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AIR COMBAT COMMAND

AIR FORCE INSTRUCTION 21-101

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Supplement

ADDENDUM B

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Maintenance

AIRCRAFT AND EQUIPMENT MAINTENANCE MANAGEMENT (F-35)

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This addendum complements AFI 21-101_ACCSUP, Aircraft and Equipment Maintenance Management. This addendum prescribes policies and procedures governing aerospace equipment maintenance management of F-35 aircraft for Air Combat Command (ACC), designated as Weapon System Lead Command per Department of Air Force Policy Directive (DAFPD) 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*. This addendum applies to Mission Design Series-stakeholders, to include Air National Guard (ANG) and Air Force Reserve Command (AFRC) IAW DAFPD 10-9. Chapters are align with AFI 21-101 and the ACC supplement. Ensure all records created as a result of processes prescribed in this publication are maintained IAW AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW Air Force Records Information Management System Records Disposition Schedule. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 to HQ ACC/A4F, 130 Douglas Street, Suite 312A, Langley AFB, VA 23665-2791. This addendum may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See Department of the Air Force Instruction (AFI) 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier

numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. **Attachment 1** contains a glossary of references and is not mandatory for compliance. Compliance with **Attachment 20**, **21,** and **22** is mandatory, using the template or locally developed product. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This publication has been substantially revised and must be reviewed in its entirety. Significant changes include paragraph alignment to parent AFI 21-101, updated terminology, guidance to match current ALIS software/processes, and updated links. Additions include monthly LO fleet management, updates to roles, responsibilities, and programs to align with current F-35 operations and processes.

Chapter 1

MANAGEMENT OVERVIEW, SUPPORTING CONCEPTS AND REQUIREMENTS.

1.1. Introduction. This instruction prescribes basic aircraft and equipment maintenance management policy implementation and procedures used throughout the United States Air Force (USAF) to perform Mission Generation (MG) functions.

1.1.1. **(Added)** The F-35 is a joint services platform that utilizes terminology that differs from legacy. For a frame of reference, the following are common terms (not all inclusive) and their legacy equivalent: Automated Logistics Information System (ALIS)=Integrated Maintenance Database System (IMDS), Joint Technical Data (JTD)=Mission Design Series (MDS) T.O., Return Material Authorization (RMA)=Due-In From Maintenance (DIFM), Time Compliance Technical Directive (TCTD)=Time Compliance Technical Order (TCTO), Action Request (AR)=107 request or Engineering Technical Assistance Request (ETAR), Minimum Essential Function List (MEFL)=Minimum Essential System List (MESL), and Logistics Control Number (LCN)=Work Unit Code (WUC).

1.3. Maintenance Concept.

1.3.2. Organizational Maintenance (O+).

1.3.2. The F-35 Joint Program employs a 2-level maintenance concept defined as organizational and depot levels of maintenance. Within the organizational level, there are on- aircraft and O+ maintenance tasks.

1.3.2.3. **(Added)** O+ Scheduled Maintenance:

1.3.2.3.1. **(Added)** Scheduled maintenance requirements for off equipment will be listed within applicable JTD. **(T-2).**

1.3.2.3.2. **(Added)** O+ scheduled maintenance will be documented and tracked for particular assets as detailed below:

1.3.2.3.2.1. **(Added)** Program provided Support Equipment (SE) scheduled maintenance will be managed, tracked and documented within Computerized Maintenance Management System (CMMS) and Lightning Support Equipment Management System (LSEMS) accordingly. **(T-2).**

1.3.2.3.2.2. **(Added)** Program provided Alternate Mission Equipment (AME) scheduled maintenance will be documented, tracked and managed within CMMS and Alternate Mission Equipment Tracking System (AMETS) (Exceptions: AME-3, armament specific hardware). **(T-2).**

1.3.2.3.2.3. **(Added)** Tracking and managing scheduled inspections or shelf life of these same items while they are not installed on an Air Vehicle (AV) will be tracked in either Maintenance Management Production Asset Inspection Requirements (MM-PAIRS) as a shelf life tracked item or external to ALIS (i.e., Logistics Data Management (LDM)). (**T-2).**

1.3.4. Action Requests (AR) are the primary method of problem reporting for the F-35 Air System. Refer to **paragraph 11.47** to submit ARs to the Autonomic Logistics Global Sustainment (ALGS) Operations Center through ALIS. SOI 1514.02.

1.3.5. **(Added)** Use of JTD. Verified JTD will be used for all maintenance actions/procedures. **(T-2)**. Where there is JTD that has not been authored or verified, refer to established SOI or User Guide procedures. **(T-2)**.

1.3.5.1. **(Added)** Sustainment Operating Instructions (SOIs) are F-35 joint program instructions provided by the Joint Program Office (JPO). They are developed with Service/Partner participation and provide source documentation for Air Force policies/instructions specific to the F-35 where legacy instructions may not be adequate for the given topic. SOIs are considered applicable and source guidance for use when there is no other Air Force guidance available. If there is a conflict, Air Force guidance will take precedence. SOI source documentation and information that is relevant to AFI 21-101 is included in this publication and referenced to the specific SOI in applicable paragraphs of this publication. Ensure the SOI is current and active when referenced. SOIs may be accessed at the following web site: **https://usaf.dps.mil/teams/12097/sustainment/af%20soi%20library/forms/allitems.aspx**

1.5. Aircraft and Equipment Readiness.

1.5.1. Prognostic Maintenance Inspections.

1.5.1.1. **(Added)** MM-PAIRS will be viewed and tracked in the same manner as scheduled maintenance inspections. **(T-2).**

1.5.1.2. **(Added)** Management of all F-35 Air Vehicle (AV) Scheduled and Prognostic maintenance requirements are performed within the ALIS. Scheduled and Prognostic maintenance is performed IAW JTD, TCTD and as directed in an Action Request Response (ARR). Specific scheduled maintenance requirements are created by using the Health Inspection Task (HIT) in MM-PAIRS via ALIS.

1.9. Publications.

1.9.3. **(Added)** Support Equipment Maintenance Matrix (SEMM). Refer to established SOI or User Guide procedures.

1.9.3.1. **(Added)** The primary source for technical data used by authorized personnel to conduct maintenance for SE is verified JTD. In the absence of verified JTD, F-35 program approved legacy general tech data may be used.

1.9.3.2. **(Added)** The SEMMs are configured and managed by Air System Contractors (ASC), intended to be used as cross reference tools for SE authorized maintenance personnel to assist in determining whether or not a particular SE maintenance task is authorized when no released JTD exists.

1.9.3.3. **(Added)** The referenced SE maintenance technical data in the SEMM is comprised of Original Equipment Manufacturer (OEM) and/or vendor Operation & Maintenance (O&M) manuals, Department of Defense (DoD) Service SE technical publications and ASC-authored work cards.

1.11. Modification Management. Submit an AR to the ALGS Operations Center through ALIS for program specific equipment and aircraft modifications. Refer to established SOI or User Guide procedures.

1.19. Changes to Technical Orders. Lockheed Martin (LM) Aeronautics is the Joint-Service Technical data Manager (LM- JTDM) and has management responsibility for all JSF program

technical data and technical data requirements. LM-JTDM provides overall management of the Joint Tech Data Action Request (JTDAR) internal process and updates required for all JSF JTD. Refer to established SOI or User Guide procedures.

1.19.1. Recommend improvements, corrections or additions to JTD by submitting a JTDAR to ALGS Operations Center through ALIS. The request will be clear, concise and provide enough detail to identify the recommendation. Additionally, the request will provide a recommended solution, if known. The initiator shall recommend a JTDAR processing priority as applicable. **(T-2).**

1.19.2. Expedited JTDAR are accomplished when personnel/property hazards, safety-of-flight conditions exist or a change that pertains to a procedure that will result in a work stoppage or damage to equipment if left uncorrected.

1.19.3. **(Added)** Routine JTDAR are accomplished for all other changes that do not meet the Expedited or Category 1 (CAT 1) Action criteria.

1.19.4. **(Added)** Additional technical data waivers, deviations, improvements, corrections, or procedures are submitted using an AR to the ALGS Operations Center through ALIS. **(T-2).** Refer to established SOI or User Guide procedures.

Chapter 2

ROLES AND RESPONSIBILITIES

2.4. Maintenance Group Commander (MXG/CC) Responsibilities.

2.4.15.1. **(Added)** Identify shortfalls of critical equipment needed for essential maintenance assets to include aircraft, engines, pods, AGE, SE, vehicles, etc., and engage with the MAJCOM and/or Lightning Support Team (LST) to mitigate.

2.4.32. Stock Record Account Number (SRAN) engine manager duties are performed by the contractor.

2.4.33. **(Added)** Engine Health Management Plus (EHM+) duties are performed by the contractor. In some cases, an AR may be required to request information outside of scope of local Flying Scheduling Effectiveness (FSE).

2.4.37. Appoint a project officer for Aircraft Structural Integrity Program (ASIP) function, when required. **(T-2).**

2.4.37.1. **(Added)** Unit AIT reports will include amplifying remarks to explain AIT data submission rates below 90%, and listed by month in the remarks section IAW DAFI 63-140, *Aircraft Structural Integrity Program and Air and Space Equipment Structural Management* **(T-2).**

2.4.37.2. **(Added)** F-35 units will track and report the quarterly AIT Status report document comment section, the number of Portable Memory Device (PMD) download failures that occur during debriefing **(T-2).**

2.5. Deputy Maintenance Group Commander (MXG/CD).

2.5.1. **(Added)** Establish and maintain an effective Low Observables (LO) maintenance program. **(T-2).**

2.7. Wing Weapons Manager (WWM).

2.7.12.2. **(Added)** Ensure JPO-provided weapons load crew CTK contents meet production contract procurement requirements. Wing Weapons Manager (WWM) may approve modifications to load crew CTKs.

2.8. Squadron Commander (SQ/CC) Responsibilities.

2.8.1.1. **(Added)** The Operating Unit/Squadron will report mishaps/accidents IAW existing Service procedures and instructions and are also responsible for contacting the ALGS Ops Center IAW the F-35 Mishap Communication Instruction. Operating Unit/Squadron policy will determine individuals or positions that will notify the ALGS Ops Center in the event of a mishap/accident. SOI 1505.01 and 1501.02 **(T-2).**

2.8.19.1. **(Added)** Work closely with the OG/CC to balance flying requirements with maintenance capability to minimize LO backlog.

2.8.19.2. **(Added)** Ensure all maintenance personnel complete annual LO awareness, panel handling training through the MTS.

2.8.19.3. **(Added)** Approval authority for flying aircraft in approved Aero Only configuration as outlined in the latest revision of Interim Maintenance Procedure, F35- IMP-A0110510105-960A-A. **(T-2)**.

2.8.19.4. **(Added)** Ensure panels are not removed from aircraft undergoing annual audits.

2.8.19.5. **(Added)** Establish a robust LO quality assurance program that includes focus on aircraft Outer Mold Line (OML) inspections, LO annual audits, and LO repair processes.

2.8.19.6. **(Added)** Establish a quarterly LO Health of the Fleet briefing.

2.8.20. **(Added)** Ensure hot wash/lessons learned from each Theater Support Package (TSP) and/or contingency deployment are captured and shared with all F-35A units, and the F-35 Weapon System Team (WST), **ACC.A4F35@us.af.mil**. **(T-2).**

2.9. Maintenance Supervision Responsibilities.

2.9.2. Engine data is maintained in ALIS.

2.9.19. ARs are used in ALIS to report materiel deficiencies. Refer to established SOI or User Guide procedures.

2.10. Flight Supervision.

2.10.25.3. **(Added)** F-35 program of record deficiency reporting will be accomplished IAW JTD AR Submittal Guide. **(T-2)**.

2.10.26. Review and track RMAs to ensure they are turned in within their allotted 24-hour time.

2.10.27.1. **(Added)** Work center supervisors request bench stock levels via the unit Supply Section. The Supply Section will forward Pre-Expended Bin (PEB) levels through the quarterly review process. Refer to established SOI or User Guide procedures **(T-2).**

2.12. Section NCOIC/Chief.

2.12.8.2. **(Added)** Ensure that CMMS has been reviewed on a daily basis to monitor scheduled and deferred events. Refer to established SOI or User Guide procedures. **(T-2).**

2.12.9.1. **(Added)** Review and ensure work center ALIS data entries for the previous day and all preceding non-fly days in CMMS for job accuracy and completeness. **(T-2).**

2.12.9.2. **(Added)** Will coordinate with applicable agencies to ensure ALIS information (reports, P&S data, Configuration) is backed up at least once per day and stored for use in case of an ALIS offline situation unless mission dictates otherwise. **(T-2).** Refer to ALIS Contingency Operations Procedures (COP) for offline procedures.

Chapter 3

AIRCRAFT MAINTENANCE SQUADRON (AMXS)

3.5. Production Superintendent (Pro Super).

3.5.2.1. **(Added)** Exceptional release (ER) aircraft for flight via the CMMS tool in ALIS IAW JTD AWI. **(T-2).** An ER will include review of all opened, closed, and deferred work packages produced since last ER. **(T-2).** Additionally, all Production Asset Inspection Requirements (PAIRs) will be reviewed for currency. **(T-2).** Refer to established SOI or User Guide procedures.

3.5.15. **(Added)** The Production Superintendent has authority to waive holes/EELs/inconsistencies to MC aircraft when authorized by the MXG/CC IAW **Chapter 11** and **Table 11.1** of this instruction.

3.5.15.1. **(Added)** The holes/EELs/inconsistencies must be determined to have been caused by an update, Sustainment Parts Information Record (SPIR), DTR and that the part in question can be verified to be correct and installed. **(T-2).**

3.5.15.2. **(Added)** Life Limited Parts/TCI or PAIRS items with holes/EELs/inconsistencies will not be waived. **(T-2).**

3.5.15.3. **(Added)** An AR must be written in ALIS to report the holes/EELs/inconsistencies prior to being waived, IAW JTD AR Submittal Guide and **Paragraph 11.34**. **(T-2).**

3.5.15.4. **(Added)** Input a note in the Air Vehicle status page of CMMS with the holes/EELs/inconsistencies that has been waived and the AR number. **(T-2).**

3.6. Flightline Expediter.

3.6.4. Reference HQ ACC/A4PM SharePoint site for the MEFL and LCN listing: **https://usaf.dps.mil/sites/ACC-A4/A4M/A4PM/AFI%2021123%20ACCSUP%20MESL/Forms/AllItems.aspx?viewpath=%2Fsites%2FACC%2DA4%2FA4M%2FA4PM%2FAFI%2021123%20ACCSUP%20MESL%2FForms%2FAllItems%2Easpx**. The F-35 uses LCNs and does not use Work Unit Codes (WUC). Therefore, no WUC manual exists. Refer to the CMMS AWI for list of LCNs utilized.

3.7. Aircrew and Maintenance Debrief Section.

3.7.12.1. **(Added)** Prognostics and Health Management (PHM) Data Download.

3.7.12.1.1. **(Added)** Portable Maintenance Device (PMD) will be processed at the end of the flying day for each sortie. **(T-2)**. HRCs downloaded from PMD will be reviewed for mission critical/safety fault determination. Exceptions listed below:

3.7.12.1.1.1. **(Added)** Back-to-back missions that were pre-scheduled in ALIS.

3.7.12.1.1.2. **(Added)** Per Aircraft Release Authority's decision where ALIS is not available (away from the AV host Standard Operating Unit (SOU) for a prompt processing of the PMD download).

3.7.12.1.1.3. **(Added)** An approved AR, A2UN or JTD guidance where ALIS is not available.

3.7.12.1.1.4. **(Added)** For failed PMD downloads follow the F-35 program current debrief users' guide.

3.7.13. **(Added)** Check ALIS for Airframe Time.

3.8. Aircraft Section.

3.8.1.2. Red gear (-21) is tracked in CMMS. **(T-2).**

3.8.1.4. **(Added)** Perform propulsion tasks to include Engine Equipment Maintenance Section responsibilities. **(T-2).**

3.8.1.5. **(Added)** Perform engine trailer MX, unless a local MOA exists for AGE flight to perform MX. **(T-3).**

3.9. Specialist Section.

3.9.2.4. **(Added)** Perform all Electro/Environmental tasks. **(T-2).**

3.9.2.5. **(Added)** Manage SPRAM Accounts. **Note:** KIV-78 must be included in a SPRAM account. **(T-2).**

3.9.2.6. **(Added)** Perform BOS cart MX. **(T-2).**

3.9.2.7. **(Added)** Perform nitrogen cart (8-bottle) MX. **(T-2).**

3.9.2.8. **(Added)** Manage and perform maintenance on removed 270 and 28 VDC batteries. **(T-2).**

3.10. Weapons Section.

3.10.1.17.1. **(Added)** Ensure all automatically or manually populated AME data and on/off equipment requiring life tracking/usage parameter(s) in ALIS are correctly reviewed for accuracy. **(T-2).**

3.10.1.17.1.1. **(Added)** AME Storage Designation: The physical storage location is virtually designated and annotated in CMMS.

3.10.1.17.1.2. **(Added)** AME Operating Unit/Squadron Acceptance: Supply notifies the receiving Operating Unit/Squadron that a due-in AME item has been delivered and is ready for pickup, or per local Supply Chain Management (SCM) policies. Refer to established SOI or User Guide procedures.

3.10.1.17.1.3. **(Added)** Receiving Initial/New AME: When the gaining Operating Unit/Squadron receives AME they shall access CMMS and establish a life limited Track Usage Record (TUR) per the PAIR as listed in JTD A13-10 tables. **(T-2).** Using the tools within CMMS, populate the TUR with the required life limited tracking data/usage parameters. Once established, the aircraft AME usage must be manually entered into CMMS. **(T-2).**

3.10.1.17.1.4. **(Added)** AME removed from aircraft requires a Work Order and attached serviceability/unserviceability tag with the following information: current status, pressurized or depleted, part number, serial number, usage information, removed date. The AME item physically becomes the property of the gaining Work Center/assigned squadron and resides in their designated storage spot. **(T-2).**

3.10.1.31. Establish and monitor gun room security and explosive licenses if required.

3.10.2. Weapons Expediter.

3.10.2.3. Reference HQ ACC/A4PM SharePoint site for the MEFL and LCN listing: **https://usaf.dps.mil/sites/ACC-A4/A4M/A4PM/AFI%2021123%20ACCSUP%20MESL/Forms/AllItems.aspx?viewpath=%2Fsites%2FACC%2DA4%2FA4M%2FA4PM%2FAFI%2021123%20ACCSUP%20MESL%2FForms%2FAllItems%2Easpx**. The F-35 uses LCNs and does not use Work Unit Codes (WUC). Therefore, no WUC manual exists. Refer to the CMMS AWI for list of LCNs utilized.

3.10.2.6.1.2. **(Added)** Maintain ALIS for installed guns, gun systems, and gun component TCIs or inspection data, based on round count limits listed in the PAIR JTD Data Module, including updating rounds from the AF Form 2434 or locally developed form. **(T-2).**

3.11. Support Section.

3.11.8. **(Added)** F-35- HAZMAT may be collocated with common HAZMAT— storage is a local decision. Wherever it is stored, in addition to tracking in ESOH, HAZMAT use must be tracked in SCM to ensure proper information is available for tracking and replenishment by Hybrid Product Support Integrator (HPSI). **(T-2).** Hazardous material may be physically stored in the main warehouse or at a HAZMAT facility. **Note:** Once issued to maintenance, HAZMAT must be tracked using local procedures. **(T-2).**

3.11.9. **(Added)** Custodians are responsible for warehousing of common hazardous material, including common petroleum, oil, and lubricants (POL).

3.12. Decentralized Material Support (DMS).

3.12.1.1. **(Added)** Requisition parts through ALIS/CMMS tool. When necessary, Supply personnel can assist with follow up via contacting JSF Supply warehouse. **(T-2).**

3.12.4.2. **(Added)** DMS will perform daily inventory of TNB assets to verify accuracy. **(T-2).**

3.12.4.3. **(Added)** DIFM/RMA assets will be tracked within the Performance Based Logistics (PBL) construct via JSF Supply warehouse using the Industrial and Financial System (IFS) tool. **(T-2).**

3.12.4.4. **(Added)** The Due-In list page in CMMS allows users to view and manage parts that are awaiting turn-in from maintenance. This screen will be used to process retrogrades to accomplish turn in correctly. **(T-2). Note:** This does not include initial issue turn-ins (i.e. AME, SE)

3.12.5.1. **(Added)** The unit is responsible for management, including replacement of damaged or lost reusable containers. The LRS will subsume F-35 packaging and reusable container responsibilities consistent with process used for legacy assets. **(T-2).**

3.12.6.1. **(Added)** All work orders associated with parts in TNB must be reviewed weekly to ensure they are still open. **(T-2). Note:** Coordinate with maintenance to ensure WO number has not changed. Turn in part if no longer needed.

3.12.6.2. **(Added)** During TNB inventory, if part has been in TNB 30 days or longer and is not required for a TCTD, Time change, pending AR, or critical safety item, perform turn in. **(T-2). Note**: Coordinate with Pro Super/Expediter prior to turn-in.

Chapter 4

MAINTENANCE SQUADRON (MXS)

4.2. Maintenance Supervision Responsibilities.

4.2.2. Base level repair capability is performed through the established PBL standards, if applicable.

4.2.6.1. **(Added)** Use the CRM tool in ALIS to submit a JTDAR for JTD changes/clarification.

4.4. Accessories Flight. Electro Environmental responsibilities reside in Specialist Section in AMU/FGS.

4.5. Aerospace Ground Equipment (AGE) Flight.

4.5.1.5.1. **(Added)** Support Equipment is managed and maintained in ALIS. The Support Equipment Maintenance Matrix (SEMM) is the primary source for AGE technical data until the technical data is entered into JTD. For detailed information on the SEMM refer to established SOI or User Guide procedures.

4.5.2.11.1. **(Added)** Ensure equipment is shipped according to AF SECA disposition instructions/requirements.

4.6. Armament Flight. Armament Flight responsibilities are accomplished through the AMU/FGS Weapons Section or established AME section.

4.7. Avionics Flight. Avionics Flight does not exist under the F-35 maintenance concept.

4.8. Fabrication Flight.

4.8.4.5. Establish/obtain NDI inspection technique files by submitting an AR to ALGS Operations Center and LST through ALIS. **(T-2).** Refer to established SOI or User Guide procedures.

4.8.5. Low Observable (LO) Aircraft Structural Maintenance (ASM) Section. LO ASM Section manages all aspects of Low Observable Health Assessment System (LOHAS); Low Observable Defect Entry Module (LODEM), Signature Assessment Module (SAM) and LO Maintenance Management Module (LOMMM) for assigned aircraft. **(T-2).**

4.8.5.8. **(Added)** Follow guidance contained in Joint Strike Fighter (JSF) Maintenance Coding Reference Guide (F35-UGP-A0122000104-090A-A) in JTD to ensure Maintenance Work Orders created in Computer Managed Maintenance System (CMMS) capture qualitative and standardized data for LO Reliability & Maintainability analysis. **(T-2).**

4.8.5.9. **(Added)** Establish a Post Operations Service (POS) final finish team rotation plan to ensure all LO personnel remain proficient. Final finish POS inspections are required at the end of each flying day. **(T-2).**

4.8.6. **(Added)** LO Signature/Fleet Management Section will:

4.8.6.1. **(Added)** Monitor fleet LOHAS Maintenance Margin Used (MMU) values and ensure aircraft are scheduled for LO margin reduction when individual aircraft LOHAS values reach 80% of the MMU. It is recommended that the LOHAS MMU be reduced as opportunistic maintenance opportunities arise and at the discretion of the MXG/CC. LOMMM “What If”

capability will be utilized to determine residual LOHAS impacts from repairs and balance this against improvements to the MMU. **(T-2).**

4.8.6.2. **(Added)** Coordinate with production superintendent(s), aircraft maintenance unit supervision and/or PS&D to schedule aircraft for LO margin reduction based on overall fleet health and/or LOMMM damage priority screen. **(T-2).**

4.8.6.3. **(Added)** Schedule aircraft with an LOHAS exceedance equal to or greater than 100% MMU at the earliest opportunity and/or during the next Shared Resources meeting. **(T-2).**

4.8.6.4. **(Added)** Unscheduled F-35 LO maintenance/LO FOM may be scheduled separately from Shared Resources meeting. **(T-2).**

4.8.6.5. **(Added)** Responsible for performing annual OML audits on each assigned aircraft. The audit is used to confirm that damages and repairs entered into the LOHAS during routine OML inspections provides for an accurate representation of the LO system health. OML audit must be completed by separate entity within the LO section, excluding OML team members. This can only be performed by physically matching aircraft damages/repairs with the entries in the LODEM. Errors identified during the audit must be recorded in an audit historical file, corrected on the aircraft OML and reflected in LOHAS for defects or repairs found deficient. Any aircraft audit that results in a +15% or -15% LOHAS margin deviation indicates a potential deficiency with the OML inspection process. See **Attachment 21** for Audit procedures and reporting requirements. **(T-2).**

4.8.6.6. **(Added)** Report fleet LOHAS mission capable status to **ACC.A4F35@us.af.mil** and **ACC.A5FL@us.af.mil** at the beginning of each week. LOHAS fleet average reports must not include non-possessed aircraft. See **Attachment 20** for a LOHAS Fleet Average Template and notes for additional reporting information. **(T-2).**

4.8.6.7. **(Added)** Key information includes LOHAS maintenance margin used number for each aircraft, fleet LOHAS average, a brief description of damages or repairs that drive a signature delta from previous OML and identify aircraft in an “Aero Only” configuration and associated panels. **(T-2).**

4.8.6.8. **(Added)** LOHAS margin values for each aircraft with a LOHAS exceedance will be reported as identified in LOMMM until it reaches 200% of the MMU. Do not report values greater than 200% to ensure fleet averages are not unnecessarily impacted. **(T-2).**

4.8.6.9. **(Added)** Low Observable (LO) coating maintenance is critical for signature performance, corrosion prevention/control and rain erosion protection; applying coatings to LO aircraft specifically for aesthetic purposes is prohibited. **(T-2)**.

4.11. Propulsion Flight. Propulsion Flight does not exist under the maintenance concept. Responsibilities to include Engine Equipment Maintenance Section responsibilities are performed by the Aircraft Section.

4.12. Test, Measurement, and Diagnostic Equipment (TMDE) Flight.

4.12.2. Local USAF PMEL should be used for calibration support whenever capability exists. **(T-2).**

4.12.3. **(Added)** When USAF PMEL capability does not exist, the Product Support Integrator (PSI) shall plan, schedule and ensure calibration support. **(T-2).**

Chapter 5

MAINTENANCE OPERATIONS (MXO)

5.2. Maintenance Operations.

5.2.1.5.2. **(Added)** Use ALIS to manage International Civil Aviation Organization (ICAO) codes for on/off-station possessed aircraft. Since the capability does not exist for utilization of PICs in ALIS, submit Purpose Identifier Code changes in Logistics Information Management System-Enterprise View (LIMS-EV). **(T-2)**. Note: ALIS CMMS status only allows the aircraft to be in a FMC, PMCM, PMCS, NMCM, NMCB or NMCS status. Legacy status codes are utilized, but does not match ALIS.

5.2.1.10. Base level repair is Not Applicable.

5.2.2. Maintenance Operations Center (MOC).

5.2.2.1.1. Use ALIS to monitor and coordinate sortie production, maintenance production, communicate priorities, and execution of the flying and maintenance schedules while maintaining visibility of fleet health indicators. For air vehicle status reporting, refer to established SOI or User Guide procedures. **(T-2).**

5.2.4. Plans, Scheduling, and Documentation (PS&D).

5.2.4. Plans, Scheduling, and Documentation (PS&D). PS&D will be the POC for managing and tracking TCTD, PAIRs, and aircraft equipment transfer. **(T-2).**

5.2.5. Maintenance Management Analysis (MMA).

5.2.5. Maintenance Management Analysis (MMA). MMA requirements are limited by ALIS capabilities.

5.2.5.1.12. ALIS administrators are responsible for system database management.

Chapter 6

QUALITY ASSURANCE (QA)

6.4. Chief Inspector Responsibilities.

6.4.10. A master standardized AFTO Form 781-series forms binder is not applicable.

6.9. QA Product Improvement Programs (PIP).

6.9.4.1. Configuration Management (CM) and Modification Management. CM and modifications are managed within ALIS. Use an AR in ALIS to resolve discrepancies, IAW JTD AR Submittal Guide and **paragraph 11.47 (T-2).**

6.9.5.1.3. Use an AR in ALIS to report materiel deficiencies, IAW JTD AR Submittal Guide and **paragraph 11.47 (T-2).**

6.9.5.1.7.1. **(Added)** Perform all Required Screening Point (RSP) actions as the point of contact for MXG **(T-3).**

6.10. Technical Order Distribution Office (TODO). JTD is managed by ALGS and LST.

6.10.1.3. Date stamping TCTDs is not compatible with program requirements as TCTDs are distributed through ALIS.

6.10.10. **(Added)** Maintain and utilize the SEMM in the same manner as an AF Technical Order. Follow procedures outlined within TO 00-5-1, to the fullest extent. **(T-2).** Address any SEMM deficiency via AR in ALIS IAW JTD AR Submittal Guide and **paragraph 11.47.3 (T-2).**

6.12. Functional Check Flights (FCFs) to include Operational Check Flights (OCFs).

6.12.1. The criteria used to determine if/when a Check Flight is required is identified within JTD, directed by AR, during TCTD follow-on checks, via an Aircraft Return Action (ARA) or as outlined in AFI 21-101. **(T-2).**

6.15. Weight and Balance (W&B) Program.

6.15.3.2.3. **(Added)** If discrepancies exist within Weight and Balance records/data, an AR must be submitted utilizing the CRM tool in ALIS to correct discrepancies, IAW JTD AR Submittal Guide and **paragraph 11.47 (T-2).**

6.15.5. **(Added)** Transfer of Air Vehicle Weight Balance records.

6.15.5.1. **(Added)** The transferring of data files between ALIS work station and the Government Furnished Equipment (GFE) laptop/work station hosting the Automated Weight and Balance System (AWBS) software is carried out IAW established SOI or User Guide procedures. Data transfer devices will comply with service policies and regulations. This can include TCTD mod packages, Zero Fuel Mass Properties (ZFMP) ADL and Form F records. **(T-2).**

Chapter 7

IMPOUNDMENT PROCEDURES

7.6.1.1. **(Added)** Indicate the reason for impoundment in the cautions and warnings section in AV status page in CMMS.

Chapter 8

TOOL AND EQUIPMENT MANAGEMENT

8.2. Guidelines for Program Management.

8.2.7. Each tool is marked with an appropriate LCN/sequence number or EID.

8.2.10.1. **(Added)** Support personnel will requisition new tools in ALIS. Ensure replacement tools are appropriately marked. **(T-2).**

8.2.10.1.1. **(Added)** Common hand tools and tool containers procured under emergency conditions may be delivered unmarked. In those cases, the receiving unit shall locally etch the replacement tool or container with the same Tool ID number as the broken or lost tool/container it is replacing. **(T-2).**

8.2.10.1.2. **(Added)** Global pooled tools on loan to another unit will be transferred in ALIS. Re-etching is not necessary. **(T-2).**

8.2.10.1.3. **(Added)** Units will not re-etch any global pooled asset. **(T-2).**

8.2.11.1. **(Added)** All locally manufactured, developed, or modified tools used on program provided equipment or aerospace vehicle will be submitted through an AR for approval. **(T-2).**

8.3. General Program Guidelines.

8.3.6. CMMS does not currently have the ability to provide MILs, track shift change inventories, or perform basic tool control procedures. TC-Max will be used until ALIS/CMMS is capable of performing these requirements. **(T-2)** Units will keep accurate status of all global pooled assets in TC-Max and ALIS. **(T-2).**

8.9. Lost Item/Tool Procedures.

8.9.2.5.2. **(Added)** If a tool is found, compare the tool sequence number to the Tool Marking Organizational Matrix to determine and contact the owner.

Chapter 9

MATERIAL MANAGEMENT SUPPORT

9.1. General. Supply chain management functions are regulated through Performance Based Logistics (PBL).

9.2. Decentralized Materiel Support.

9.2.4.2.1. **(Added)** Parts Ordering. Parts are ordered through CMMS/SCM interface by appointed maintenance or supply personnel **(T-2).**

9.2.4.2.1.1. **(Added)** Requisitions outside of ALIS using legacy or other processes/systems will be accomplished according to AFI 23-101 **(T-2).**

9.2.4.2.1.2. **(Added)** Ordering and turn-in of GFE/Government Furnished Material (GFM) parts will be accomplished using legacy system(s) **(T-2).**

9.2.4.2.1.3. **(Added)** Parts ordered for on/off-equipment maintenance will be carried out to support the Work Order (WO) execution phase. **(T-2).** Parts that are considered retrogrades (RMA) shall be ordered through the WO/Solution Set and not as Ad-Hoc orders unless approved by the Pro Super. **(T-2).**

9.2.4.2.1.4. **(Added)** Backorder review will be accomplished monthly by DMS personnel to ensure orders no longer required are cancelled and to remove erroneous data **(T-2).**

9.2.4.2.2. **(Added)** Parts Processing. Mission Capable sourcing and request for upgrade, downgrade and cancel Priority 1 requirements are coordinated with JSF Supply. Sample Priority 1 Verification Worksheet **(Attachment 22)** may be used to assist in the verification process prior to backorder.

9.2.4.2.2.1. **(Added)** Upon receipt of part(s) from the warehouse, parts should be signed for to close out the requisition order process in both CMMS and SCM. This can be done at an ALIS terminal, but must be physically signed for at the point of receipt (i.e. pick ticket or local tracking log). **(T-2). Note:** If the order does not close in CMMS due to system error, consult ALIS admin.

9.2.4.2.3. **(Added)** CMMS order cancellation can be accomplished from the Material Request Details Page and only on requisitions in the state of New, Released, or Picked. Cancellations will only be accomplished by DMS or appointed supply representatives. **(T-2) Note**: Order cancellation must be done prior to WO cancellation. The reason and Priority 1 authority must be documented in the notes block. **(T-3)**.

9.2.4.2.4. **(Added)** All parts, with the exception of incomplete TCTD kits, will be picked up and signed for from the warehouse within 3 duty days of arrival or warehouse personnel will turn back in to stock. **(T-2).**

9.4. Readiness Spares Package (RSP) Review.

9.4.1. **(Added)** Extraction of assets from the Deployment Spares Package (DSP) for Priority 1 requirements shall be considered as a last-resort source of supply and must be approved by the service-designated POC who owns the DSP. **(T-2).**

9.4.1.1. **(Added)** Any request to extract a component from a DSP is initiated by the HPSI. **Note**: If a participant removes a part from a pre-assembled DSP without following the BR #160 process, normal replenishment (Priority 3) will occur.

9.5. Bench Stock. Pre-Expended Bin (PEB). The main users of bench stock items are Maintenance and back shops, where bench stock may also be stored. **Note**: CMMS currently does not identify shelf-life items. Recommend tracking using manual procedures.

9.5.2. When bench stock falls below the minimum supply level established in CMMS (Note: this is not necessarily 50%), authorized bench stock personnel initiate a material request in CMMS. Warehouse personnel will follow procedures in the Supply Users Guide (SUG) to issue the items or items will be backordered (if not available locally).

9.5.2.1. **(Added)** PEB will be inventoried monthly. **(T-2)**. Replenishment orders can be placed at any time.

9.5.2.2. **(Added)** Parts ordering for consumables and PEB are carried out to support the WO execution for replacement of minor hardware and consumable items. For the General Use Consumable (GUC) List, refer to: **https://usaf.dps.mil/teams/12097/supply%20chain/forms/allitems.aspx?viewid=b7541e20%2D69dd%2D45a8%2Dafb2%2Da01ef3edaf15&id=%2Fteams%2F12097%2FSupply%20Chain%2FGUC%20Listings**. Consult unit DMS for ordering details. **Note**: Consumable, shop use, and RMA initial issue items can be ordered through the parts catalog.

9.5.2.3. **(Added)** Excess PEB items identified by CMMS maximum quantity must be returned to the warehouse. **(T-2).**

9.5.4. **(Added)** At least quarterly, Warehouse and Maintenance personnel will communicate any suggestions/changes regarding bench stock inventory to their Supply Field Service Representative (FSR). This includes requests for bench stock items that are not currently stocked, suggestions to remove items from bench stock that are no longer needed, and requests to increase or decrease the quantity of specific items. FSRs collect these suggestions and, on a quarterly basis, communicate them to the HPSI (A). The HPSI (A) validates the PEB additions/deletions/changes and orders any additional or new bench stock items needed.

9.15. Time Compliance Technical Order (TCTO) Kit Procedures.

9.15.4. **(Added)** When ordering TCTD material, annotate item is marked for TCTD within the notes section of CMMS. **(T-2).**

9.16. Supply Points.

9.16.4. **(Added)** Follow guidelines contained within the SUG for inventory of all Supply Points, to include Wheel and Tire.

9.18. DIFM Management.

9.18.1. Retrograde/RMAs will be managed IAW applicable SOIs, SUG and ALIS work instruction. **(T-2).**

9.18.3. DMS or sections with RMAs (i.e. backshops) will use the Retrogrades to be Returned List, from SCM to monitor owed retrogrades. **(T-2).**

9.18.3.4. **(Added)** Status of each retrograde will be provided to the warehouse daily to assist with RMA monitoring/management. **(T-2).**

9.18.7.1.1. If the part contains fluid, ensure drain and purge tags accompany the part for turn in. Ensure container is leak proof (i.e. turned-in in plastic bag to prevent leakage). **(T-2).**

9.18.7.1.2. When turning in oxygen cylinders, a completed Oxygen Cylinder Pressure Certificate certifying that it is below 29 psi will accompany the item. **(T-2).**

9.18.7.2.2. **(Added)** Ensure that the failure information is in CMMS before returning retrograde to supply. **(T-2).**

9.18.7.2.3. **(Added)** Ensure serviceable/unserviceable part tags from CMMS are filled out completely and accompany parts to include applicable failure data/ Health Reporting Code (HRC) codes (if unserviceable), part number, serial number, if part was ever installed on aircraft (if serviceable) and CMMS requisition ID, as a minimum. **(T-2).**

9.18.7.4. Unserviceable RMA parts must be turned in to the supply warehouse within 24 hours (**Note:** Not applicable to one-for-one serviceable part swaps) Warehouse personnel must receive the unserviceable part from maintenance, though there are exceptions for certain remain-in-place items (i.e. TCTD, Time-Change, parts pending AR, critical safety issue). CMMS notification must be processed & received in SCM prior to turn-in. **(T-2).**

9.18.7.5. **(Added)** Ensure all packaging and container material received is reused for the retrograde part being returned. **(T-2).**

9.19. Tail Number Bins (TNB).

9.19.5. Parts placed in TNB will have:

9.19.5.3. Requisition ID. **(T-2).**

9.19.5.7. Current work order number. **(T-2).**

9.19.5.8. **(Added)** Pick ticket. **(T-2).**

9.19.5.9. **(Added)** AFTO 350 Tag that shows the part number, work order, and air vehicle tail number. **(T-2).**

9.21. Bench Check and Repair Policy. No additional guidance for F-35 aircraft maintenance.

9.22. Maintenance Turn-Around (TRN) Record Update Processing. No additional guidance for F-35 aircraft maintenance. This is an HPSI function.

9.23. Buildup Items. ALIS will be used to manage built up items (e.g. wheel/tire) from alternate locations **(T-2).**

9.23.1. Send items to appropriate work centers for build-up and return them to the section (i.e. DMS) for re-issue.

9.23.1.1. Use locally developed control log to track items being sent for build-up.

9.23.1.2. Validate control log daily, follow-up actions required for items over 10 days old.

9.24. Deficiency Report (DR) Exhibits. F-35 deficiency reporting is completed via an Action Request (AR) submitted in ALIS/CRM. **(T-2).**

9.24.1. **(Added)** DMS will verify that the AR number is annotated on the unserviceable tag prior to turn in. **(T-2).**

Chapter 10

MUNITONS POLICY AND WEAPONS LOAD CREW PROGRAM

10.1. AF Munitions Policy. No additional guidance for F-35 aircraft maintenance.

Chapter 11

ADDITIONAL MAINTENANCE REQUIREMENTS AND PROGRAMS

Table 11.1. Mandatory Special Certification Roster (SCR) and Prerequisites.

42	Waive holes/EELs/inconsistencies	MSgt or higher (or civilian equivalent). (Note 1)
Notes: - Approved by MXG/CC - Approved by Operations Officer/MX SUPT - Operations Officer/MX SUPT may delegate approval authority to the AMU OIC/SUPT or Flight CC/Chief. - Munitions inspectors who are trained and certified may annotate serviceability tags for munitions items (TO 11A-1-10). - Appointed by the Unit Commander (or equivalent) of units possessing NWRM		

11.8. Foreign Object Damage (FOD) Prevention Program.

11.8.6.2.1. For suspected material failure, submit an AR in ALIS/CRM. Refer to established SOI or User Guide procedures.

11.10. Aircraft Structural Integrity Program (ASIP). Refer to **paragraph 2.4.37** of this instruction.

11.11. Identification Friend or Foe (IFF) Program.

11.11.1. The F-35 has a self-test function for IFF checks. This self-test function verifies that the system is operational; however, the self-test function does not verify that the correct/current keys required are loaded for the required mission set. Units may use applicable aircrew -1 checklists for correct/current key verification. **(T-2)**.

11.17. Engine Run Training and Certification Program

11.17.11. Personnel qualified for "In cockpit Integrated Power Plant (IPP)" will be tracked on the SCR. **(T-2).**

11.17.11.1. IPP operators are not required to be tracked on the SCR if PMA only IPP operations are conducted.

11.28. Crash Damaged or Disabled Aircraft Recovery (CDDAR) Program.

11.28.1. Additional F-35 CDDAR training can be provided at the Integrated Training Center (ITC) or lead command approved locations.

11.47. (Added) Customer Relationship Management Program. Refer to established SOI or User Guide procedures.

11.47.1. **(Added)** Responsibilities. **(T-2).**

11.47.1.1. **(Added)** The CRM is a tool within ALIS shall be used to report problems via an AR. All ARs raised via CRM shall be transmitted via the Optional Screening Points (OSP) and Required Screening Points (RSP). These points screen ARs for integrity and accuracy of entries

and information as well as prevent classified, sensitive or International Trade in Arms (ITAR) information from being transmitted. OSP and RSP personnel shall be designated via an ALIS System Permission Request (ASPR) to ALIS administrators. Those units not assigned to established groups will be designated by the appropriate site lead or QA department.

11.47.1.1.1. **(Added)** RSP for the MXG will reside in the QA PIM office.

11.47.1.2. **(Added)** ARs shall be submitted for reporting actions that require rectification outside the capability of the local unit. Examples of such cases are JTD changes, modifications, engineering analysis, ALIS issues, TCTD discrepancies, etc. Many of these occasions have specific forms in existing policy documents; the AR process will replace these mediums in the F-35 environment.

11.47.2. **(Added)** Overall timelines for ARs.

11.47.2.1. **(Added)** Established timelines within the SOIs/JTD AR Submittal Guide will be adhered to in the AR process. These timelines are general guidelines for AR initiation. Every level of approval must remain cognizant of timelines to prevent undue delay of ARs. Delays must be communicated to the OSP and RSP during the AR initiation process. **(T-3).**

11.47.3. **(Added)** AR Submission Process.

11.47.3.1. **(Added)** Initiator shall:

11.47.3.1.1. **(Added)** Exhaust all available means of resolution prior to submitting an AR.

11.47.3.1.2. **(Added)** Inform AMU/FGS production, Flight and shop supervision of AR requirement.

11.47.3.1.3. **(Added)** Utilize JTD AR Submittal Guide to ensure correct AR categorization, severity and classification.

11.47.3.1.4. **(Added)** Notify workcenter OSP of AR submittal.

11.47.3.1.5. **(Added)** Monitor AR status via CRM tool.

11.47.3.2. **(Added)** For OSP responsibilities, refer to JTD AR Submittal Guide.

11.34.3.2.1. **(Added)** Notify RSP of AR submittal.

11.47.3.2.2. **(Added)** Monitor AR status via CRM tool.

11.47.3.3. **(Added)** For RSP responsibilities refer to JTD AR Submittal Guide.

11.47.3.3.1. **(Added)** Once request is validated, submit AR and monitor the AR's status via CRM tool.

11.47.3.4. **(Added)** ALGS role.

11.47.3.4.1. **(Added)** ALGS responsibilities are outlined in JTD AR Submittal Guide.

11.47.4. **(Added)** Resolution of AR Disparities:

11.47.4.1. **(Added)** Disparities will be resolved by the MXG/CC or OG/CC.

11.47.5. **(Added)** AR Review Team.

11.47.5.1. **(Added)** ARs shall be reviewed at all levels to ensure proper categorization and severity is assigned. Refer to established SOI or User Guide procedures.

11.47.5.2. **(Added)** Squadron OSP and respective RSP should consider fleet implications when preparing ARs for submittal. Depending upon the circumstances for the AR, an AR may have an impact on all assigned aircraft/equipment regardless of the squadron.

11.47.6. **(Added)** Contingency Back-up. In the event CRM is down, the following process shall be utilized to initiate an AR.

11.47.6.1. **(Added)** Submit AR through designated RSP via: Fax #: 1-817-777-1868: Email address: **jsf-algs-center.fcaero@lmco.com** and/or Phone # 1-888-433-5677.

11.47.6.2. **(Added)** Responses must filter through RSP/PIM. **(T-3).**

11.47.7. **(Added)** Classified AR procedures.

11.47.7.1. **(Added)** Ensure classified ARs are produced IAW JTD AR Submittal Guide.

11.47.7.2. **(Added)** Consult ALIS admin for assistance, if necessary.

Chapter 12

MAINTAINING COMMERCIAL DERIVATIVE AIRCRAFT (CDA)

12.1. Background Information and Objective. No additional guidance for F-35 aircraft maintenance.

Chapter 13

CENTRALIZED REPAIR FACILITIES (CRF)

13.1. Introduction. No additional guidance for F-35 aircraft maintenance.

Chapter 14

MAINTENANCE PLANS, SCHEDULING AND DOCUMENTATION (PS&D)

14.1.4. The PS&D Section NCOIC/Chief (or equivalent) will:

14.1.4.5. Provide SME on all maintenance scheduling issues. Electronic equipment logbook (EELs) management embedded in ALIS replaces AFTO Form 95s. **(T-2).**

14.1.5.1. The Wing AVDO ensures the asset transfer approval process and coordination between losing and gaining units required prior to, during, and after an Asset transfer is accomplished and coordination on any outstanding supply demands.

14.1.5.3. **(Added)** Coordinate on possession codes/reporting while awaiting AR disposition.

14.1.5.4. **(Added)** Utilize LIMS-EV for aerospace vehicle inventory transactions.

14.2. Data Documentation.

14.2.1.2. EELs are embedded in ALIS and replace legacy AFTO Form 95. **(T-2).**

14.2.2.2. **(Added)** Jacket files will only contain DD forms 2861, FCFs, and backup files COC, DFT, CFT, etc completion. All other information is embedded within ALIS.

14.2.2.2.1. **(Added)** Backup files will be ran upon SOU transfer or monthly, whichever comes first.

14.2.2.3.1. Not required, F-35 does not have major inspections.

14.2.2.3.5. Not required, F-35 does not have -6 TO.

14.2.2.3.7. Engine Records are embedded within ALIS.

14.2.2.3.8. No ADRs are performed on F-35. The ADR is accomplished by ALIS.

14.2.2.3.12. F-35 uses JTD.

14.2.2.3.13. ARs are stored within CRM application in ALIS.

14.2.2.3.14. ALIS does not support pulled forms. Not applicable to the F-35.

14.2.3. Aircraft Document Reviews (ADR). Not required.

14.2.7.1. PS&D will coordinate with MMA and the ALIS administration office to initiate ALIS lock out procedures. IAW **Chapter 5** of this instruction. **(T-2).**

14.3. Configuration, TCTO, SI and TCI Management.

14.3.2. Configuration Management (CM) is managed by ALIS.

14.3.2.1. Units are responsible for accurate reporting of AV configuration in ALIS. **(T- 2).**

14.3.2.2. Maintenance personnel discovering an item with a missing data plate, or one which does not have a serial number, will submit an AR within CRM application in ALIS for disposition. **(T-2).**

14.3.2.4. ALIS notifications notify users in real-time of out of configuration items.

14.3.3.3.1.3. Copies of TCTDs are within ALIS.

14.3.3.3.1.4. Supplies (including WRM) affected by the TCTD are automated within ALIS.

14.3.3.3.1.5. The CRM application in ALIS is used to submit an AR to report TCTD deficiencies IAW **paragraph 11.47** of this instruction. Refer to established SOI or User Guide procedures.

14.3.3.3.2.1. Total number of end items applicable is automated within JTD.

14.3.3.3.2.2. Chair a TCTD planning meeting with attendees from QA, owning and performing work centers, ASC, Propulsion System Contractor (PSC) and/or supply equivalent. **(T-2).**

14.3.3.3.2.3.1. TCTD folders will be standardized and include the completed AF Form 2410 or locally developed product and messages. **(T-2).**

14.3.3.3.2.3.2. **(Added)** Annual TCTD review will consist of verifying applicable tracked TCTDs, verifying rescinded TCTDs are removed from ALIS. If rescinded TCTD anomaly occurs, an AR will submitted for removal.

14.3.3.3.2.3.4. F-35 TCTDs are not listed within REMIS.

14.3.3.3.2.5. TCTD kits are managed by the ASC and/or PSC. Use supply change management (SCM) requisition option to order required parts/kits/tools. **(T-2).**

14.3.3.3.2.6.2. The ASC and/or PSC will ensure kits and/or parts are assembled prior to release. **(T-2).**

14.3.3.3.2.7. PS&D will control and release TCTD kits from contractor sources.

14.3.4.1. Job Standard Master Listing (JML)/ PAIR Management.

14.3.4.1.1. ALIS MM-PAIRs and A13-10 table within JTD represent all PAIRs applicable to an aircraft.

14.3.4.2.4.2. Perform a review of the A13-10 Table and all PAIRs for accuracy and currency when PAIR audit TCTD is received. **(T-2).**

14.3.4.2.4.2.1. PS&D will review PAIRs in the MIS as soon as an automated JTD update is received within ALIS, and will promptly notify all affected sections for action. **(T-2).**

14.3.4.2.4.2.2. PS&D will monitor PAIRs for all inspections and time changes listed in the JTD A13-10 table within ALIS. JSTs are automated by JTD A13-10 table within ALIS. **(T-2).**

14.3.4.2.4.3. For Remaining Life Estimate (RLE)/ Time to Maintenance (TTM), red is displayed upon the end of life or time limit reached and extensions can only be granted via the AR process or MAJCOM policy. Upon reaching the end of life or time limit, a WO will automatically be generated for that event. If a WO is not automatically generated, manually generate a WO. Refer to established SOI or User Guide procedures.

14.3.4.2.4.3.1. ALIS JTD A13-10 table depicts the total number of SIs and TCIs loaded for each assigned aircraft/system.

14.3.4.3. TCI accomplishment is managed in ALIS MM-PAIRs by PS&D.

14.3.4.3.2. Monitor, schedule and manage TCIs through ALIS. AFMAN 21-201, Conventional Munitions Maintenance Management or identified as Federal Supply Group (FSG 13) and Materiel Management Code AQ Items. **(T-2).** MM-PAIRs application within ALIS automates RLE/TTM.

14.3.4.3.3. ALIS is the source of record for all egress data. **(T-2).**

14.3.4.3.4. Initiate, validate, and submit TCI extension requests via AR within CRM application in ALIS. **(T-2).**

14.3.4.3.12. All time changes are ordered through SCM guidelines within ALIS. **(T-2).**

14.3.4.4. **(Added)** Management of all AV and PS Scheduled and Prognostic Maintenance will be carried out within ALIS via MM-PAIRs.

14.3.4.5. **(Added)** Scheduled Maintenance Inspections:

14.3.4.5.1. **(Added)** Only authorized individuals will perform PAIR creation. Refer to established SOI or User Guide procedures.

14.3.4.5.2. **(Added)** Each PAIR is applicable to specific TVEs as detailed in JTD. Specific details about the PAIR and work requirements will be detailed within JTD.

14.3.4.5.3. **(Added)** Authorization to deviate, along with any applicable latitudes, from Scheduled/Prognostic maintenance requirements may be granted via the AR process.

14.3.4.5.4. **(Added)** If an AR Response directs an inspection requirement, the MM- PAIRs tool will be used to initiate these requirements **(T-2).**

14.3.4.5.5. **(Added)** If there is a requirement to adjust or correct usage on an aircraft or part, MM-PAIRs will be utilized to make the necessary changes directed by AR response. **(T-2).**

14.3.5. Coordinate on all major maintenance through AR submission within ALIS through the CRM application. **(T-2).**

14.3.8. Depot Induction.

14.3.8.1. Maintenance Unit/Squadron will prepare aircraft and equipment for entry to depot-level work efforts. Refer to established SOI or User Guide procedures. **(T-2).**

14.3.8.2. Maintenance Unit/Squadron will participate in the Pre and Post meetings for their respective aircraft. **(T-2).** Pre-dock will be held no later than 30 days prior to aircraft induction into depot. **(T-2).** Pre-dock/induction meeting will have, as a minimum, the Baseline Scheduled Work Package (SWP) and the F-35 Maintenance Request Form. Aircraft configuration required for depot induction will be discussed during Pre- dock/induction meeting. **(T-2).** A Post-dock meeting will be held no later than 10 days prior to scheduled aircraft completion. **(T-2).**

14.3.8.3. Maintenance Unit/Squadron will report unsatisfactory receipt, at either the squadron or depot level, through the Depot Feedback Questionnaire within 30 days. **(T-2).** Submit an AR as required.

14.3.8.4. Additional work requests (Unit Level TCTDs), One Time Inspections (OTIs), Delayed Discrepancies, PAIRs will be annotated on a Maintenance Request Form submitted to the F-35 JPO no later than 60 days prior to aircraft induction for consideration. **(T-2).** The F-35 JPO will notify requesting unit of what work will be approved and included in the depot work package.

14.3.8.5. Non-ALIS portion of an asset's records will be transferred by electronic media/jacket file. **(T-2).**

14.3.8.6. When directed to transfer an asset, the originating unit will input all current state data associated with a PAIR for the AV to a Deferred Work Order. **(T-2).**

14.3.8.7. In addition to ALIS SOU transfer, aircraft jacket file must be transferred. **(T-2).**

14.3.8.8. CMMS will cancel all requisitions after the initiation of an asset transfer. The losing and gaining unit will coordinate to ensure necessary demands are transferred. **(T-2).**

14.3.8.9. The losing Maintenance Unit/Squadron will ensure all requisition details are included in any, deferred WO or Follow on Maintenance Requirement prior to asset transfer. **(T-2).**

14.3.8.10. The losing Maintenance Unit/Squadron will inform local SCM administrator/user of any outstanding requisitions that must be transferred/redirected to the gaining Operating Unit/Squadron. **(T-2).** Transferal or redirection of open requisitions is a SCM responsibility.

14.3.8.11. The receiving unit will ensure that all necessary requisitions are reordered on the gaining unit's SOU. **(T-2).** If problems or anomalies occur, an AR is to be initiated for resolution.

14.3.8.12. The gaining ALIS admin will notify the losing unit to initiate the deletion of the AV from their SOU after the gaining unit has loaded and verified the data. **(T-2).**

14.4.1. Propulsion Flight does not exist under the maintenance concept. EM responsibilities are performed by the AMXS/AMU/FGS Dedicated Scheduler.

14.4.1.1.1. EM Focal point is Pratt & Whitney at Hartford, CT for both the Engine Trending and Diagnostics (ET&D) and Engine Health Management (EHM+) program when applicable.

14.4.1.2. AMXS/AMU/FGS/EM Dedicated Scheduler:

14.4.1.2.5. Engine PAIRs are automated within ALIS through MM-Pairs application.

14.4.1.3. SRAN Engine Manager does not exist under the maintenance concept.

Chapter 15

AIRCRAFT SUN SHADE SUSTAINMENT

15.1. Introduction. No additional guidance for F-35 aircraft maintenance.

Chapter 16 (Added)

AEROSPACE VEHICLE COATING AND MARKING REQUIREMENTS

16.1. Introduction. No additional guidance for F-35 aircraft maintenance.

TOM D. MILLER, Maj Gen, USAF
Director of Logistics, Engineering, and Force Protection

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 21 Jan 2020

AFI 21-101_ACCSUP, *Aircraft and Equipment Maintenance Management*, 23 Jun 2020

Abbreviations and Acronyms

AA—Air abort

AD—Addition

ADL—Aircraft Data Load

AI—Air abort IFE

ALGS—Autonomic Logistics Global Sustainment

ALIS—Autonomic Logistics Information System

AME—Alternate Mission Equipment

AMETS—Alternate Mission Equipment Tracking System

AR—Action Request

ARA—Aircraft Return Action

ARR—Action Request Response

ASC—Air System Contractor

ASIP—Aircraft Structural Integrity Program

ATC—Air traffic control

AVDO—Aerospace Vehicle Distribution Officer

AWBS—Automated Weight and Balance System

AWI—ALIS Work Instruction

BOS—Before Operations Servicing

BR—Business Rule

(Added) CFT—Contractor Field Team

CMMS—Computerized Maintenance Management System

(Added) COC—Certificate of Compliance

(Added) COP—Contingency Operations Procedures

COTS—Common Off The Shelf

CRM—Customer Relationship Management

CX—Cancellation

(Added) DFT—Depot Field Team

DIFM—Due-In From Maintenance

DIT—Data Integrity Team

DMS—Decentralized Maintenance Support

DSP—Deployment Spares Package

DTR—Distribution Tracking Record

EEL—Electronic Equipment Log

EHM+—Engine Health Management Plus

EL—Early landing

ER—Exceptional Release

ET—Early take-off

ET&D—Engine Trending and Diagnostics

ETAR—Engineer Technical Assistance Request

FCF—Functional Check Flight

FE/IFE—Flight Emergency/In-Flight Emergency

FGS—Fighter Generation Squadron

FSE—Flying Scheduling Effectiveness

FSR—Field Service Representative

GA—Ground Abort

GAA—Ground abort, before engine start, maintenance

GAB—Ground abort, after engine start, before taxi, maintenance

GAC—Ground abort, after taxi, maintenance

GFE—Government Furnished Equipment

GFM—Government Furnished Material

GUC—General Use Consumable

HAZMAT—Hazardous Material

HIT—Health Inspection Task

HPSI—Hybrid Product Support Integrator

HQ—Headquarters

HRC—Health Reporting Code

IAT—Individual Aircraft Tracking

ICAO—International Civil Aviation Organization

IFF—Identification Friend or Foe

IFS—Industrial and Financial System

IOS—Interim Operational Servicing

IPI—In Process Inspection

IPP—Integrated Power Plant

JDL—Joint Strike Fighter Data Library

JML—Job Standard Master Listing

JPO—Joint Program Office

JTD—Joint Tech Data

JTDAR—Joint Tech Data Action Request

LCN—Logistics Control Number

LDM—Logistics Data Manager

LIMS-EV—Logistics Information Management System-Enterprise View

LL—Late landing

LO—Low Observable

LODEM—Low Observable Defect Entry Module

LOHAS—Low Observable Health Assessment System

LOMMM—LO Maintenance Management Module

LSEMS—Lightning Support Equipment Management System

LST—Lightning Support Team

LT—Late take-off

MEFL—Minimum Essential Function List

MEL—Minimum Essential Level

MICAP—Mission Impaired Capability Awaiting Part

MIL—Master Inventory List

MM-PAIRS—Maintenance Management – Production Asset Inspection Requirement System

MMU—Maintenance Margin Used

MX—Maintenance

OCF—Operational Check Flight

O&M—Operation & Maintenance

OEM—Original Equipment Manufacturer

OML—Outer Mold Line

OMS—Offboard Mission Support

OP—Operations

OSP—Optional Screening Point

OT—Other

P&W—Pratt & Whitney

PAIR—Production Aircraft Inspection Requirement

PBL—Performance Based Logistics

PEB—Pre-Expended Bin

PHM—Prognostics and Health Management

PIC—Purpose Identifier Codes

PMA—Portable Maintenance Aid

PMD—Portable Maintenance Device

POS—Post Operations Service

PS—Propulsion System

PSC—Propulsion System Contractor

PS&D—Plans Scheduling and Documentation

PSI—Product Support Integrator

QA—Quality Assurance

R&M—Reliability and Maintainability

RLE—Remaining Life Estimate

RMA—Return Material Authorization

RLE—Remaining Life Estimate

RSP—Required Screening Point

SAM—Signature Assessment Module

SCM—Supply Chain Management

SE—Support Equipment

SEMM—Support Equipment Maintenance Matrix

SHM—Squadron Health Management

SOI—Sustainment Operating Instruction

SOU—Standard Operating Unit

SP—Spare

SPIR—Sustainment Parts Information Record

SRAN—Stock Record Account Number

SSI—Supplemental Servicing Inspection

SU—Supply

SWP—Scheduled Work Package

SY—Sympathy

TCTD—Time Compliance Technical Directive

TNB—Tail Number Bin

TS—Tail number swap

TTM—Time to Maintenance

TUR—Track Usage Record

UTE—Utilization Day

WO—Work Order

WRM—War Reserve Material

WST—Weapons System Team

WWM—Wing Weapons Manager

WX—Weather

XEH—Exercise higher headquarters

XEL—Exercise local

ZFMP—Zero Fuel Mass Properties

Attachment 20 (Added)

LOHAS FLEET AVERAGE TEMPLATE

Figure A20.1. LOHAS Fleet Average Template.

LOHAS FLEET AVERAGE TEMPLATE

//FOUO//
UNCLASSIFIED
DAILY LOHAS Maintenance Margin Used (MMU) ROLLUP
LOHAS MMU per Tail Number
Current as of:
February 14, 2017
8:30

Aircraft: 13-5XXX (AFXXX)		**Aircraft: 13-XXXX (AFXXX)**	
Margin:	**LOHAS Margin**	**Margin:**	**LOHAS Margin**
No Change	%	No Change	%
	Previous Day		**Previous Day**
Notes:	%	**Notes:**	%
Standard Ranking Pending	**Difference**	**Standard Ranking Complete**	**Difference**
	%		%
Aircraft: 13-XXXX (AFXXX)		**Aircraft: 13-XXXX (AFXXX)**	
Margin:	**LOHAS Margin**	**Margin:**	**LOHAS Margin**
LH Vert Bulb Seal Replaced	%	No Change	%
	Previous Day		**Previous Day**
Notes:	%	**Notes:**	%
Standard Ranking Pending	**Difference**	**Standard Ranking Pending**	**Difference**
	%		%
Aircraft: 13-XXXX (AFXXX)		**Aircraft: 13-XXXX (AFXXX)**	
Margin:	**LOHAS Margin**	**Margin:**	**LOHAS Margin**
No Change	%	No Change	%
	Previous Day		**Previous Day**
Notes:	%	.	%
Standard Ranking Pending	**Difference**	**Standard Ranking Pending**	**Difference**
	%		%
		Fleet LOHAS MMU Average	%

A20.1. Note: Key information includes LOHAS maintenance margin used number for each aircraft, fleet LOHAS average, a brief description of damages or repairs that drive a signature delta from the previous OML and number of aero only panels. LOHAS margin value will be capped at 200% for each aircraft with a LOHAS margin exceedance over 100%.

Attachment 21 (Added)

F-35 AUDIT PROCEDURES, DOCUMENTATION AND REPORTING TEMPLATE

Table A21.1. F-35 Audit Procedures, Documentation and Reporting Template.

Create a work order in Computer Managed Maintenance System (CMMS) for the audit.
Perform Aircraft Safe for Maintenance (F35-AAA-A05210100000-120A-A) JTD Data Module.
Perform audit utilizing Post Operations Servicing (POS(OML))- Inspection (F-35-AAA-A13210300000-281-A) JTD Data Module.
Input new damages and compare all damages/repairs to the OML with entries contained in LODEM. Update LODEM as the audit progresses.
Maintain an ongoing records during the audit for starting LOHAS MMU number, damages added, damages deleted, damages edited and final audit LOHAS MMU value for audit historical files.
The LOHAS and OML audit historical files will be maintained for 5 years **(T-2).** Each audit file will include at a minimum:
Name of person(s) performing the audit.
Date of audit.
Pre-audit LOHAS margin percentage.
Post-audit LOHAS margin percentage.
Number of new damages identified.
Number of previously repaired damages not removed from LOHAS.
Number of duplicate entries identified.
Root cause and corrective action when post audit results in a +15% or -15% change.
NOTE: Report audits results upon completion to: ACC.A4F35@us.af.mil and ACC.A5FL@us.af.mil

Attachment 22 (Added)

SAMPLE MICAP VERIFICATION WORKSHEET

Figure A22.1. Sample MICAP Verification Worksheet.

Tail number	**NOUN**	**Part Number**
Requisition ID	**Quantity**	**Priority**
Job Control Number	**IFS Purchase Order#**	**IFS Customer Order # 1**
Maintainer Who Ordered Part	**Pro Super Signature**	**Pro Super Print**

CANN Action

CANN From Aircraft & LCN	**CANN To Aircraft & LCN**
CANN From JCN	**CANN To JCN**
Pro Super Signature	**Pro Super Print**

Supply Checklist

Checklist Item	**Yes**	**No**	**N/A**
Is the warehouse balance zero?	☐	☐	☐
Are assets available in TNB?	☐	☐	☐
Has base repair capability been verified?	☐	☐	☐
Did you document MICAP on Supply Status Board?	☐	☐	☐

Cancel MICAP

Cancellation Code	**Pro Super Signature**	**Pro Super Print**

MICAP Cancellation Codes

1-RECEIVED FROM ALTERNATE F35 SOURCE

2-RECEIVED FROM GOVT SERVICE/OTHER SERVICES (GFE/DLA)

3-CANNIBALIZATION ACTION

4-RECEIVED FROM BASE ASSETS (DSP/BENCHSTOCK/PEB)

5-ALT P/N SATISIFED REQUIREMENT

6-SUSTAINMENT DIRECTED (would include IM directed cancellations and requirements we would not track such as TCTD, time change, mod etc.)

7-OTHER

9-REPORTED/ORDERED IN ERROR BY MAINT

0-ADMINISTRATIVE/CMMS ERROR/CONFIGURATION

Comments
