK.** This term includes any off-equipment action by maintenance in determining the condition status of an item and the determination of capability or lack of capability to return an item removed for a malfunction or an alleged malfunction, to a serviceable status. It also includes repair action when the repair is accomplished concurrently with the bench check.

A.1.7 **BITS AND PIECES.** Items that are normally treated as one piece of hardware, or are physically constructed of two or more pieces joined together in a way that prevents disassembly without destruction or impairment of the designed use. Examples of such items are nuts, bolts, screws, gaskets, seals, bearings, brushes, gears, fuses, light bulbs, tubes, capacitors, and resistors.

A.1.8 **CLASS A-1 AND B-1 ACCESSORIES (AEROSPACE VEHICLE, AIR-LAUNCHED MISSILE, AND SE ENGINE ITEMS ONLY).** Externally mounted engine accessories and components of reciprocating and turbojet engines, which when installed, constitute a complete basic engine as prescribed in TO 2R-1-16 and TO 2J-1- 24. Return these accessories with the engine to an overhaul facility in accordance with instructions in the above referenced technical orders.

A.1.9 **CLASS A-2 AND B-2 ACCESSORIES (AEROSPACE VEHICLE, AIR-LAUNCHED MISSILE, AND SE ENGINE ITEMS ONLY).** Externally mounted engine accessories and components of reciprocating and turbojet engines, which are not a part of the basic engine but are a part of the engine quick-change power pack, and for which a replacement time is specified in the aerospace vehicle, missile, or SE inspection requirements manual.

A.1.10 **COMPONENT.** An item (assembly, subassembly, or part) which serves as one of the parts of a whole.

A.1.11 **CONFIGURATION.** The functional and/or physical characteristics of hardware and software as set forth in technical documentation and achieved in a product.

A.1.12 **CONFIGURATION CONTROL.** The systematic evaluation coordination, and approval or disapproval of all approved changes in the configuration of a baselined CI, and implementation of approved changes.

A.1.13 **CONFIGURATION IDENTIFICATION.** The current approved or conditionally approved technical documentation for a configuration item as set forth in specifications, drawings and associated lists, and documents referenced therein.

A.1.14 **CONFIGURATION ITEM (CI).** An aggregation of hardware and/or software, or any portion thereof, that satisfies a function and is designated for configuration control. Items that reflect the current approved configuration of military systems

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and/or commodities currently in the Air Force operational inventory. CIs require the use of the latest TO information listed in the appropriate TO Index.

A.1.15 CONFIGURATION MANAGEMENT. A discipline applying technical and administrative direction and surveillance to:

A.1.15.1 Identify and document the functional and physical characteristics of a CI.

A.1.15.2 Control changes to those characteristics.

A.1.15.3 Record and report change processing and implementation status.

A.1.16 CONFIGURATION STATUS ACCOUNTING. The recording and reporting of the information that is needed to manage configuration effectively, including a listing of the approved configuration identification, the status of proposed changes to configuration, and the implementation status of approved changes on both a gross and individual serial number basis.

A.1.17 CORE AUTOMATED MAINTENANCE SYSTEM (CAMS). An automated baselevel maintenance information system for aerospace vehicle, engine, trainer, SE, TMDE, missile, and communications electronic maintenance. CAMS provides support for the home base and deployed locations.

A.1.18 END ITEM OF EQUIPMENT. An entity of hardware which is not to be installed in another piece of equipment. The end item for airborne units is the aerospace vehicle itself. For SE, it is that configuration of hardware not installed in, nor physically attached to another piece of equipment to the extent that it loses its end item identity. Engines will also be considered as an end item when they are in a removed status. Selected systems that do not meet the above criteria but have been selected to be treated as such by the MDD PWG in the maintenance information systems i.e. guns, ejection systems, E-W PODs. For C-E, it is that group of components and dedicated ancillary devices that perform a specific mission function. Examples of C-E end items are radio sets, radar sets, TACANs and microwave terminals.

A.1.19 ENGINE CONFIGURATION MANAGEMENT SYSTEM (ECMS). A compliance accounting system for TCTOs issued against selected aerospace vehicle engines, missile engines, and auxiliary power units (APU).

A.1.20 EQUIPMENT. Equipment, or the term "equipment unit," is used frequently in this group of technical orders for ease of writing and reading the prescribed instructions. In most instances, this term will be construed to mean complete end items, but on occasion, it will also refer to assemblies, subassemblies and components that are being processed within the maintenance shops. In general, the statement in which the term is used will imply what the intended meaning is for that particular application.

A.1.21 FUNCTIONAL CHECK. A functional check accomplished prior to use, on serviceable items withdrawn from supply stocks, and checks performed in the maintenance shops on repaired and over hauled items and on non-failure items that are removed for scheduled bench check and/or calibration.

A.1.22 G081. G081 provides a maintenance management system and a logistics command and control system for the C-5, C-130, C-141, KC-10, KC-135, C-9, and C-17 fleets. This system operates on a central database located at Tinker AFB utilizing an Amdahl mainframe. It provides fleet-wide visibility of status and location of aerospace vehicle, discrepancy history, TCTO status, MDD history, personnel, back shop production control, training, S-E, and AGE. Selected CONUS C-5, KC-10, C-130, C-141, KC-135 and C-17 home stations have access to the system. Outside CONUS main enroute locations have access and make updates to the system as well.

A.1.23 GROUND COMMUNICATIONS-ELECTRONICS (C-E) EQUIPMENT. Based radio, wire and including infrared; all radar and radiation aids for aerospace vehicle control and navigation, and ground based controls and guided missiles; radiating aids for fire control; electronic counter-measures and related radiation, reradiation, and electronic devices; computers, data, or video processing equipment. (Excluded is the Real Property Installed Equipment (RPIE) outlined in AFI 21-116).

A.1.24 HIGH-COST-HIGH-POWER ELECTRON TUBES. Tubes assigned a work unitcode in the applicable work unit code manuals are classed as high-cost high-power electron tubes.

A.1.25 INTEGRATED WEAPON SYSTEM MANAGEMENT (IWSM). Empowering a single manager (SM) (AFMC Handbook 610-3) with authority over the widest range of military systems program decisions and resources to satisfy customer requirements through the life cycle of that system. This is the AFMC management philosophy for all military systems and commodities.

A.1.26 INTEGRATED MAINTENANCE DATA SYSTEM (IMDS). An automated maintenance information system for aerospace vehicle, engine, trainer, SE, missile, TMDE, and communications-electronic maintenance data. IMDS provides support for home base, deployed operations and depot level maintenance data.

A.1.27 JOINT ELECTRONICS TYPE DESIGNATOR (JETD). A JETD is a specific combination of letters and numerals, structured in accordance with MIL-STD-196(), provides a standard means of uniquely identifying electronic material by design configuration (see AFJI 60-105). Examples:

A.1.27.1 System, set, central, or group used with, or part of more than one set, and general purpose test equipment: AN/FPS-35, AN/FYQ-4, AN/UPA-56, AN/USM-425(V)1.

A.1.27.2 Groups, units, and test equipment which is designed as part of, or used with the procured with a specific set: QA-221/G, C-8717/G, TS-1996/ FYQ.

A.1.28 LIMITED LIFE HELICOPTER COMPONENTS. Time change items that have a limited service life due to the higher number of repeated loads experienced during operation. Determine the life of the component by measuring the actual operational loads, the number of load occurrences and then testing the component to these loads until failure (engineering determined). The components require replacement and condemnation at a scheduled period of operating hours less than the failure hours determined during testing.

A.1.29 LINE REPLACEABLE UNIT (LRU). An item that is normally removed and replaced as a single unit to correct a deficiency or malfunction on an end item of equipment.

A.1.30 LOGISTICS CONTROL NUMBER (LCN). A number assigned to a location of a part within the hierarchical breakdown of a weapon system. The LCN is used in IMDS in the same way as the WUCs are used in legacy information systems.

A.1.31 MAINTENANCE PLANNING. This term pertains to the act of planning and programming known workloads to effectively use assigned manpower. At the MXG/CC level, this concerns allocating manpower among the various maintenance functions and establishing appropriate priorities. At the maintenance control level, this concerns exercise of job scheduling and specialist dispatch control to effectively accomplish all known jobs in accordance with established priorities. At work center and crew level, this concerns scheduling and sequencing of individual tasks in the most logical and practical order of accomplishment to avoid wasted effort, to prevent job interruptions that can occur due to interference between tasks, and to promote efficient work habits to assure the highest possible quality maintenance.

A.1.32 MASTER JOB STANDARD NUMBER (MJSN). A number assigned to each inspection and time change item on a weapon system. This number facilitates automated transfer of data between bases and information systems when the weapon system is transferred. It also facilitates automated forecasting of consumable items for system managers.

A.1.33 MATERIEL GROUP MANAGER (MGM). The single manager for a Materiel Group, who has the same responsibilities as a System Program Director or Product Group Manager for the assigned materiel.

A.1.34 MINIMUM SIGNATURE. The minimum signature for maintenance document purposes required by the 00-20-series technical orders consisting of the written first name initial, last name, and employee number or equivalent/FAA certification number. AFMC Depots may use a production stamp in place of the employee number. Contractors will use their FAA certification number. Electronic signatures may be used in lieu of the above requirements. Minimum signature for aircrews will be first name initial and last name.

A.1.35 NON-JETD (Joint Electronics Type Designator). Used to denote electronic equipment not assigned a JETD. Includes: COMSEC material under the National Security Agency (NSA) Telecommunications Security (TSEC) Nomenclature System (i.e., TSEC/KY57) and items limited to commercial identification (i.e., Rixon CCU-432).

A.1.36 NON-RECOVERABLE ITEM. An item for which exchange accountability is not maintained by base supply and which can be disposed of at the user or maintenance shop level if repairs cannot be accomplished.

A.1.37 NON-REPAIRABLE ITEM. An item that cannot be repaired in any manner to restore serviceability. These items can also be classed as either recoverable or non-recoverable in the supply system.

A.1.38 NOT REPAIRABLE THIS STATION (NRTS). A status condition determined during shop processing of an item. It indicates that the item cannot be repaired at base level.

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A.1.39 ON-EQUIPMENT MAINTENANCE. Maintenance tasks that are (or can be) effectively accomplished on the military system or commodity end item.

A.1.40 OFF-EQUIPMENT MAINTENANCE. Maintenance tasks that are not (or cannot be) effectively accomplished on the military system or commodity end item, but require the removal of the component to a repair shop and the use of repair shop resources. Does not include end items such as aerospace vehicle engines, electronic countermeasures, gun pods, etc.

A.1.41 OPERATIONAL CHECK. A functional check of an accessory, component, or system accomplished in its installed environment to ensure proper installation and operation.

A.1.42 OVERHAUL. The disassembly, cleaning, inspection, repair, or replacement of parts or components; reassembly; and test of any item or accessory in accordance with applicable technical orders, directives, or authorized manufacturers publications to provide an operationally safe reliable item.

A.1.43 PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL). A laboratory authorized to own and use base measurement standards to maintain working standards. The working standards are used with PMEL owned TMDE to maintain (troubleshoot, align, repair, and calibrate) TMDE designated as PMEL responsibility. PMELs are the base level-link for measurement transfer and maintenance self-sufficiency for all systems in the Air Force.

A.1.44 PREVENTIVE MAINTENANCE. This term, or the single term "maintenance," as referenced in this group of technical orders, is the normal upkeep and preservation of equipment through systematic inspection, detection and correction of discrepancies to prevent failures, to verify serviceability, or to restore complete serviceability of equipment that has been subjected to usage, wear and tear, or deterioration caused by environmental elements.

A.1.45 PRODUCT GROUP MANAGER (PGM). The single manager for a Product Group, who has the same responsibilities as a System Program Director or Materiel Group Manager, for the assigned products.

A.1.46 QUALITY ASSURANCE. The coordinated actions by all equipment maintenance activities to provide a program of inspection and control that achieves effective production inspection and testing; assessment of product quality and reliability; identification and notification of quality deficiencies; and standards of quality for material and technical data related to the use, maintenance, storage and handling of Air Force equipment.

A.1.47 QUICK-ENGINE-CHANGE ADAPTING KIT. Quick-engine-change adapting kits are stocked as a single item in the appropriate federal supply classification. The kits consist of specific, miscellaneous, peculiar parts required to tailor quick engine-change parts or power packs for use on any of the several positions of a multi-engine aerospace vehicle, or on various production models in aerospace vehicle of a given type. These kits increase the interchangeability and thus reduce the number of different basic power and parts packs that must be procured and stocked.

A.1.48 QUICK-ENGINE-CHANGE PARTS PACK. Quick-engine-change parts pack, often referred to as quick-engine-change kits, are those groups or parts, as completely assembled as consisting of accessories, hardware, and electrical items. These parts packs normally do not include the engine, cowling, propeller and certain other parts, most of which are of a government furnished parts (GFP) nature. The term quick-engine-change parts pack is also used to describe those loose replaceable component parts, accessories, hardware, and electrical items, stocked under a single part or stock number in the appropriate federal supply classification (FSC) and issued for use in connection with changes of jet engines that may not have a conventional, assembled unit or pack, such as provided for reciprocating type engines.

A.1.49 QUICK-ENGINE-CHANGE (QEC) POWERPACK. Quick-engine-change powerpacks are comprised of the quick-engine-change parts packs assembled on mounting stands with the engine, and any other items that are deemed necessary and practicable to facilitate aerospace vehicle engine changes in the shortest possible time. Items such as propellers and cowlings are normally not installed on the power pack unless they can be left on the power pack during installation on the aerospace vehicle.

A.1.50 REAL PROPERTY INSTALLED EQUIPMENT (RPIE). Items of equipment attached to or installed in real property. This equipment is normally programmed, procured, funded, and installed through the USAF military construction program. Real property installed equipment also includes missile support subsystems or items which are predominately composed of common standard commercial type items.

A.1.51 RECOVERABLE ITEM. Any item for which exchange accountability is maintained by base supply, and turn-in is required to clear the base supply due in from maintenance (DIFM) account.

A.1.52 REPAIR. The restoration or replacement of parts or components of materiel as necessitated by wear and tear, damage, failure of parts or the like in order to maintain the specific item of materiel in efficient operating condition.

A.1.53 REPARABLE ITEM. Any item that can be removed from an end item, assembly, subassembly, or component for separate processing to accomplish any form of repairs needed to restore serviceability. Consider items on which some form of repair can and will be accomplished to permit reuse of the item as reparable regardless of the level of repair or whether the item is classed as recoverable or non-recoverable in the supply system.

A.1.54 REPARABLE PROCESSING CENTER (RPC). A function within production control that controls the processing within the maintenance complex for all assemblies, accessories, and components removed from end items. The RPC will either physically process these items directly through RPC, or process them under its control. The reparable processing center maintains sufficient control to monitor the quantity and type of assets that are reparable and their location; the estimated due out of items undergoing shop capability for any item that can enter the shop processing channels. A Reparable Asset Control Center (RACC) may accomplish these functions. The RACC is an integrated function consisting of RPC and the repair cycle support unit.

A.1.55 SCHEDULED MAINTENANCE. Known or predictable maintenance requirements that can be planned or programmed for accomplishment on short and long-range schedules. This includes accomplishing recurring scheduled maintenance inspection and servicing, complying with TCTOs other than the immediate action category, accomplishing scheduled time change item replacements, and correcting delayed or deferred discrepancies. It also includes modification and renovation projects that are programmed for depot accomplishment.

A.1.56 SERIALY CONTROLLED ITEMS. Those items of equipment selected by the SM for which it is necessary to maintain TCTO configuration accounting and/or location information by item serial number to provide operating time data and status for logistics management and weapon system compatibility purposes.

A.1.57 SERVICE LIFE EXPECTANCY. The projected operational usefulness of an item in terms of operating time, cycles, or calendar age; as determined through engineering estimates or actual operational experience. The time or age figure (for example, 1000 hours or 36 months) used in relation to service life expectancy represents the point at which continued use of the item would create a high probability of failure within a short span of time.

A.1.58 SHOP REPLACEABLE UNIT (SRU). A component of a line replaceable unit that has a distinctive stock number for which like spares are locally authorized and maintained to permit repair of the line replaceable unit. These components become repair cycle assets when processed separately and are subject to DIFM controls (TO 00-20-3). SRUs carry ERRC Codes XD2, XF3, XB3.

A.1.59 STANDARD CONFIGURATION MANAGEMENT SYSTEM (SCMS). A mechanized compliance status accounting system for TCTOs written against aerospace vehicle, missiles systems, and components selected for reporting as end items.

A.1.60 SUBASSEMBLY. A self-contained unit of an assembly that can be removed, replaced, and repaired separately. These items are normally made available in supply stocks as separate units to support maintenance actions.

A.1.61 SUPPORT EQUIPMENT (SE). SE includes all equipment required to perform the support function except that which is an integral part of mission equipment. It does not include any equipment required to perform mission operation functions. SE should be interpreted as including tools, test equipment automatic test equipment (when it accomplishes a support function) field and depot Aerospace Ground Equipment (AGE) and related computer programs and software. It includes the following major categories:

A.1.61.1 DIRECT SUPPORT EQUIPMENT (DSE). Equipment required to directly assist in supporting weapons systems, support training aerospace vehicle, subsystems and equipment, or provide a service to, or are an aid in the performance of maintenance on weapon systems and support/training aerospace vehicle while on the ground. This equipment does not have test, measurement or diagnostic capabilities as its principle function.

A.1.61.1.1 POWERED AGE. Those items of portable (trailer mounted with towbar) engine or motor driven equipment used in servicing, handling and maintaining weapon systems. These items include portable engine and motor-driven equipment in the following categories: generator sets, air compressors, self-generating nitrogen servicing carts, cabin leakage testers, blowers, hydraulic test stands, air conditioners (including air cycle machines and liquid cooling carts, ground heaters, light carts, gas turbine compressors, universal maintenance stands, hydraulic jacking manifolds, and self propelled bomb lifts and cranes. The exception to portable engine or motor driven powered AGE are solid state frequency converters and skid mounted engine driven generators used to supply electrical ground power to aircraft.

A.1.61.1.2 NON-POWERED AGE. Those items of portable services handling and maintenance equipment that are not motor or engine driven (with the exception of small electric positioning motors). These items include, but are not limited to,

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maintenance stands, A frames, platforms, aerospace vehicle jacks/tow bars, trailers (except munitions handling and engine) and hydraulic servicing carts.

A.1.61.1.3 VEHICULAR SE. Those items of SE of a vehicle nature used in support of the maintenance or launch of weapon systems and support/training aerospace vehicle. This includes such items as deicer trucks, high reach trucks, calavar, etc. It does not include those special purpose vehicles assigned to transportation civil engineering, fuel activities, and those towing vehicles assigned to maintenance activities.

A.1.61.1.4 Munitions handling Equipment. Portable servicing Equipment used to load and unload weapons on the aircraft. These items include but are not limited to loading trailers, storage and handling trailers, adapters, etc.

A.1.61.1.5 Propulsion Handling Support Equipment. Portable servicing equipment used to perform aircraft engine maintenance to include jet engine noise suppressers, etc.

A.1.61.2 TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE). Equipment used to troubleshoot, perform functional test and/or calibration on weapon systems, support/training aerospace vehicle subsystems, components, or the equipment used in support of these systems while on the ground. This category includes aerospace vehicle/engine test cells, shop test stands, NDI equipment, electrical test sets, precision measurement equipment (PME), weapon systems or aerospace vehicle mockups, generator load banks, and associated electrical/ electronic supporting equipment, hydraulic test stands stationary, cabin leakage testers, etc.

A.1.61.3 TOOLS. Those items issued to a work center or to an individual in the performance of maintenance and inspection of weapon systems, support/training aerospace vehicle, subsystem, component or the supporting equipment.

A.1.61.3.1 COMMON TOOLS. Items of tools and tool equipment that are found in common usage such as those applicable to or used on a variety of equipment and components. These items include, but are not limited to, wrenches, sockets, hammers, screwdrivers, pliers, torque wrenches, etc.

A.1.61.3.2 SPECIAL TOOLS. Items of tools designed and developed to perform a peculiar maintenance operation on a specific end item of equipment or component. These items include but are not limited to wheel/bearing pullers, special jigs, special cradles, alignment devices, vacuum pumps, floor jacks/cranes, engine slings, and those special tools listed in applicable equipment technical orders.

A.1.62 SUPPORT SYSTEM. A composite of equipment, skills, and techniques that, while not an instrument of combat, are capable of performing a clearly defined function in support of an Air Force mission. A complete system includes all subsystems, related facilities, equipment, materiel, services, and personnel required for operation of the system, so that it can be considered a self-sufficient unit in its intended operational environment. This system may furnish support to operating or support forces, weapon systems, command and control systems, or to other support systems.

A.1.63 SYSTEM MANAGER (SM). The SPD, PGM, or MGM in charge of a weapon/military system, product group, or materiel group.

A.1.64 SYSTEM PROGRAM DIRECTOR (SPD). The individual in an AFMC SPO who is ultimately responsible and accountable for decisions and resources in overall program execution. The single interface to the user who oversees the seamless process. SPD is the designated title for the single manager of a program who reports to a Program Executive Officer (PEO) or Designated Acquisition Commander (DAC).

A.1.65 TECHNICAL ORDER COMPLIANCE (TOC). Performance of work or inspections directed by technical orders. In contrast to TCTOs, it pertains to actions that are normally recurring in nature.

A.1.66 TIME CHANGE ITEMS (TCI). Items identified as having a fixed service life expectancy, and which must be replaced with a new or overhauled item after accrual of a specified number of hours or cycles of operation, or at the expiration of a given calendar time period.

A.1.67 TIME COMPLIANCE TECHNICAL ORDER (TCTO). Authorized directives issued to provide instructions to Air Force/contractor activities for accomplishing onetime changes, modification, inspection of equipment, or installation of new equipment.

A.1.68 TRAINING EQUIPMENT. For the purpose of the 00-20-series technical order, the term training equipment includes aerospace vehicle, missile and ground C-E equipment maintenance and operator training equipment in federal supply group (FSG) 69; and all maintenance training equipment, trainers, training aids, bench training sets, and standard Air Force material

used at resident training centers, at field training detachments, or used in operational organizations for training purposes. Training equipment includes all trainers with a Standard Reporting Designator Code (SRD) prefix "T."

A.1.69 TRANSIENT AEROSPACE VEHICLE. Aerospace vehicle not assigned to the landing station. Deployed aerospace vehicle with organic support are not considered transient aerospace vehicle.

A.1.70 TROUBLESHOOTING. The logical, analytical, and where applicable, a Technical Order prescribed procedure followed in isolating equipment malfunctions.

A.1.71 WEAPON SYSTEM. A weapon and those components required for its operation. It is a composite of equipment, skills, and techniques that form an instrument of combat which usually, but not necessarily, has an aerospace vehicle as its major operational element. The complete weapon system includes all related facilities, equipment, materiel, services, and personnel required solely for the operation of the aerospace vehicle, or other major elements of the system, so that the instrument of combat becomes a self-sufficient unit of striking power in its intended operational environment.

A.1.72 UNSCHEDULED MAINTENANCE. Unpredictable maintenance requirements not previously planned or programmed, but require prompt attention and must be added to, integrated with, or substituted for previously scheduled workloads. This includes compliance with immediate action TCTOs, correction of discrepancies discovered during flight or operation of equipment, and performance of repairs as a result of accidents or incidents. Work that necessitates special depot scheduling will also be classed as unscheduled maintenance.

APPENDIX B

APPLICABLE TECHNICAL ORDERS AND SUPPORTING DIRECTIVES

B.1 APPLICABLE TECHNICAL ORDERS.

Technical orders related to this publication are:

TO NUMBER	TITLE
TO 00-5-1	AIR FORCE TECHNICAL ORDER SYSTEM
TO 00-5-2	TECHNICAL ORDER DISTRIBUTION SYSTEM
TO 00-5-15	AF TIME COMPLIANCE TECHNICAL ORDER SYSTEM
TO 00-20-1	AEROSPACE EQUIPMENT INSPECTION, DOCUMENTATION, POLICIES AND PROCEDURES
TO 00-20-2	MAINTENANCE DATA DOCUMENTATION
TO 00-20-3	MAINTENANCE PROCESSING OF REPARABLE PROPERTY AND THE REPAIR CYCLE ASSET CONTROL SYSTEM
TO 00-20-9	FORECASTING REPLACEMENT REQUIREMENTS FOR SELECTED CALENDAR TIME CHANGE ITEMS
TO 00-20-14	AIR FORCE METROLOGY AND CALIBRATION PROGRAM
TO 00-25-4	DEPOT MAINTENANCE OF AEROSPACE VEHICLES AND TRAINING
TO 00-25-107	MAINTENANCE ASSISTANCE
TO 00-25-108	COMMUNICATIONS-ELECTRONICS (C-E DEPOT SUPPORT)
TO 00-35D-54	USAF MATERIAL DEFICIENCY REPORTING AND INVESTIGATION
TO 1-1-3	INSPECTION AND REPAIR OF INTEGRAL TANKS AND FUEL CELLS
TO 1-1-300	ACCEPTANCE/FUNCTIONAL CHECK FLIGHT AND MAINTENANCE OPERATIONS CHECKS
TO 1-1B-50	AIR FORCE WEIGHT AND BALANCE PROGRAM
TO 1-1H-39	AIRCRAFT BATTLE DAMAGE REPAIR MANUAL - GENERAL
TO 1-1-17	STORAGE OF AEROSPACE VEHICLE AND MISSILE SYSTEMS APPLICABLE DASH
TO 2J-1-18	PREPARATION FOR SHIPMENT AND STORAGE OF GAS TURBINE ENGINES
TO 2J-1-24	EQUIPMENT COMPRISING A COMPLETE BASIC GAS TURBINE ENGINES
TO 2R-1-11	CORROSION CONTROL OF RECIPROCATING AIRCRAFT ENGINES
TO 2R-1-16	EQUIPMENT COMPRISING COMPLETE RECIPROCATING TYPE AIRCRAFT ENGINES
TO 33K-1-100-2	CALIBRATION REQUIREMENT SUMMARY AGENDA
TO 35-1-4	PROCESSING AND INSPECTION OF SUPPORT EQUIPMENT FOR STORAGE AND SHIPMENT
TO 42B2-1-1	USE AND GRADES OF AIRCRAFT ENGINE LUBRICATING OILS

B.2 SUPPORTING DIRECTIVES.

Additional publications pertaining to the USAF equipment maintenance program which prescribe Air Force policies are as follows:

PUBLICATION	TITLE
AFI 10-2701	ORGANIZATION AND FUNCTION OF THE CIVIL AIR PATROL
AFI 11-301	AIRCREW LIFE SUPPORT SYSTEM PROGRAM
AFI 11-401	FLIGHT MANAGEMENT

PUBLICATION	TITLE
AFI 21-101	MAINTENANCE MANAGEMENT OF AEROSPACE VEHICLE
AFI 21-102	DEPOT MAINTENANCE MANAGEMENT
AFI 21-103	EQUIPMENT INVENTORY, STATUS, AND UTILIZATION REPORTING
AFI 21-109	COMMUNICATIONS SECURITY (COMSEC) EQUIPMENT MAINTENANCE AND MAINTENANCE TRAINING
AFI 21-113	AIR FORCE METROLOGY AND CALIBRATION (AFMETCAL) PROGRAM
AFI 21-116	MAINTENANCE MANAGEMENT OF COMMUNICATIONS ELECTRONICS
AFI 21-118	IMPROVING AEROSPACE EQUIPMENT RELIABILITY AND MAINTAINABILITY
AFI 21-201	MANAGEMENT AND MAINTENANCE OF NON-NUCLEAR MUNITIONS
AFI 23-202	BUYING PETROLEUM PRODUCTS, AND OTHER SUPPLIES AND SERVICES OFF-STATION
AFI 33-111	TELEPHONE SYSTEMS MANAGEMENT
AFMAN 37-139	RECORDS DISPOSITION SCHEDULE
AFI 51-503	AEROSPACE ACCIDENT INVESTIGATIONS
AFMAN 23-110	USAF SUPPLY MANUAL

APPENDIX C

LIST OF ACRONYMS

C.1

ABDR	-	Aircraft Battle Damage Repair
ACC	-	Assistant Crew Chief
AGE	-	Aerospace Ground Equipment
AME	-	Alternate Mission Equipment
ATD	-	Aircrew Training Device
CAD	-	Cartridge Actuated Device
CAMS	-	Core Automated Maintenance System
CFT	-	Contract Field Team
CoM	-	Chief of Maintenance
DCC	-	Dedicated Crew Chief
DEC	-	Digital Electronic Control
DIFM	-	Due in From Maintenance
DFT	-	Depot Field Team
DOM	-	Date of Manufacture
DOI	-	Date of Installation
EOR	-	End-of-Runway
FC	-	Fault Code
FCF	-	Functional Check Flight
FIM	-	Fault Isolation Manual
FOM	-	Facilitate Other Maintenance
FRM	-	Fault Reporting Manual
GITA	-	Ground Instructional Training Aircraft
IAW	-	In accordance with
ID	-	Identification
JG	-	Job Guide
LSE	-	Life Support Equipment
MADRS	-	Maintenance Analysis Detection and Recorder Subsystem
MDS	-	Mission, Design, Series
MHE	-	Munitions Handling Equipment
NIE	-	Normally Installed Equipment
PAD	-	Propellant Actuated Device
PCAMS	-	Process Control Automated Management System
PLI	-	Pre-Launch Inspection
QT	-	Quick-turn
RCMA	-	Reliability centered Maintenance Analysis
SE	-	Support Equipment
SM	-	Single Manager
SN	-	Serial Number
TCI	-	Time Change Item
TCTO	-	Time Compliance Technical Order
WAI	-	Walk-Around Inspection
WCD	-	Work Control Document

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WUC - Work Unit Code