BY ORDER OF THE COMMANDER
AIR EDUCATION AND TRAINING COMMAND

AETC Supplement 1
TO 00-20-5
15 September 1996

AIRCRAFT, DRONE, AIRCREW TRAINING DEVICES, ENGINES, AND AIR-LAUNCHED MISSILE INSPECTIONS, FLIGHT REPORTS, AND SUPPORTING MAINTENANCE DOCUMENTS

TO 00-20-5, 1 June 1996, is supplemented in accordance with the provisions of TO 00-5-1.

This revision realigns the supplement to the new basic dated 1 June 1996. Changed, revised, or added guidance will be annotated by a★ in the margin.

NOTE: All AETC units owning or maintaining equipment identified in the supplement title will maintain this publication in current status and make reference to this publication on the title page and each affected paragraph of the basic TO. File this supplement behind the basic TO and retain until revised or rescinded by HQ AETC. Pencil changes to this supplement are authorized for only paragraph renumbering to align this supplement to changes or to a new basic technical order (00-20-5). Any discrepancies other than paragraph realignment which are discovered by users will be reported via message or letter to HQ AETC/LGMMP.

1-5. Group Commanders may authorize the use of automated aerospace equipment forms. Only USAF or AETC approved automated maintenance management systems will be used. Automated forms must contain the same data elements as the manual AFTO-series forms. Units may use fully automated, partially automated, or manual equipment forms.

1-6.3. Employee numbers are required.

1-16.6. The appropriate group commander, or designated senior maintenance officer where the transient aircraft is located, in coordination with the owning unit, may approve the over-flight of a scheduled maintenance inspection for the purpose of a one-time flight(s) to home station.

2-1.2. HQ AETC/LGMA may authorize the use of USAF approved modified inspection workcard decks during contingency or increased readiness conditions.

2-2. A specified flying period begins with the first flight after a preflight, combined preflight/basic postflight, or preflight/thruflight is accomplished. Unit commanders may extend flying periods during contingency, increased readiness, or ORI situations, but the provisions of paragraph 2-2.2 still apply. The duration of specified flying periods for AETC aircraft are as follows:

- The specified flying period for T-1, T-3, T-37, T-38, T-41, F-15, F-16, C-12, and C-21 aircraft is 24 hours.

- The specified flying period for T-43, C-5, KC-135, C-141, C-130, UH-1, and H-53 aircraft is 48 hours.

★**2-2.2.** The preflight validity period for all AETC aircraft is 72 hours. The requirement to reaccomplish the preflight if an aircraft has not flown in 48 hours is waived for C-5, KC-135, C-141, F-15, and F-16 aircraft.

- For F-15 and F-16 aircraft, a pre-launch (PLI) or walk-around inspection (WAI) will be performed IAW the weapons system -6 workcards/checklists. Accomplish the

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PLI/WAI as close to takeoff as practical, but not earlier than six hours prior to flight. Document the PLI/WAI on AFTO Form 781H, **Aerospace Vehicle Flight Status and Maintenance Document**, in the appropriate column and enter PLI or WAI in the "TYPE" inspection block.

- H-60 aircraft will utilize a 10-hour/14-day inspection concept in lieu of preflight (PRE), Basic Postflight (BPO), or combined BPO/PRE inspections.

2-4.3.1(Added). Thruflight inspections are not required when there is no pilot/aircrew change or when the departing aircrew verbally communicates (face-to-face) the maintenance status of the aircraft to the arriving pilot/aircrew and the scheduled ground time does not exceed four hours. KC-135 units will document accomplishment of the quick-turn (QT) inspection as "TH N/A" on AFTO Form 781H, block 8.

2-4.3.2(Added). F-15 and F-16 units may perform integrated combat turnarounds (ICT) during combat exercises or contingency operations when munitions loading is involved (MCR 60-6, *Combat Sortie Generation*). Do not use ICTs when using sortie surge as a scheduling technique unless the munitions involved are listed as primary on the unit committed munitions listing (UCML). If ICTs are not performed, use the applicable weapon system -6 workcards for aircraft with approved abbreviated procedures to fulfill the thruflight inspection obligation. If abbreviated -6 procedures have not been established, units develop local workcards and submit them to HQ AETC/LGMA for approval. When ICTs are not performed, conduct munitions loading operations using the applicable weapon system 33-1-2/33-2-1 technical order.

2-6. AETC units may perform a combined preflight/basic postflight, or preflight/thruflight inspection, depending on the inspection concept of the weapon system. This inspection combines all requirements of the preflight inspection and the designated inspection performed at the end of the specified flying period.

★**2-10.3.** Forward deviations outside the ISO compliance window to HQ AETC/LGMA as soon as the over-fly condition is known or projected. Submit the following minimum information:

- MDS
- Serial number
- Reason
- Type inspection due
- Date due
- Scheduled input date
- Hours flown since last inspection
- Outstanding TCTOs
- Time change items due
- Special inspections due
- Landing condition status of last four sorties (if code-3, list the system failure).

3-2.1. Wings have the option of using all 781-series forms with aircrew training devices (ATD), to include federal stock class (FSC) 6930 visual systems.

3-5.3. Completed AFTO Forms 781 will be delivered to the debrief function for input into CAMS. Units will follow locally established procedures for assuring flying hour accounting accuracy according to AETCI 21-101, volume 2, chapters 1 and 14.

3-10. Wings have the option of using the exceptional release portion of AFTO Form 781H, block 9, for ATDs.

3-10.11. Use block 11 to indicate the status of gun and chaff/flare systems.

3-10.11.2. When munitions are present in more than one system, reference all data on AFTO Forms 781A by page and item number (e.g., P4/2, P6/3).

★**3-11.** AFTO Form 781A entries are required for all discrepancies or malfunctions detected by airborne automatic checkout equipment (e.g., C-5 maintenance analysis detection and recorder subsystem (MADARS)).

- Non-mission essential faults on F100-PW-220 engines are assigned a 5000-series code. These advisory codes defer and (or) delay maintenance until it is convenient to fix them. 5000-series codes are only available in the engine diagnostic unit (EDU) and the only means of detecting them is to review

event/fault data collected at the end of each flying period.

- Code 5011 thru 5017, FTIT probes. When two or less advisory codes occur, enter a red diagonal in AFTO Form 781K and defer maintenance until it is convenient to fix them. When three or more probes fail, the discrepancy is transferred to the AFTO Form 781A and upgraded to a red X, requiring immediate maintenance to correct all open 5011 thru 5017 coded discrepancies.

3-11.11.3. When gun, chaff, or flare systems are loaded with munitions, an informational note is required indicating the type and quantity of munition(s) loaded. A single form entry is made indicating all combinations of chaff/flare loads. Gun, chaff, and flare informational notes must be transferred along with discrepancies when a new AFTO Form 781A is initiated, even when using automated forms. Individuals transferring these form entries must update the AFTO Form 781H, Block 11. Entries are cleared when munitions are expended or downloaded (see para 1-12).

3-11.11.9. Incomplete Maintenance. Whenever a maintenance action is stopped or interrupted prior to completion, or a change of maintenance technicians occurs, the following documentation actions must be accomplished (see figure 3.1):

3-11.11.9.1. The technician performing the maintenance action will create a separate entry in the AFTO Forms 781A to identify the required steps to complete the task. [For Example: Lt MLG Strut Requires Repack IAW 1AC-5B-2-5JG-2, Sect 3-2. (Reference the page/block of the original discrepancy)]

3-11.11.9.2. The technician will then sign-off the T.O. steps accomplished prior to the maintenance action being stopped or interrupted (i.e. job awaiting parts, or technician reassigned to another job for an extended period), or turning over the task to another technician. [For Example: Lt MLG Strut Repack Steps 1 thru 25 CW IAW 1AC-5B-2-5JG-2, Sec 3-2 (reference the page/block of subsequent entries).]

3-11.11.9.3. The technician will then create a subsequent entry in the AFTO Form 781A detailing the remaining open T.O. steps or tasks. [For Example: Lt MLG Strut Requires repack IAW 1AC-5B-2-5JG-2, Sect 3-2 Steps 26 thru 30 NCW (reference previous entry).]

3-11.11.9.4. If the same maintenance action is again stopped, interrupted, or requires another change of technician, repeat the above process until the maintenance action is complete.

NOTE:

Since subsequent write-up corrective actions only document partial completion, the original discrepancy and job control number (JCN) will remain open until the entire maintenance action is completed. Once maintenance has begun on major maintenance tasks, do not transcribe aircraft forms until the tasks are completed.

3-11.11.9.5. When all steps or tasks of the maintenance action are complete, a 7- or 9-level technician qualified to clear the discrepancy will audit all pertinent write-ups to determine if all steps were accomplished in accordance with the applicable technical data. The supervisor will also ensure all follow-on maintenance actions and associated maintenance tasks are complete or properly documented. The 7- or 9-level technician then clears the original discrepancy.

3-11.11.13. Units may use locally pre-printed general purpose forms (i.e., AF Form 3131) or locally prepared lists to record the removal of access panels from aircraft or SE undergoing inspection or extensive recurring maintenance according to AETCI 21-101, volume 2, chapter 4.

3-11.13. When the discrepancy is carried forward, print the name or employee number of the individual who signed the original AFTO Form 781A "DISCOVERED BY" block to the "DISCOVERED BY" block of the new AFTO Form 781A.

3-11.13.5(Added). Informational notes indicating munitions loaded in the gun, chaff, or flare systems must be transferred to the new AFTO Form 781A, even when using automated forms. Individuals transferring these notes must update the AFTO Form 781H, Block 11. These entries are cleared when munitions are expended or downloaded.

PAGE 2 OF _____ PAGES

DATE FROM	TO	CREW CHIEF	ORGN	LOCATION	MDS	SERIAL NO
02/05/9	/ /	TSgt L. Jones	HQ AETC	Randolph AFB TX	AC-5B	95-1234

SYM	DATE DISCD	WDC	JCN	DOC NO	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	DATE CORRECTED
X	03/05/6	F	1230001		P I	/ /	/ /	/ /

DISCREPANCY	CORRECTIVE ACTION
Lt MLG Strut Leaking Beyond Limits IAW	
1AC-5B-2-5JG-1	

CORRECTED/TRANSFERRED BY	GRADE	EMPLOYEE NO

DISCOVERED BY	GRADE	EMPLOYEE NO	INSPECTED BY	GRADE	EMPLOYEE NO
L. Jones	SSgt	00246			

SYM	DATE DISCD	WDC	JCN	DOC NO	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	DATE CORRECTED
S	03/05/5	F	1230002		P I	/ /	/ /	03 / 05 / 6

DISCREPANCY	CORRECTIVE ACTION
Lt MLG Strut Requires Repack IAW	Lt MLG Strut Repack Steps1 Thru 25 CW IAW
1AC-5B-2-5JG-2, Sect 3-2	1AC-5B-2-5JG-2, Sect 3-2
(See pg 2 blk 1)	(See pg 2 blk 3)

CORRECTED/TRANSFERRED BY	GRADE	EMPLOYEE NO
L. Jones	SSgt	00246

DISCOVERED BY	GRADE	EMPLOYEE NO	INSPECTED BY	GRADE	EMPLOYEE NO
M. Moorhouse	SrA	00369	J. Sine	TSgt	00135

SYM	DATE DISCD	WDC	JCN	DOC NO	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	DATE CORRECTED
X	04/05/6	F	1230002		P I	/ /	/ /	/ /

DISCREPANCY	CORRECTIVE ACTION
Lt MLG Strut Requires Repack IAW	
1AC-5B-2-5JG-2, Sect 3-2	
Steps 26 thru 30 NCW	
(See pg 2 blk 2)	

CORRECTED/TRANSFERRED BY	GRADE	EMPLOYEE NO

DISCOVERED BY	GRADE	EMPLOYEE NO	INSPECTED BY	GRADE	EMPLOYEE NO
L. Jones	SSgt	00246			

AFTO FORM FEB 83 **781A** MAINTENANCE DISCREPANCY AND WORK DOCUMENT PREVIOUS EDITION WILL BE USED

Figure 3.1. Incomplete Maintenance Documentation.

3-11.14. Certified mechanics (CM) and certified master mechanics (CMM) (roles, responsibilities and limitations identified in AFI 21-101, *Maintenance Management of Aircraft*; AETCI 21-101, volume 2, *Maintenance Management of Aerospace Equipment*; and local directives) will accomplish the following procedures to clear red X entries without follow-up inspections: Enter their signature in the "CORRECTED BY" block of the AFTO Forms 781A or 244, initial the "INSPECTED BY" block, followed by the acronym "CM or CMM," and place their last name initial over the red X symbol.

★**3-11.15.** Civil service employees will enter their pay grade in the grade block. Civilian contractor personnel will enter the abbreviation “CIV” in the grade block when maintenance is performed.

3-14.16(Added). Use the following procedures to record or monitor oil consumption on F-15 and F-16 aircraft:

3-14.16.1. For engines fitted with engine events history recorder (EHR):

3-14.16.1.1. After each flight or engine ground run:

3-14.16.1.1.1. Check engine oil quantity within 30 minutes of shutdown.

3-14.16.1.1.2. Record oil level and amount serviced in pints on AFTO Form 781H, block 12.

3-14.16.1.1.3. Obtain engine operating time (EOT) from EHR and enter on AFTO Form 93, Modular Engine Time Card.

3-14.16.1.2. To determine oil consumption, compare the amount of oil in tank from the previous flight, block 12 of the AFTO Form 781H, to the amount of oil in the tank after the current flight.

3-14.16.1.3. Compare the amount of oil consumed to the flight time in Block 14 of the AFTO Form 781H.

3-14.16.1.3.1. If the hourly amount consumed is less than maximum specified in the applicable engine technical order, no further action is required.

3-14.16.1.3.2. If the amount consumed and serviced exceeds maximum limits, accomplish the following:

3-14.16.1.3.2.1. Obtain EOT reading from the previous flight’s AFTO Form 93 or if this was the first flight of the day, from the AFTO Form 781J.

3-14.16.1.3.2.2. To obtain the EOT, subtract the previous EOT reading from the present EOT reading.

3-14.16.1.3.2.3. Divide the EOT by the quantity of oil serviced for the same period of time.

3-14.16.1.3.2.4. If hourly consumption is exceeded, investigate according to applicable technical orders.

3-14.16.2. For engines with an engine monitoring system (EMS):

3-14.16.2.1. After each flight or engine ground run:

3-14.16.2.1.1. Check engine oil quantity within 30 minutes of shutdown.

3-14.16.2.1.2. Record oil level and amount serviced in pints on AFTO Form 781H, block 12.

3-14.16.2.2. To determine the amount of oil consumed, compare the amount of oil in tank from the previous flight, block 12 of the AFTO Form 781H, to the amount of oil in tank after the current flight.

3-14.16.2.3. Calculate the hourly amount of oil consumption to the flight time in block 14 of the AFTO Form 781H.

3-14.16.2.3.1. If the hourly amount consumed is less than that specified in applicable technical orders, no further action is required.

3-14.16.2.3.2. If the amount consumed and serviced exceeds maximum limits, accomplish the following:

3-14.16.2.3.2.1. Download engine EMS to obtain EOT since last service.

3-14.16.2.3.2.2. Calculate the hourly consumption to the EOT (paragraph 3-14.16.1.3.2.2. and 3-14.16.1.3.2.3).

3-14.16.2.3.2.3. If hourly consumption is exceeded, investigate in accordance with applicable technical orders.

3-14.8. Post AFTO Form 781J times at the end of each flying period.

3-14.11.2. On installed F100-PW-100/200 engines, enter the following times on the AFTO Form 781J: Events history recorder (EHR) engine time window value and the engine operating time (EOT). Line-out the "time" in the No. 1 engine block and enter "No. 1 engine EHR ET." Line-out the "No. 2 engine" and "time" and enter "No. 1 engine EOT." On dual-engine aircraft, enter the data the same as above for the second engine, using blocks 3 and 4. On engines with monitoring systems, enter "EMS ET" instead of "EHR ET" on the AFTO Forms 781J. Units may use remaining blocks of the AFTO Form 781J to monitor other engine maintenance requirements (e.g., oil analysis program (OAP) documentation).

3-14.16. Maintain AFTO Forms 781J in the aircraft forms binders.

3-15.2. Aircraft with engine history recorders will enter the recorder serial numbers under the engine change due time, block B.

3-15.7. Short-term calendar and hourly inspections are listed in the aircraft -6 and are frequencies of 30 days or less, or 50 hours or less. Maintain short-term items of AFTO Forms 781K, block G. Life support inspections of 30-day intervals or less and event-connected inspections like "fired bomb rack inspections" in block G. Maintain all other calendar and hourly inspections in CAMS. To allow weapons load crews to verify load stations currency prior to munitions loading, units may also maintain certain functional checks on the AFTO Form 781K.

3-21. Ensure an entry is made on AFTO Form 781B when cryptographic components are installed on or removed from the aircraft. Annotate the 781 binder according to the basic T.O., paragraph 1-15.

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