



TECHNICAL REPORT	TA-HB-0007-1™	REV. A
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Superseding TA-HB-0007-1		
(R) Logistics Product Data Summaries Handbook		

RATIONALE

Revision A of this handbook is a complete revision to SAE TA-HB-0007-1. It includes 29 additional summaries, minor corrections to existing summaries and detailed guidance for tailoring, in addition to the previously documented summaries. All summaries from MIL-STD-1388-2B (Cancelled) are now included in this handbook, plus the new LSA-020, LSA-021, LSA-022, LSA-051, and LSA-055. Detailed guidance was also added to assist programs in determining which summaries to place on contract and how/why to limit the data element selections on a given summary. This revision provides information related to the policy, which dictates the requirement for the summary product or for the data listed on the summary. It also describes who typically uses the summary and under which circumstances, when the data is generated in the life cycle, and how the data is developed for Product Support Analysis (SAE TA-STD-0017A) activities and Systems Engineering Processes. The selection of reports is tailorable by program, and no program should require the delivery of all summaries specified in this handbook.

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1. SCOPE

SAE TA-HB-0007-1A is an integral part of the following suite of documents, which are meant to be used together: SAE TA-STD-0017A, Product Support Analysis, SAE GEIA-STD-0007C, Logistics Product Data, SAE GEIA-HB-0007B, Logistics Product Data Handbook, and SAE TA-HB-0007-1A. MIL-HDBK-502A, Product Support Analysis provides additional guidance and instruction applicable to United States DoD programs.

SAE TA-STD-0017A Product Support Analysis is a standard which prescribes a set of analysis activities for designing support and supporting the design of a product. MIL-HDBK-502A provides DoD users with implementation guidance for SAE TA-STD-0017A. The results of the analysis are Logistics Product Data. SAE GEIA-HB-0007B is a companion handbook to SAE GEIA-STD-0007C. The handbook provides standard guidance (i.e., how to), data population during life cycle phases, tailoring, contracting, data selection, a data map, and detailed information on data development for key and major fields (LCN, PLISN, UOC, etc.).

SAE GEIA-STD-0007C provides a comprehensive list of data elements that can be generated as a result of the Product Support Analysis conducted during the design, development, and initial fielding of a system or end item (EI). It captures information related to logistics design requirements, reliability and maintainability, system safety, maintenance engineering, support and test equipment, training and training devices, manpower and skills, facilities, transportation, supply support, and parts packaging. The most important aspect of the data in SAE GEIA-STD-0007C is that it is used to generate the logistics support products (e.g., operator and maintainer manuals, supply support lists, training programs for operators/maintainers, etc.) required to sustain a system or end item. These products can be generated using the summary specifications in SAE TA-HB-0007-1A. The summary specifications are written to take advantage of the data element and entity relationships in SAE GEIA-STD-0007C. Figure 1 illustrates the interrelations between the suite of documents.

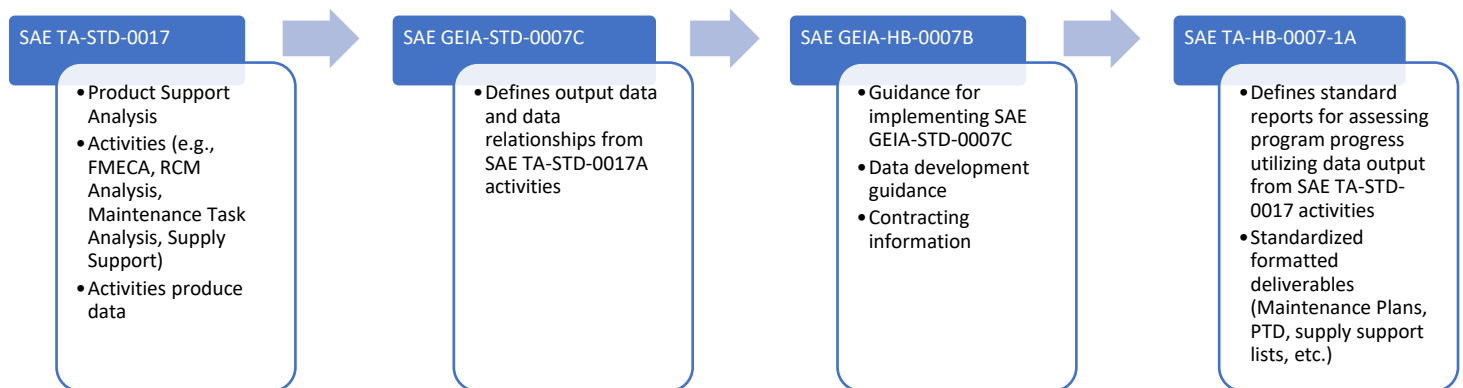


Figure 1 – PSA and LPD suite of standards and handbooks

SAE TA-HB-0007-1A is written primarily with two audiences in mind: The software developer and the data consumer. Instructions for software developers are intended to explain the relationships between data elements and summary elements, as well as how to produce the LPD summaries from those data elements. Software developers should pay particular attention to the following sections within each summary specification: Summary Scope, Summary Selection, Summary Processing/Business Rules, Summary Sequence and Summary Format. Data consumers should pay particular attention to the Introduction, Associated Statutes, Regulations, Policy, Standards, Handbooks, and Data Item Descriptions (DID), Tailoring, and Data Sources. Data consumers can use the tables of data sources to determine the breadth and depth of data that is displayed on each summary. This is particularly helpful when contracting for the data and the summaries, since contracting for a particular summary requires contracting for all of the required data elements as identified in the summary.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply unless a specific version is referenced. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption is obtained. The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.1.1 SAE Publications

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Telephone: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), Web address: <https://www.sae.org/>

AIR4845	The FMECA Process In The Concurrent Engineering Environment
AS1390A	Level of Repair Analysis
EIA-649	Configuration Management
GEIA-HB-649A	Configuration Management Standard Implementation Guide
GEIA-HB-0007B	Logistics Product Data Handbook
GEIA-STD-0007C	Logistics Product Data
TA-STD-0017A	Product Support Analysis
JA-1011	Evaluation Criteria for Reliability-Centered Maintenance (RCM) Process
JA-1012	A Guide to the Reliability-Centered Maintenance (RCM) Standard

2.1.2 Association Connecting Electronics Industries

Available from Association Connecting Electronics Industries, 3000 Lakeside Drive Suite 105N, Bannockburn, IL 60015, Telephone: 847-615-7100, Web address: <https://www.ipc.org/>

IPC-1752	Materials Declaration Management Standard
IPC-1754	Materials and Substances Declaration for Aerospace and Defense

2.1.3 Aerospace Industries Association Publications

Available from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928, Tel: 703-358-1000, <https://www.aia-aerospace.org/>

NAS 411	Hazardous Materials Management Program (HMMP)
NAS 411-1	Hazardous Materials Target List (HMTL)

2.1.4 U.S. Government Publications

Available from Government Publishing Office, 732 North Capitol St. NW, Washington, DC 20401-0001, Telephone: 202-512-1800, Web Address: <https://www.gpo.gov/>

Code of Federal Regulations (CFR) Title 10	Armed Forces
Code of Federal Regulations (CFR) Title 14 Part 43	Federal Aviation Regulation
Code of Federal Regulations (CFR) Title 29 Part 1910.1200	Hazardous Communications
Code of Federal Regulations (CFR) Title 32	National Defense
Code of Federal Regulations (CFR) Title 48	Federal Acquisition Regulation
Code of Federal Regulations (CFR) Title 49	Transportation
Code of Federal Regulations (CFR) Title 50	War and National Defense

Available from Executive Services Directorate, 1155 Defense Pentagon Room 3C842 Washington, DC 20301-1155, Telephone: 703-692-5473; Web Address: <https://www.esd.whs.mil/>

DoDD 1100.4	Guidance for Manpower Management
DoDD 1322.18	Military Training
DoDD 4510.11	DoD Transportation Engineering
DoDD 5000.01	The Defense Acquisition System
DoDD 6055.09E	Explosives Safety Management (ESM)
DoDI 4151.20	Depot Maintenance Core Capabilities Determination Process
DoDI 4151.21	Public-Private Partnerships for Product Support
DoDI 4151.22	Condition Based Maintenance Plus (CBM+) for Materiel Maintenance
DoDI 4160.28	DoD Demilitarization (DEMIL) Program
DoDI 4540.07	Operation of the DoD Engineering for Transportability and Deployability Program
DoDI 4715.23	Integrated Recycling and Solid Waste Management
DoDI 5000.73	Cost Analysis Guidance and Procedures
DoDI 5000.88	Engineering of Defense Systems
DoDI 5000.91	Product Support Management for the Adaptive Acquisition Framework
DoDI 5220.22	National Industrial Security Program (NISP)
DoDI 6050.05	DoD Hazard Communication (HAZCOM) Program
DoDI 7041.04	Estimating and Comparing the Full Costs of Civilian and Active Duty Military Manpower and Contract Support
DoDM 4100.39	Federal Logistics Information System (FLIS) Procedures
DoDM 4140.01	DoD Supply Chain Materiel Management Procedures
DoDM 4140.27	DoD Shelf-Life Management Program
DoDM 4151.22-M	Reliability Centered Maintenance (RCM)

Available from Defense Procurement and Acquisition Policy, Services Acquisition Directorate, 3060 Defense Pentagon, Room 3C958, Washington, DC 20301-3060 Telephone: 703-693-0486, Web Address: <https://www.acq.osd.mil/dpap/sa/about.html>

Automatic Test Systems Joint Memorandum of Agreement Among Service Acquisition Executives, subject: Automatic Test Systems Acquisition Procedures

DOT&E and TEMP Guidebook

Logistics Assessment Guidebook

Policy memo, Under Secretary of Defense, DoD Policy for Automatic Test Systems

Test and Evaluation Master Plan

Available from Defense Acquisitions University, 9820 Belvoir Road, Fort Belvoir, VA. 22060, Telephone: 703-805-3459, Web Address: <https://www.dau.edu>.

Defense Acquisition Guidebook

IPS Element Guidebook

PSM Guidebook

Available from Defense Logistics Agency, Andrew T. McNamara Building, 8725 John J. Kingman Road, Fort Belvoir, VA 22060-6221, Telephone: 877-352-2255, Web Address: <https://www.dla.mil/>

Cataloging Handbook H2 Federal Supply Classification Cataloging Handbook

Cataloging Handbook H6 Federal Item Name Directory

DLAI 4145.3	Preparing Hazardous Materials for Military Air Shipments
DLAI 4145.08	Radioactive Commodities in the Department of Defense Supply System
DLAI 4145.11	Storage and Handling of Hazardous Materiel
DLAI 4145.25	Storage and Handling of Liquefied and Gaseous Compressed Gasses and Their Full and Empty Cylinders

Federal Logistics Information System (FLIS) Cataloging Data and Transaction Standards (CDTS)

Available from the Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone: 215-697-6257, Web address: <https://quicksearch.dla.mil/qsSearch.aspx>

DI-PSSS-81545	Interactive Computer Aided Provisioning System (ICAPS) Data Exchange
DI-ENVR-80266	Nuclear Hardness and Survivability (NH&S) Design Analysis Report
DI-HFAC-81399	Critical Task Analysis Report
DI-ILSS-80454	Support Equipment Installation Data (SEID)
DI-ILSS-80868	Special Equipment Tools and Test Equipment List
DI-PACK-80120	Preservation and Packing Data
DI-PACK-80880	Transportability Report
DI-PACK-81582	Packaging Development Data Report
DI-PSSS-80980	Reliability-Centered Maintenance (RCM) Failure Modes and Effects Analysis (FMEA) Report
DI-QCIC-80278	Calibration and Measurement Requirements Summary (CMRS)
DI-SESS-80294	Maintenance Test and Support Equipment Requirements List
DI-SESS-81495	Failure Modes, Effects, and Criticality Analysis Report
DI-SESS-81518	Instructional Performance Requirements Document
DI-SESS-81712	Provisioning Parts List Index (PPLI)
DI-SESS-81714	Provisioning Screening Data
DI-SESS-81758	Logistics Product Data

DI-SESS-81759	Logistics Product Data Summaries
DI-PSSS-81823	Reliability-Centered Maintenance (RCM) Class Maintenance Plan (CMP)
DI-PSSS-81829	Reliability-Centered Maintenance (RCM) Corrective Maintenance (CM) Development Report
DI-SESS-81968	Reliability and Maintainability (R&M) Allocation Report
FED-STD-313	Material Safety Data, Transportation Data, and Disposal Data for Hazardous Materials Furnished to Government Activities
MIL-DTL-24784/23	Illustrated Parts Breakdown (IPB) Requirements
MIL-DTL-38807	Manuals, Technical - Illustrated Parts Breakdown
MIL-HDBK-2097	Acquisition of Support Equipment and Associated Integrated Logistics Support
MIL-HDBK-502A	Product Support Analysis
MIL-HDBK-817	System Development Radiation Hardness Assurance
MIL-HDBK-29612	Guidance for Acquisition of Training Data Products and Service
MIL-PRF-49506	Logistics Management Information (Cancelled)
MIL-STD-1366	Transportability Criteria
MIL-STD-1388-2B	DoD Requirements for a Logistic Support Analysis Record (Cancelled)
MIL-STD-1472	Human Engineering
MIL-STD-1629	Procedures for Performing a Failure Mode, Effects and Criticality Analysis (Cancelled)
MIL-STD-1766	Nuclear Hardness and Survivability Program Requirements for ICBM Weapon Systems
MIL-STD-1839	Calibration and Measurement Requirements
MIL-STD-2073-1	Standard Practice for Military Packaging
MIL-STD-209	Lifting and Tiedown Provisions
MIL-STD-3018	Parts Management
MIL-STD-3023	High-Altitude Electromagnetic Pulse (HEMP) Protection for Military Aircraft
MIL-STD-3031	Army Business Rules for S1000D: International Specification for Technical Publications Utilizing a Common Source Data Base
MIL-STD-3034	Reliability-Centered Maintenance (RCM) Process
MIL-STD-3048	Air Force Business Rules for the Implementation of S1000D
MIL-STD-40051-1	Preparation of Digital Technical Information for Interactive Electronic Technical Manuals (IETMs)
MIL-STD-40051-2	Preparation of Digital Technical Information for Page-Based Technical Manuals (TMs)
MIL-STD-46855	Human Engineering Requirements for Military Systems, Equipment, and Facilities
MIL-STD-882	System Safety
SD-19	Parts Management Guide

UDI-L-21594 Maintenance Plan, Support Equipment, Airborne Systems, Subsystems and Equipment

Available from Air Force Publishing Office, Air Force E-Publishing, Telephone: 202-404-2438, Web Address: <https://www.e-publishing.af.mil/>

AFI 21-113 Air Force Metrology and Calibration (AFMETCAL) Management

AFI 21-118 Improving Air and Space Equipment Reliability and Maintainability

AFI 21-129 Two Level Maintenance and Regional Repair of Air Force Weapon Systems and Equipment

AFI 38-201 Management of Manpower Requirements and Authorizations

AFI 63-101/20-101 Integrated Life Cycle Management

AFI 23-101 Air Force Materiel Management

AFMCI 21-100 Depot Maintenance Management

AFMCI 21-101 Depot Maintenance Activation Planning

AFPD 10-9 Lead Command Designation and Responsibilities for Weapon Systems

AFPD 20-1 Integrated Life Cycle Management

AFPD 21-1 Maintenance of Military Materiel

AFPD 38-2 Manpower

AFPD 90-11 Air Force Strategy, Planning, and Programming Process

Available from Army Publishing Directorate, 9031 Chapek Road, Building 1458, Fort Belvoir, VA 22060-5447, Telephone: 703-614-3727, Web Address: armypubs.army.mil/ContactUS/ContactUs.aspx

AR 70-1 Army Acquisition Policy

AR 71-32 Force Development and Documentation Consolidated Policies

AR 73-1 Test and Evaluation Policy

AR 350-38 Policies and Management for Training Aids, Devices, Simulators, and Simulations

AR 602-2 Human Systems Integration in the System Acquisition Process

AR 700-18 Provisioning of U.S. Army Equipment

AR 700-15/NAVSUST 4030.28F/AFMAN 24-206/MCO 4030.33F/DLAR 4145.7/DCMAR 4145.X Packaging of Materiel

AR 700-127 Integrated Product Support

AR 708-1 Logistics Management Data and Cataloging Procedures for Army Supplies and Equipment

AR 750-1 Army Materiel Maintenance Policy

AR 750-43 Army Test, Measurement, and Diagnostic Equipment

DA PAM 70-3 Army Acquisition Procedures

DA PAM 700-127 Integrated Product Support Procedures

DA PAM 738-751 Functional Users Manual for the Army Maintenance Management System, Aviation

TB 750-25 Maintenance of Supplies and Equipment Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support (C&RS) Program

TB 750-93-1 Department of the Army Technical Bulletin Maintenance of Supplies and Equipment Functional Grouping Codes: Combat, Tactical, Support Vehicles, Medical and Special Purpose Equipment.

Available from United States Army Training and Doctrine Command Administrative Publications, Fort Eustis, VA 23604-5000, Telephone: 757-501-6514, Web Address: <https://adminpubs.tradoc.army.mil/>

TP 350-70 Publication Series TRADOC Training Guidance Publications

TRADOC Pamphlet 350-70-13 System Training Integration

Available from Program Manager, Head, Publishing & Logistics Systems Management, HQMC ARDE, Telephone: 703-614-1712 or 1713, Web address: <https://www.marines.mil/News/Publications/>

MCO 4733.1 Marine Corps Ground Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP)

MCO 4790.21 Depot Level Source of Repair (DLSOR) Policy

CMC Washington DC L LP (UC) Message 251917Z

Available from Naval Air Systems Command, Logistics and Industrial Operations, Patuxent River, MD 20670, Telephone: 301-342-5292, Web address: <https://www.navair.navy.mil/>

NAVAIR 00-25-403 Guidelines for the Naval Aviation Reliability-Centered Maintenance (RCM) Process

NAVAIR 00-25-406 Maintenance Planning Management Manual

Available from Naval Sea Systems Command, 1333 Isaac Hull Avenue, SE, Washington Navy Yard, DC 20376, Telephone: 202-781-0000, Web Address: <https://www.navsea.navy.mil/Resources/Instructions/>

NAVSEA S0300-B2-MAN-010 Ship Operations Manual

NAVSEA SL150-AA-PRO-010/DMP Operations and Procedures Manual for Contractor Prepared Data

NAVSEA ST000-AG-IDX-010 Test Measurement Diagnostics Equipment (TMDE) Index

NETCINST 1510.4 Job Duty Task Analysis Policy

Available from Department of Navy Issuances, 2000 Navy Pentagon, Washington, DC 20350, Web Address: <https://www.secnave.navy.mil/doni/default.aspx>

OPNAVINST 1000.16 Navy Total Force Manpower Policies and Procedures

OPNAVINST 1500.76 Naval Training Systems Requirements, Acquisition, and Management

OPNAVINST 3960.16 Navy Test, Measurement, and Diagnostic Equipment, Automatic Test Systems, and Metrology and Calibration

OPNAVINST 4790.14 Joint Depot Maintenance Program

OPNAV M-5090.1 Environmental Readiness Program Manual

Available at United States Coast Guard Office of Information Management, US Coast Guard Stop 7710, 2703 Martin Luther King Jr Ave SE, Washington DC 20593-7710, Telephone 202-475-3531, Web Address: <https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-C4IT-CG-6/The-Office-of-Information-Management-CG-61/About-CG-Directives-System/Commandant-Instruction-Manuals/>

CIM 4105.14 The Coast Guard Integrated Logistics Support (ILS) Manual



Documents

Document Sharing Hub

CIM 4408.8

Spare Parts Breakout (SPBO) Program

Available from National Aeronautics and Space Administration, 300 E. Street SW, Suite 5R30, Washington, DC 20546,
Telephone: (202) 358-0001, Web Address: <https://www.nasa.gov/>

NASA Reliability-Centered Maintenance Guide for Facilities and Collateral Equipment

Available from National Security Agency, Cybersecurity Directorate, 9800 Savage Road, Suite 6623, Ft. George G.
Meade, MD 20755-6623, Web Address: <https://www.nsa.gov/>

DS-84 Data Standard for the Preparation and Submission of Provisioning Technical Documentation

2.2 Acronyms/Abbreviations

AAL	Additional Authorization List
ACAT	Acquisition Category
AIC	Allowance Item Code
AFI	Air Force Instruction
ALC	Alternate Logistics Support Analysis Control Number
AMC	Acquisition Method Code
AMSC	Acquisition Method Suffix Code
ANL	Annual
AOR	Annual Operating Requirement
AR	Army Regulation
ARA	As Required List A
ARB	As Required List B
ARN	Additional Reference Number
ASIOE	Associated Support Items of Equipment
ATS	Automatic Test Systems
BDAR	Battle Damage Assessment Repair
BIIL	Basic Issue Items List
BIT	Built-in Test
BITE	Built-in Test Equipment
BOIP	Basis of Issue Plan
BOIPFD	Basis of Issue Plan Feeder Data
C&RS	Calibration and Repair Support
CAD	Condemned at Depot
CAGE	Commercial and Government Entity Code
CAL	Calibration
CARD	Cost Analysis Requirements Description
CBD	Condemned Below Depot
CBIL	Common and Bulk Items List
CBM+	Condition Based Maintenance Plus
CDD	Capability Development Document
CDRL	Contract Data Requirements List
CFE	Contractor Furnished Equipment

CFI	Card Format Indicator
CIC	Critical Item Code
CMRSP	Calibration Measurement Requirement Summary Parameter
COEI	Component of End Item
COTS	Commercial off the Shelf
CPC	Concurrent Production Code
CSN	Card Sequence Number
CTIC	Contractor Technical Information Code
DA PAM	Department of the Army Pamphlet
DAC	Document Availability Code
DAG	Defense Acquisition Guidebook
DASD	Deputy Assistant Secretary of Defense
DCN	Design Change Notice
DDCC	Design Data Category Code
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DLA	Defense Logistics Agency
DLIS	Defense Logistics Agency Logistics Information Services
DMIL	Demilitarization Code
DMSMS	Diminishing Manufacturing Sources and Material Shortages
DMWR	Depot Maintenance Work Requirements
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DoDM	Department of Defense Manual
DOT&E	Director Operational Test and Evaluation
DSOR	Depot Source of Repair
DSP	Defense Standardization Program
DT&E	Development Testing and Evaluation
DTN	Data Type Number
DTS	Defense Transportation System
EBCDIC	Extended Binary Coded Decimal Interchange Code
EC	Essentiality Code
ED	Embedded Diagnostics
EFM	Engineering Failure Mode
EI	End Item
EIAC	End Item Acronym Code
EMP	Electromagnetic Pulse
EP	Embedded Prognostic
ESML	Expendable/Durable Supplies and Materials List
ESOH	Environment, Safety, and Occupational Health



ETM	Electronic Technical Manuals
FCA	Facility Requirement Code
FDC	Facility Drawing Classification
FEP	Failure Effect Probability
FGC	Functional Group Code
FMECA	Failure Mode, Effects, and Criticality Analysis
FMI	Failure Mode Indicator
FMR	Failure Mode Ratio
FPL	Failure Probability Level
FR	Failure Rate
FTA	Fault Tree Analysis
FY	Fiscal Year
GFAE	Government Furnished Aeronautical Equipment
GFE	Government Furnished Equipment
HCI	Hardness Critical Item
HCP	Hardness Critical Procedure
HEMP	High-Altitude Electromagnetic Pulse
HM	Hardness Maintenance
HMMP	Hazardous Material Management Program
HMPC	Hazardous Maintenance Procedure Code
HMTL	Hazardous Materials Target List
HPS	Hardness Protection Subsystem
HQDA	Headquarters, Department of the Army
HS	Hardness Surveillance
HSI	Human System Integration
I/O	Input/Output
IA	Inherent Availability
IAEG	International Aerospace Environmental Group
IC	Indenture Code
ICAPS	Interactive Computer Aided Provisioning System
ICC	Item Category Code
ICTP	Individual and Collective Training Plans
IETM	Interactive Electronic Technical Manuals
ILS	Integrated Logistics Support
IMC	Item Management Code
IPB	Illustrated Parts Breakdown
IRCC	Integrated Logistics Support Requirement Category Code
ISIL	Interim Support Items List
JCIDS	Joint Capabilities Integration and Development System
JDM	Joint Depot Maintenance
LCN	Logistics Support Analysis Control Number



LCSP	Life Cycle Sustainment Plan
LFT&E	Live Fire Test and Evaluation
LIN	Line Item Number
LLTIL	Long Lead Time Items List
LMI	Logistics Management Information
LMP	Logistics Modernization Program
LOG DEMO	Logistics Demonstration
LORA	Level of Repair Analysis
LPD	Logistics Product Data
LRU	Line Replaceable Unit
LSA	Logistics Support Analysis
LVC	Land Vessel Code
MAC	Maintenance Allocation Chart
MAIS	Major Automated Information System
MANPRINT	Manpower and Personnel Integration
MAOT	Maximum Allowable Operating Time
MARC	Manpower Requirements Criteria
MATDEV	Materiel Developer
MB	Measurement Base
MDAP	Major Defense Acquisition Program
M-DEMO	Maintainability Demonstration
METCAL	Metrology and Calibration
MGI	Maintenance Group Identifier
M-H	Man-hours
MIL-HDBK	Military Handbook
MIL-PRF	Military Performance Specifications
MIL-STD	Military Standard
MLF	Maintenance Level Function
M/L	Maintenance Level
MOS	Military Occupational Speciality
MPC	Mission Phase Code
MPT	Manpower, Personnel, and Training
MRR	Maintenance Replacement Rate
MRU	Minimum Replacement Unit
MTA	Maintenance Task Analysis
MT&SE	Maintenance Test and Support Equipment
MTBF	Mean Time Between Failure
MTBM	Mean Time Between Maintenance
MTBPM	Mean Time Between Preventive Maintenance
MTBTMA	Mean Time Between Task Maintenance Actions
MTTR	Mean Time to Repair

NALC	Navy Ammunition Logistic Code
NASA	National Aeronautics and Space Administration
NAVAIR	Naval Air Systems Command
NAVSEA	Naval Sea Systems Command
NAVSUP WSS	Naval Supply Systems Command Weapons Systems Support
NDS	National Defense Stockpile
NEC	Navy Enlisted Code
NET	New Equipment Training
NHA	Next Higher Assembly
NIIN	National Item Identification Number
NIST	National Institute of Standards and Technology
NMWR	National Maintenance Work Requirements
NOFF	Nonoperational Fragility Factor
NRTS	Not Repairable This Station
NSA	National Security Agency
NSN	National Stock Number/NATO Stock Number
NTSP	Navy Training System Plan
O/M	Operations/Maintenance
ODRC	Output Data Request Code
OPI	Operational Procedures Indicator
ORR	Overhaul Replacement Rate
OSD	Office of the Secretary of Defense
PCCN	Provisioning Contract Control Number
PCL	Post Conference List
PD-TMDE	Product Director Test, Measurement, and Diagnostic Equipment
PE	Program Element
PESHE	Programmatic Environment, Safety, and Occupational Health Evaluation
PGC	Parameter Group Code
PHST	Packaging/Preservation, Handling, Storage, and Transportation
PI	Part Indicator
PIC	Priority Indicator Code
PIIN	Procurement Instrument Identification Number
PLCC	Provisioning List Category Code
PLISN	Provisioning List Item Sequence Number
PLT	Production Lead Time
PM	Program Manager
PMAC	Preliminary Maintenance Allocation Chart
PMCS	Preventive Maintenance Checks and Services
PMF	Parts Master File
PMIC	Precious Metal Indicator Code
PMTA	Preventive Maintenance Task Analysis



PPLI	Provisioning Parts List Index
PPSL	Program Parts Selection List
PSA	Product Support Analysis
PSICP	Program Support Inventory Control Point
PSM	Product Support Manager
PSPC	Physical Security Pilferage Code
PTD	Provisioning Technical Documentation
QPA	Quantity per Assembly
QPEI	Quantity per End Item
QQPRI	Qualitative and Quantitative Personnel Requirements Information
QUP	Quantity per Unit Pack
R&M	Reliability and Maintainability
R/S IND	Replaced or Superseding Provisioning List Item Sequence Number Indicator
R/V	Range or Value
RAM	Reliability, Availability, and Maintainability
RCM	Reliability-Centered Maintenance
RCMA	Reliability-Centered Maintenance Analysis
RDC	Reference Designator Code
RDOC	Reference Designation Overflow Code
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
RFP	Request for Proposal
RIL	Repairable Items List
RIP	Remain In Place Indicator
RISS	Recommended Initial System Stock Buy
RMSSL	Recommended Minimum System Stock Level
RNVC	Reference Number Variation Code
RoHS	Restriction of Hazardous Substances
RPSTL	Repair Parts and Special Tools List
RSR	Repair Survival Rate
RTLL	Recommended Tender Load List
SAIP	Service Acquisition Integrated with Production
SCPL	System Configuration Provisioning List
SDDC	Surface Deployment and Distribution Command
SE	Support Equipment
SECL	Support Equipment Candidate List
SEID	Support Equipment Installation Data
SERD	Support Equipment Recommendation Data
SERV DES	Service Designator
SETR	Systems Engineering Technical Reviews
SFPPPL	Short Form Provisioning Parts List
SHSC	Safety Hazard Severity Code

SIASCN	Standard Interservice Agency Serial Control Number
SL	Shelf Life
SLAC	Shelf Life Action Code
SMCC	Special Material Content Code
SMIC	Special Maintenance Item Code
SMR	Source, Maintenance, and Recoverability Code
SOW	Statement of Work
SPI	Special Packaging Instructions
SPIIN	Supplementary Procurement Instruction Identification Number
SRA	Shop Replacement Assemblies
SSC	Skill Specialty Code
SSI	Special Stockage Indicator
STTE	Special Tools and Test Equipment
T&E	Test and Evaluation
TADSS	Training Aids, Devices, Simulators, and Simulations
TA-HB	TechAmerica Handbook
TAR ACT	Test Accuracy Ratio Actual
TAR DES	Test Accuracy Ratio Desired
TA-STD	TechAmerica Standard
TD	Technical Data
TDM-Catalyst	Technical Data Management-Catalyst
TDP	Technical Data Package
TEA	Transportation Engineering Agency
TEC	Type Equipment Code
TEMP	Test and Evaluation Master Plan
TM	Technical Manual
TMDE	Test, Measurement, and Diagnostic Equipment
TMFGC	Technical Manual Functional Group Code
TNGDEV	Training Developers
TOCC	Type of Change Code
TRADOC	U.S. Army Training and Doctrine Command
TRD	Test Requirements Document
TRN EQP	Training Equipment Requirements Code
TRN REC	Training Recommendations Type
TTEL	Tool and Test Equipment List
TUC	Type of Price Code
UM	Unit of Measure
UOC	Usable On Code
USAF	U.S. Air Force
USAFMSA	U.S. Army Force Management Support Agency
USAPSL	U.S. Army Primary Standards Laboratory

USATA	U.S. Army Test, Measurement, and Diagnostic Equipment Activity
USC	United States Code
USD(AT&L)	Under Secretary of Defense (for Acquisition, Technology, and Logistics)
USER	Using Service Designator Code
UUT	Unit Under Test
W/P	Wartime/Peacetime
WG	Wage Grade
WRA	Weapons Replacement Assemblies
WUC	Work Unit Code
ZLIN	Z (Development) Line Item Number

3. GENERAL REQUIREMENTS

3.1 Introduction

SAE TA-HB-0007-1A, Logistics Product Data (LPD) Summaries (i.e., Reports) Handbook describes the processes required for generating recommended Product Support Analysis summaries. The entities, data attributes, and element definitions for the data listed on the summaries are prescribed in Appendix A of SAE GEIA-STD-0007C. The LPD summaries and their layouts, selection options and data development requirements for each summary are described in this document. Summary generation can be accomplished via manual process or via software. The latter approach is recommended since software is available on the market that meets the requirements for each of the summaries in this handbook.

Each summary is defined by selection options, processing, format, summary sequence, and data sources. The selection options paragraph identifies recommended mandatory and optional selections that can be made by the user to tailor the summary content. The processing paragraph identifies qualifying criteria for summary data, summary calculations, and specific instructions regarding how the data should be presented on the summary. Each summary has a sample summary showing its format. Summary sequences specify the sort criteria for a given summary, and each Part/Section within a summary. There is an attached listing of data sources for the elements that are on a summary. The listing provides the summary header for each element and its SAE GEIA-STD-0007C data element/attribute, along with the appropriate entity. The data source listings were developed by viewing each summary in a left-to-right, top-to-bottom sequence.

The Data Table is organized in two major segments defined as “Selection Options” and “Output.” Data Elements are listed in the position they appear on the Summary and may appear more than once, including those from the same entity.

Additional information related to the Element Name is shown in parentheses (). Examples may include “Throughput” – an entry in a field that will appear on the summary, or “Manually Entered” – an entry in a field, i.e., decision point, that may not appear on the summary.

Element Names required to generate the summary, but do not appear in the summary, are shown in brackets []. The LCN Nomenclature column of the summary allows for 42 positions (1st row: 18 positions, 2nd row: 18 positions, 3rd row: 6 positions). The Task Identification column of the summary allows for 36 positions (1st row: 18 positions, 2nd row: 18 positions).

3.2 Contracting for the Summaries

In each functional area/systems engineering discipline there are specific deliverable products required for a given contractual phase. Specific summaries can be used to either satisfy completely or provide source information to the generation of these deliverable products. For example, provisioning technical documentation (PTD) is normally required at the end of engineering development and manufacturing. The LSA-036 summary satisfies the requirement for this product from the Logistics Product Data (LPD) data repository. This section addresses the products by functional area that are normally required, the LPD summary that can satisfy or provide source information for development of the product and the Data Item Descriptions (DID) and documents associated with the product. Knowing which summaries are required is a key step in determining which data elements are required.

The U.S. Department of Defense (DoD) can contract for each summary using DI-SESS-81759, Logistics Product Data Summaries. It is highly recommended that the data also be delivered at least at the end of contract.

Cancelled DIDs cannot be referenced as they are not contractually enforceable. Cancelled DIDs are only used as examples and reference material.

3.2.1 Tailoring

Tailoring is a very important aspect of developing and purchasing necessary data and summaries. The goal of tailoring is to determine the most appropriate data and the timing at which the data and summaries should be delivered. This handbook was developed with tailoring in mind. Every program should assess the Product Support Analysis (PSA) scheduled to be accomplished during each phase of a program and the need for a particular summary down to the data elements on that summary.

Within the context of this handbook, there are several sections to assist the user in tailoring summaries. Table D1 associates each summary to the applicable IPS elements as defined in DoDI 5000. This table also indicates whether or not a summary is typically delivered, either as a formatted summary along with the data or as a data delivery only. The table should be used for guidance and does not dictate whether or not a program should require delivery of a particular summary.

The Tailoring section within each summary specification provides guidance for who, what, how, when, and why; who typically requires delivery of this summary or data, what the data represents (functional area, processes in which the data is used), how the data is developed (which activities or process), when the data or summary is typically developed and/or delivered, and why the user might want or need this data or summary.

The Data Element Requirement column in the Data Sources Table indicates whether the subject data element is required or optional. The required data elements are identified as a recommended minimum data set, which represents the set of data elements that are necessary in order to adhere to the processing instructions and business rules for each LSA summary, enforce data integrity, and preserve data relationships. In most cases, additional data elements (marked "optional," or left blank) will be necessary in order to provide any useful content within the report. Many of the elements marked "optional" include additional comments that suggest a possible motivation for selecting the subject data element, such as ensuring data clarification, adhering to service-specific business rules, or identifying the usage of the data element in other processes or downstream data repositories. Selection of optional data elements should be evaluated carefully during the contracting process to ensure that program process requirements are met, while at the same time balancing any cost factors related to the production, delivery and maintenance of the optional data elements. SAE does not endorse the selection of any particular set of Data Elements

3.2.2 Summary Deliverables

Within each functional area/systems engineering discipline there are specific deliverable products required for a given contractual phase. Specific summaries can be used to either satisfy completely or provide source information to the generation of these deliverable products. For example, provisioning technical documentation is normally required at the end of engineering development and manufacturing. The LSA-036 summary satisfies this requirement. This section addresses the products by functional area that are normally required, the summary that can satisfy or provide source information for development of the product, and the Data Item Descriptions (DID) and documents associated with the product. Determining which summaries are required is a key step in determining which LPD data elements are required.

Reliability, Failure Mode, Effects, and Criticality Analysis (FMECA), and RCM. The LSA-050, Reliability-Centered Maintenance (RCM) summary, can be used as source data for a final RCM summary. This will satisfy Military Standard (MIL-STD)-3034 and Naval Air System Command (NAVAIR) 00-25-403 Guidelines for the Naval Aviation Reliability-Centered Maintenance (RCM) Process. The RCM summary identifies preventive maintenance tasks by evaluating maintenance required for an item by its reliability characteristics. This summary can be used to identify the results or effects of a potential failure on the system. The LSA-058, Reliability and Maintainability Analysis Summary, can be used as source information for any type of Reliability and Maintainability. It also can be used as a quick overview of most of the R&M type information.

Maintenance Planning. The LSA-004 summary, also known as the Maintenance Allocation Chart (MAC), provides man-hour allocations by maintenance function and level. Also included in the MAC are the tools and test equipment required by the task function and maintenance level (M/L). The summary identifies tools and equipment by maintenance levels needed to perform the maintenance functions, and to validate Source, Maintenance, and Recoverability (SMR) Codes for spares and repair parts. The LSA-023, Maintenance Plan Summary, satisfies the requirements for an U.S. Air Force (USAF) maintenance plan. The summary compares the requirements for a system end item to the Reliability, Availability, and Maintainability (RAM) characteristics. It identifies the preventive and corrective maintenance actions along with a listing of required support equipment (SE) for those maintenance actions. The LSA-024, Maintenance Plan, satisfies the requirements for an U.S. Navy maintenance plan. The summary identifies general considerations, the required repair capabilities, and maintenance tasks needed for the item under analysis. The LSA-033, Preventive Maintenance Checks and Services Summary, can be used as a starting point for maintenance operations. These summaries provide operator/crew and organizational level preventive maintenance task identification, description, and whether or not the equipment has full mission capability during the maintenance action.

Technical Data (TD) and Manuals. Appendix B of U.S. Army TMs will include the Maintenance Allocation Chart (MAC), the LSA-004 summary. The LSA-019, Task Analysis Summary, is task narrative data and has multiple options for selecting that summary. The summary can be selected by maintenance level, item category code (ICC), task narrative, hardness critical procedures, task interval, and task function. It serves as feeder data to operators' and maintainers' Technical Manuals (TM). The LSA-030, Indentured Parts List, summary can be used for developing parts manuals. It serves as source information for the Repair Parts and Special Tools List (RPSTL) for the U.S. Army, the Illustrated Parts Breakdown (IPB) for the U.S. Air Force and the Stockage List Type Four for the U.S. Marine Corps. These three products are part of the LSA-030 summary and need to be specified when asking for the LSA-030 summary. The LSA-033 summary will satisfy the requirements to develop an operator/crew and organizational level Preventive Maintenance Checks and Services (PMCS) TM. The LSA-040, Authorization List Items Summary, comprises the Authorization List Items Summary which includes sections listing end item components, basic issue items, additional authorization items, and expendable/durable supplies and materials. The Component of End Item (COEI) List, Basic Issue Items (BII) List, Additional Authorization List (AAL), and Expendable/Durable Supplies and Materials List (ESML) are also used as source data for TM development. Those four lists and the U.S. Marine Corps Stockage List Type Three are contained in the LSA-040 summary. Most of the above summaries can also serve as source data for MIL-STD-40051-1, Preparation of Digital Technical Information for Interactive Electronic Technical Manuals (IETMs), and MIL-STD-40051-2, Preparation of Digital Technical Information for Page-Based Technical Manuals (TMs). In the case of the latter, typically only formatting changes are required. MIL-STD-40051-1 and MIL-STD-40051-2 provide additional information on the Preparation of Digital Technical Information for Interactive Electronic and Page-Based Technical Manuals. sections listing end item components, basic issue items, additional authorization items,

and expendable/durable supplies and materials. The Component of End Item (COEI) List, Basic Issue Items (BII) List, Additional Authorization List (AAL), and Expendable/Durable Supplies and Materials List (ESML) are also used as source data for TM development. Those four lists and the U.S. Marine Corps Stockage List Type Three are contained in the LSA-040 summary. Appendix B of U.S. Army TMs will include the Maintenance Allocation Chart (MAC), the LSA-004 summary. The LSA-033 summary will satisfy the requirements to develop an operator/crew and organizational level PMCS TM. MIL-STD-40051-1 and MIL-STD-40051-2 provide additional information on the Preparation of Digital Technical Information for Page-Based Technical Manuals.

Support and Test Equipment. These summaries are used when developing pieces of support equipment. The Support Equipment Recommendation Data (SERD) summary, LSA-070, describes requirements for a piece of support equipment. The LSA-071, Support Equipment Candidate List (SECL), provides a list of support equipment requirements by active and disapproved candidates. The LSA-074 summary, Support Equipment Tool List, provides a list of tools currently in the inventory and tools that are not in the inventory, but need to be developed. These three summaries satisfy the requirement established by Military Handbook (MIL-HDBK)-2097. When a piece of support equipment needs to be registered in the U.S. Army inventory, use the LSA-072 summary, Test, Measurement, and Diagnostic Equipment (TMDE) Requirements. To satisfy MIL-STD-1839, Calibration and Measurement Requirements, use the LSA-076 summary, Calibration Measurement and Requirement Summary (CMRS). This summary provides details of the TMDE and its calibration procedures.

Supply Support. The LSA-036 Provisioning Requirements Summary provides the Logistics Product Data necessary to review, catalog and procure the initial range and depth of parts for supply support. Life cycle cost reductions and operational readiness of systems is enhanced through parts standardization, as emphasized in MIL-HDBK-502A. Parts selection during the engineering design effort will have the most impact on standardization and supply support. Screening parts against the Defense Logistics Agency Federal Logistics Information System (FLIS) improves supply support by identifying parts with existing National Stock Numbers (NSNs) currently being managed in the DoD system. The LSA-032 Defense Logistics Agency Logistics Information Services Provisioning Screening Summary is used to screen parts for NSNs and update logistics product data software accordingly. The NSN data from the LSA-032 is used to update the LSA-036 Summary and other PTD such as the proof RPSTL and Authorization Lists. The LSA-036 Summary is used to produce the following provisioning lists: Provisioning Parts List (PPL); Long Lead Time Items List (LLTIL); Repairable Items List (RIL); Interim Support Items List (ISIL); Tool and Test Equipment List (TTEL); Common and Bulk Items List (CBIL); Design Change Notices (DCN); System Configuration Provisioning List (SCPL); Short Form Provisioning Parts List (SFPPL); and Post Conference List (PCL). The LSA-080, Bill of Materials, LSA-151, Provisioning Parts List Index (PPLI), and LSA-155, Recommended Spare Parts List for Service Acquisition Integrated with Production (SAIP) Parts are used to assist in Supply Support.

Manpower, Personnel, and Training (MPT). The following reports are used for identifying manpower, personnel, and training considerations. In the area of MPT the LSA-019 summary can be used as feeder data to the task skill analysis. The LSA-018 summary can be used to develop a task inventory list. This summary should be used when there is a need for the development of human systems integration type task analysis. The LSA-014, Training Task List, summary should be requested when a training task list is required. This summary will satisfy the requirements of Military Performance Specifications (MIL-HDBK-29612). The U.S. Army's LSA-065, the Manpower Requirements Criteria (MARC), will satisfy the requirements for a MARC summary. The LSA-075, Manpower, Personnel and Training, can be used as the Manpower and Personnel Integration (MANPRINT) summary.

Facilities. In the area of facilities, the LSA-012, Facility Requirement, summary can be used to identify the facilities needed to perform maintenance tasks and training. This summary can be used by the services to develop their service peculiar facility requirements. The LSA-077, Depot Maintenance Interservice Data Summary, should be used when there is a need for a Joint Depot Maintenance (JDM) facility.

Packaging, Handling, Storage, and Transportability (PHS&T). The LSA-025, Packaging Requirements Data summary and the LSA-026, Packaging Developmental Data summary are used to identify requirements for packaging developmental data and packaging requirements data identified in MIL-STD-2073-1. Special Packaging Instructions (SPI) are required to be developed when packaging cannot be developed using packaging requirements data identified in the decision chart of MIL-STD-2073-1. The packaging data is then captured in the SPI. When an LSA-025 summary has a SPI identified, DI-PACK-80121 will be a contract CDRL deliverable along with the LSA-025 and LSA-026 in the format required by the DoD Service Agency Packaging Activity. Refer to requirements for SPI and additional packaging requirements in MIL-STD-2073-1. The Transportability Summary, LSA-085, provides information critical to the shipping and transport of major end items of equipment. It includes environmental and hazardous material information necessary for safe transport of an item by air, highway, rail, and sea.

Hazardous Materials. The LSA-078 satisfies the DoDI 5000.88 and DoDI 5000.91 requirement to identify all hazardous materials associated with a system. The data identifies hazardous materials inherent in the design of the end item and hazardous materials required for operations and maintenance.

3.2.2.1 Provisioning Related Summaries

This section contains the provisioning related summaries that facilitate the development of the provisioning technical documentation that is normally submitted to DoD agencies as part of the initial and follow-on provisioning process. The following summaries contained in this handbook support the provisioning process. An overview of their use in the provisioning process is provided.

The MAC (LSA-004) identifies the maintenance task functions and associated maintenance man-hours (M-H), maintenance-level allocations, tool and test equipment requirements, and other remarks. The MAC will appear as Appendix B to Crew/Maintainer level maintenance manuals for the U.S. Army. While the MAC is a U.S. Army-oriented summary, the U.S. Air Force uses the LSA-023, Maintenance Plan Summary, and the U.S. Navy/U.S. Marine Corps uses the LSA-024, Maintenance Plan, as the primary planning, analysis, and review tools for maintenance requirements. The summaries contain the maintenance concept for each reparable or maintenance significant item. The support item requirements portion of the task analysis, i.e., Entity CG serves as a baseline for determination of the Source Maintenance and Recoverability Code. The third position of the Source Maintenance and Recoverability Code provides authorization for requisition and stockage of an item. The Source Maintenance and Recoverability Code is provided to the user in the field in the RPSTL or -P (parts) manual. The Source Maintenance and Recoverability Code and other provisioning related data elements, i.e., Replacement Task Distribution Type, Repair Cycle Time Type, Maintenance Task Distribution Type, Maintenance Replacement Rate (MRR) I, Maintenance Replacement Rate II, and Maintenance Replacement Rate Modifier are used for determination of initial spares and repair requirements.

The Support Items List (LSA-009) allows simplified review of all repair parts, tool and test equipment necessary to support the system or piece of equipment. This is a useful summary due to the ability to review by National Stock Number, provisioning technical documentation list, and Item Category Code, and can be sorted by Logistics Support Analysis Control Number (LCN) or Reference Number.

The RPSTL, or illustrated parts breakdown manual, contains lists of repair parts and special tools and illustrations of the parts and tools peculiar to the end item. The RPSTL manual format includes a table of contents, a tabular listing of authorized spare/repair parts, a listing of special tools and support equipment, illustrations that show all spare/repair parts and special tools and support equipment, and part number/National Stock Number (NSN) to figure and item number indexes. The LSA-030 summary can be used as a comparative baseline for ensuring these listings and indexes are built accurately.

The Defense Logistics Agency (DLA) Logistics Information Services Provisioning Screening Summary (LSA-032) is used to screen the Federal Logistics Information System (FLIS) for existing National Stock Numbers (NSNs) that match reference numbers associated with the system being provisioned. The information returned from the screening process is used to update logistics product data software to populate the NSNs data fields in various PTD summaries such as the proof RPSTL and Authorization Lists.

The LSA-036, PTD is used by the customer for the identification, selection and determination of initial requirements and cataloging of support items to be procured through the provisioning process. The various types of provisioning lists are automatically produced using the SAE GEIA-STD-0007C style sheet process or logistics product data software or Logistics Support Analysis (LSA) Record software. The LSA-036, PTD is generic term for any of the Provisioning List, LLTIL, PPL, RIL, etc. Each service uses the LSA-036 text file for receipt of PTD as inputs to their in-house provisioning ADP system.

The Authorization List Items summary (LSA-040) contains four categories of items which are published in the Crew/Maintainer Technical Manual. These are (1) components of end item, (2) basic issue items list, (3) additional authorization list, and (4) expendable durable supplies and materials list. The items placed into the four categories are identified within the provisioning data.

The LSA-068 summary displays a comparison of the Replacement and Repair Task Codes (first position), and displays the Source, Maintenance, and Recoverability (SMR) Code to validate this critical provisioning data. Basic Task information (Entity CA) is displayed followed by the associated Entity CI Provisioned Items for each task. The summary then displays the associated provisioned item's Source Maintenance and Recoverability Code for easy comparison with the maintenance level of the Task Code (third position).

The LSA-080 summary provides a detailed analysis of the provisioning data. The Bill of Materials Summary, Part I, identifies assembly level items, and a one indenture lower listing of the spare/repair parts that comprise the assembly. The LSA-080 summary can be used to check for completeness of the provisioning data against assembly drawings and may also be useful for RPSTL data development. The summary is sequenced by the assembly level Reference Number, so that it can track with a drawing package provided in drawing number sequence. Basic data related to the development of a properly structured provisioning parts list is also displayed. An LSA-80 summary should accompany an LSA-036 summary when performing an LSA/Logistics Product Data Provisioning Review.

The LSA-151, Provisioning Parts List Index (PPLI) provides a cross reference between Reference Numbers and the applicable Provisioning List Item Sequence Number (PLISN) of the provisioning list. It provides a reference of usage and location within the provisioning list by LCN for a given Reference Number. It will also show all items that have been deleted.

against a System End Item Provisioning Contract Control Number (PCCN) but still remain in the parts application data [an Entity HG "D" Type of Change Code (TOCC) entry].

The LSA-152, PLISN Assignment/Reassignment Summary provides a listing, by Reference Number, of PLISN, Indenture Code (IC), NHA PLISN, and Prior Item PLISN, assigned by SAE GEIA-STD-0007C compliant software, based on user input parameters. The summary will depict the file content before and after the assignments or reassignments are made [PLISNs are assigned using the Extended Binary Coded Decimal Interchange Code (EBCDIC) collating sequence]. As an option, this summary can be used to assign provisioning related control and reference data.

It is necessary that the data be properly structured using either a uniform (i.e., unbroken) LCN Structure when applying the classical or modified classical LCN assignment technique. When applying the sequential LCN assignment technique, the indenture code must be consistently applied to avoid a break in the LCN structure. Using the LSA-080, Bill of Materials Summary, the analyst can review the file for correct structure, or use the detect error conditions to ensure a correct file structure. This summary should be developed prior to the development of the LSA-036, PTD summary in order to ensure the key fields of the LSA-036 summary are correct and properly assigned.

3.3 Standard Summary Generation

3.3.1 Common Selection Criteria

For a majority of the summaries there are eight common selections. These common selections are End Item Acronym Code (EIAC), Logistics Support Analysis Control Number (LCN), Alternate Logistics Support Analysis Control Number (ALC), Logistics Support Analysis Control Number Type, Usable On Code (UOC), Service Designator (SERV DES) Code (Task Code, fourth position), Operations and Maintenance Level Code, and Item Category Code (ICC).

The handbook primarily uses Refrigeration Unit for the EIAC in the summaries, however there are other examples found throughout the handbook. Other end items were required to be able to generate specific summaries.

LCN selections must specify an EIAC parameter.

LCN selections may have both a Start and a Stop LCN. If a Start and Stop LCN are selected then it will include all LCNs that fall within that range of LCNs selected, unless Start and Stop are equal then only a single LCN will be included. If a Start LCN is selected but not a Stop LCN then only the Start LCN and LCNs following it sequentially will be included. For selections from the "A", "B", "C", "F", "G", and "J" entities which may have data under combinations of functional and physical LCNs, the following selection criteria applies.

If the summary selection specifies a LCN Type of "F", an attempt to match each qualified LCN to Entity XG functional/physical LCN mapping entity is first performed. If a match is found in this entity, then summary data is extracted under the physical LCN equivalent if said data exists. However, if the functional data has not yet been migrated (copied) to the physical LCN, data from the functional LCN is extracted instead. Regardless, the functional LCN is displayed on the summary. If no match for a functional LCN is found in Entity XG, then the search for the summary data for the non-matched LCN is conducted using the functional LCN value directly.

If the summary selection specifies a "P" LCN Type, the search for summary data is conducted directly under the appropriate entities for summary generation. It will not be necessary to search Entity XG for functional equivalent LCNs.

When a selection is made with a specific ALC, only items matching the selected ALC are displayed. If the ALC is left blank on a selection, then other summary qualifiers are used.

The UOC is mandatory for most summaries and is used to identify specific model(s) of the end item. It is used to identify the model/configuration relationship of each LCN comprising a system/equipment and to control these relationships for summary creation. In accordance with (IAW) Entity XC, each configuration/model is assigned a unique UOC at the system/end item level LCN. Each individual assembly/component/piece part is also "linked" to the assigned UOC of the model of which it is applicable through Entities XF and HO. When an assembly/component/piece part is applicable to more than one configuration/model, then multiple UOCs are "linked" to the component for a single LCN and ALC via Entities XF and HO. This eliminates the requirement of duplicating analysis and related data, merely because an item has application to multiple configurations/models. A common source of report errors is the unintended omission of XF and/or HO data.

For selections, choosing a Service Designator Code of A, F, N, or M results in the selection of the matched Service Designator Codes and X and J codes. Choosing code T results in selection of T and J. Choosing X, J, S, or O results in only those codes being selected. Service Designator Codes and descriptions are shown in Table 1.

Table 1 – Service Designator Codes

Code	Description	Code	Description
A	ARMY	T	FAA
N	NAVY	S	National Security Agency
F	AIR FORCE	Y	COAST GUARD
M	MARINES	J	FAA/All Military
X	ALL SERV	O	OTHER

The Operations and Maintenance Level Code will interpret the third position of the Task Code to produce the requested summary. Refer to SAE GEIA-STD-0007C for allowable codes.

The default value for selectable Item Category Codes is all applicable Item Category Codes. Each summary description will denote allowable Item Category Codes. If Item Category Codes are selectable but not denoted for the summary, then all Item Category Codes defined in SAE GEIA-STD-0007C are allowed.

3.3.2 Subordinate LCN/ALC

Subordinate LCN/ALC selections can be of use when multiple configurations, or alternate design and maintenance concepts have been included as part of the logistics product data for an equipment. The ALC specified for the subordinate selection(s) for any LCN within the LCN range overrides the basic ALC selection. The output summary will include the alternate assembly(s) requested including its subordinate items, if applicable. Once the alternate assembly and their breakdown have been selected, the process will revert to the configuration and LCN range specified on the basic selection. For example, if the basic selection is LCN = A, ALC = 00, no Stop LCN (implies a Stop LCN of AZZZZZZZZZZZZZZZZZZ) with subordinate LCN/ALC selections of A0102/01, A010207/02, and A04/01, results from the LCN/ALCs shown in Table 2 would be output on the report.

Table 2 – LCN/ALC codes

LCN (From)	LCN (To)	ALC
A	A0101ZZZZZZZZZZZZZZZZZZ	00
A0102	A010206ZZZZZZZZZZZZZZZZ	01
A010207	A010207ZZZZZZZZZZZZZZZZ	02
A010208	A0102ZZZZZZZZZZZZZZZZZZ	01
A0103	A03ZZZZZZZZZZZZZZZZZZZZ	00
A04	A04ZZZZZZZZZZZZZZZZZZZZ	01
A05	AZZZZZZZZZZZZZZZZZZZZZZ	00

3.3.3 Task Referencing or Subtask Referencing

Entity CA in SAE GEIA-STD-0007C allows for referencing of tasks and their related information. To reference a task, a user will input the "Referenced" EIAC, LCN, ALC, LCN Type and Task Code following the Entity CA key set (or "Referencing" keys). As SAE GEIA-STD-0007C denotes, this task referencing capability should only be utilized when the data of Entity CA and subordinate Entities CB to CI, CK, CL, CR, CS, CT, CV, and CW are identical for the referenced and referencing tasks. All non-key attributes in Entity CA and all data in subordinate entities will be used from the Referenced Task and its subordinate entities. Therefore, only key entries, referenced task entries, and mandatory element entries (Task Identification and Task Frequency) are required in Entity CA, and no further entries are required in the subordinate Entities.

Subtask referencing is similar to task referencing. The subtask referencing capability should only be used when the data of this entity and its subordinate entities (Entities CD, CR, and CS) are the same for referenced and referencing subtasks. All non-mandatory attributes in Entity CB and all subordinate entities are pulled from the Referenced Subtask and its subordinate entities.

When utilizing task or subtask referencing, two cautions should be followed. First, many software systems allow only one tier of referencing for tasks and subtasks. In other words, task A can reference task B as long as task B does not reference task C. If task B does reference task C, then task A must reference task C instead of task B. Second, in any summaries dealing with task information and related calculations, software systems must utilize referenced task and subtask information for summary outputs.

In any summaries dealing with task information and related calculations, software systems should utilize referenced task and subtask information for summary outputs with the exception of the non-subordinate information described above.

3.3.4 Use of Task Resource Entities (CG, CI, CR, and CS)

Entities CR (Subtask Support Equipment Data) and CS (Subtask Provisioned Item Data) were added in the SAE GEIA-STD-0007B. However, the standard does not provide any business rules for the use of CG, CI, CR, and CS entities with possible duplication of resources at the task and subtask levels respectively. Several summaries in this handbook use the data from the CG and CI entities and this section provides generic guidance for any program that desires to use the CR and CS entities in the Maintenance Task Analysis (MTA) process.

The affected summaries include LSA-005, LSA-012, LSA-023, LSA-024, LSA-027, and LSA-078.

Summaries that summarize the quantity of support equipment resources shall use the maximum quantity defined for the same support equipment across all CR occurrences for the task. If the same SE exists in CG, then the greater of quantities between CR and CG shall be used.

Summaries that report quantities of provisioned parts used for a task shall roll up each CS provisioned item quantity across all subtasks. If the same part exists in the CI entity, then its quantity shall be added to the sum of CS quantities.

Summaries that display the resources without quantities shall display a single occurrence for each support equipment and/or provisioned item despite the possibility that it may appear in multiple entities (CG, CI, CR, and CS). For detailed processing logic, refer to appropriate sections of the summaries defined in APPENDIX D – LOGIC TABLES.

3.3.5 Including Digital File Data in Summaries

Entity XT provides the ability to store Digital File Data, which can be applied to multiple functional areas in the logistics product database through the use of various cross mapping Entities. Many of the summaries contained within this handbook may be augmented with graphics or other types of rich media that have been stored in Entity XT and mapped to an Entity related to one of the Entities found in the Data Sources section of each individual report. There are different ways in which rich media may be represented in the summary, some of which may be dependent upon the desired output format. For example, output printed on paper could include a reasonable representation of a static graphic, but to represent a video would require some type of external reference. More modern output formats may be able to include fully embedded video, CGM graphics, external links, and the like.

Every effort has been made to identify logical options for including rich media within each summary, provide guidance on which entity data sources would be applicable thereto in the summary's data sources section, and display suggested methods of representing the rich media in the recommended format section.

Because of the diverse nature of the various types of rich media and the non-restrictive nature of Entity XT, the reader is encouraged to explore additional uses of rich media in the summaries, and alternate representations thereof in the summary outputs, in ways that interested parties agree are best suited for the business solution under analysis. Given this flexibility, it is expected that this exploration process may result in the inclusion of rich media content in the summaries that deviates from the data sources and formats shown in the summary specifications of this handbook.

4. SUMMARIES SPECIFICATIONS

4.1 Annual Man Hours by Skill Specialty Code and Level of Maintenance (LSA-001)

4.1.1 Introduction

The LSA-001, Annual Man Hours by Skill Specialty Code (SSC) and maintenance level (M/L) of Task Code (third position), summarizes the training and personnel requirements identified for each maintenance task. It provides the analyst with a one or two-page summary of the total Operations and Maintenance man-hours required to support the weapon system. This data can be used to assess the new system impact on field/depot manpower by Military Occupational Specialty (MOS)/Wage Grade (WG)/Navy Enlisted Code (NEC). The LSA-001 also provides the analyst with a summary of all tasks requiring a given MOS/WG/NEC. Additionally, the summary displays a report of skill levels required, as well as any requirement for special training equipment to acquire the skill to perform the task.

For the U.S. Army, a Basis of Issue Plan (BOIP) is required by Army Regulation (AR) 71-32. This report provides input for the Basis of Issue Plan Feeder Data (BOIPFD). Detailed information on BOIPFD can be found in Department of the Army Pamphlet (DA PAM) 700-27.

4.1.2 Associated Statutes, Regulations, Policy, Standards, Handbooks, and Data Item Descriptions

- DoDI 5000.88 and DoDI 5000.91. The Program Manager (PM) will, in conjunction with designated DoD Component Human System Integration (HSI) staff, define the human performance characteristics of the user population based on the system description, projected characteristics of target occupational specialties, and recruitment and retention trends. The PM will also develop complete resource estimates for Test and Evaluation (T&E) [(Defense Acquisition Guidebook (DAG) CH 8–3.6.1] to include: test articles, test sites and instrumentation, test support equipment, threat representations and simulations, test targets and expendables, support for operational forces used in test (both friendly and threat), models and simulations, testbeds, joint mission environment, distributed test networks, funding, manpower and personnel, training, federal/state/local requirements, range requirements, and any special requirements (e.g., explosive ordnance disposal requirements or corrosion prevention and control).
- DoDI 7041.04 and DoDI 5000.73. Manpower data is used in developing cost estimates for Economic Analysis beginning with Milestone A as required in the Cost Analysis Requirements Description (CARD).
- SAE TA-STD-0017A, and MIL-HDBK-502A. The following activities are applicable: Activity B.3, Comparative Analysis and Activity D.1, Task Analysis.
- Director Operational Test and Evaluation (DOT&E) and Test and Evaluation Master Plan (TEMP) Guidebook. Manpower/personnel and training requirements and limitations are identified in the Resource Summary section of the TEMP. Manpower/Personnel and Training; Require programs to specify manpower/personnel and training requirements and limitations that affect test and evaluation execution, and identify how much training will be conducted with modeling and simulation.
- Product Support Manager (PSM) Guidebook. Indicates the Life Cycle Sustainment Plan (LCSP) should be written and approved, to include supply chain performance requirements, manpower, information technology infrastructure, support equipment plans, logistics risks and mitigation plans, support strategies, and product support arrangement strategies. The LCSP development begins at Milestone A and is mature at Milestone C. The LCSP is then reviewed by the Component Acquisition Executive (CAE) at least every five years after a system's Initial Operational Capability.

4.1.3 Tailoring

Who: Users may include: Commercial/Industry, All Armed Services, Program Executive Offices, Program Managers and Product Support Managers. This is a management/analyst review summary. The formatted summary is often delivered as part of a contractual requirement. The data or summary may be delivered IAW DI-SESS-81758, Logistics Product Data/DI-SESS-81759, Logistics Product Data Summaries via Contract Data Requirements List (CDRL). The data should be delivered as part of a LPD file as the contract specifies.

What: LSA-001 summarizes the training and personnel requirements identified for each maintenance task. The summary also displays any requirement for special training equipment to acquire the skill to perform the task.

When: During development, this summary should be used as an analysis tool to assess the new system's impact on field/depot manpower by MOS/WG/NEC.

How: Estimated data can be derived from previous like systems through SAE TA-STD-0017A, Activity B.3, Comparative Analysis. The mature data for this summary is an output of Task Analysis per Activity D.1. Task analysis is an iterative

process throughout the development cycle where the level of system detail available is provided at a lower and lower indenture level over time.

Why: Manpower requirements are required to be documented in the TEMP. A draft update is due for the Development Request for Proposal (RFP) Release Decision Point and approved at Milestone B. Additionally, the data in the LSA-001 summary is used as input into Manpower mix data, as required in Economic Analyses. Manpower mix data is used to support workforce mix decisions. Costing tools, including DoDI 7041.04, account for fully loaded costs (i.e., all variable and fixed costs, compensation and non-compensation costs, current and deferred benefits, and cash and in-kind benefits) approved by the DoD Component manpower authority.

For the U.S. Army, the data is the BOIPFD that is used to develop the Basis of Issue Plan (BOIP). The BOIPFD is a compilation of information about a new or improved item of equipment. It contains functions, capabilities, intended use, initial cost estimate, basis of issue, personnel, and support requirements. The developer summarizes information obtained from valid requirements documents and applicable information obtained from the product/project manager. The materiel developer (MATDEV) prepares and submits the BOIPFD to initiate BOIP development. As the system matures, the MATDEV may amend the feeder data. BOIPFD will be prepared by the MATDEV upon receipt of an approved Capability Development Document (CDD) and approved Milestone B decision. BOIPFD will be prepared by the MATDEV and forwarded to U.S. Army Force Management Support Agency (USAFMSA) within 60 days of the assignment of Line Item Number (LIN) for developmental items and within 30 days for NDI. A BOIP is a requirements document that states the planned placement of quantities of new equipment and associated support items of equipment (ASIOE) and personnel, as well as the reciprocal displacement of equipment and personnel. MATDEVs use BOIPs as input for concept studies, life cycle cost estimates, and trade-off analyses during the research and development process.

4.1.4 Scope

The summary is divided into two parts. It is used to determine manpower requirements of the system/equipment, and to determine the time required and number of personnel, by Skill Specialty Code, and Subtask Person Identifier to perform each task. Part I contains a summary of annual man-hour expenditures by maintenance levels (i.e., Task Code, third position) and Skill Specialty Code. Man-hour totals are based on the Number of Systems Supported by maintenance level. Part II contains a summary of the man-hours, by Subtask Person Identifier, expended on each maintenance task.

4.1.5 Selection

Mandatory: EIAC, Start LCN, LCN Type, UOC, and Service Designator Code

Optional: ALC, Stop LCN, Skill Specialty Code, Skill Specialty Evaluation Code, Number of Systems Supported per maintenance level (Default = 1), Display Option (Part I, Part II) and Skill Specialty Code Description Option

4.1.6 Processing/Business Rules

The same qualifying criteria is used for both Parts I and II. Task Codes are qualified by matching on selected Service Designator Code (Task Code, fourth position). Qualified tasks must have an entry in Entity CD with a valid Subtask Mean Man-minutes per Subtask Person Identifier over the range of selected LCNs.

It is possible to select only Part I of the summary. If Part II is selected, Part I will also be displayed. If a selection is made by Skill Specialty Code, then both Parts I and II will be generated.

Part I Man-Hour Summary MAN-HOURS (M-H) is computed by summing all Total Annual Man-Hours [TOTAL ANNUAL (ANL) M-H] for a given Subtask Person Identifier, Skill Specialty Code (or New or Modified Skill Specialty Code) and maintenance level of the Task Code, third position.

Part I TOTAL NUMBER OF MAINTENANCE TASKS is computed by summing each qualified Task Code having contributed to man-hour computations.

Part II M-H PER PERS ID is computed by summing all Subtask Mean Man-minutes for each subtask entry matching an identical Subtask Person Identifier and Skill Specialty Code. This value is then divided by 60.

Part II ANL M-H/ITEM is computed by multiplying the M-H PER PERSON ID (see 4.1.6 0.) by the Task Frequency.

Part II TOTAL ANL M-H is computed by multiplying the ANL M-H/ITEM (see 4.1.6 0.) by the Number of Systems Supported by Task Code maintenance levels input through the summary selection.

Part III lists all SSC or NM SSC that qualifies based on the selection option.

4.1.7 Sequence

Part I is sequenced by ascending values of Skill Specialty Code. Part II is sorted also by ascending Skill Specialty Code. Within this sequence Tasks are sorted in ascending LCN then Task Code sequence.

4.1.8 Data Sources

The data sources listed in Table 3, include those data elements which appear on the summary and those which are needed to generate the summary (for instance, those data elements used in calculations). The data source listings were developed by viewing each summary in a left-to-right, top-to-bottom sequence. The table can be used both as a map to the location of the data in the summary and as a list of predefined data elements which display on the summary.

The Data Table is organized in two major segments defined as “Selection Options” and “Output.” Data Elements are listed in the position they appear on the Summary and may appear more than once, including those from the same entity.

The Element Name column contains the data element names as listed on the summary, headers for the data, and data elements necessary to process the summary. The Data Element Name column lists the matching data element from SAE GEIA-STD-0007C. The Data Type Number column can be used to locate the definition of the data element in SAE GEIA-STD-0007C. The Data Element Requirement column indicates whether that data element is required or optional and contains more specific guidance as necessary.

Additional information related to the Element Name is shown in parentheses (). Examples may include “Throughput” – an entry in a field that will appear on the summary, or “Manually Entered” – an entry in a field, i.e., decision point, that may not appear on the summary.

Element Names required to generate the summary, but do not appear in the summary, are shown in brackets [].

Note that not all data may be required to generate the summary and not all parts of the summary are necessary. See the tailoring section of this summary and the Data Element Requirement column for specific guidance.

Table 3 – Data Sources for Annual Man-Hours by Skill Specialty Code and Level of Maintenance (LSA-001)

Element Name	Data Element Name	Entity	Data Type Number	Data Element Requirement
SELECTION OPTIONS/HEADER				
EIAC	End Item Acronym Code	XB	2040	Required
LCN NOMENCLATURE	Logistics Support Analysis Control Number Nomenclature	XB	2950	Required
START LCN	Logistics Support Analysis Control Number	XB	2970	Required
ALC	Alternate Logistics Support Analysis Control Number Code	XB	1200	Optional
TYPE	Logistics Support Analysis Control Number Type	XB	2980	Required
STOP LCN	Logistics Support Analysis Control Number	XB	2970	Optional
UOC	Usable On Code	XF/XC	5790	Required
SERV DES	Task Code (4th position)	CA	5110	Required
SSC	Skill Specialty Code	CD	4810	Optional
	New or Modified Skill Specialty Code			
SSE	Skill Specialty Evaluation Code	CD	4820	Optional
DISPLAY OPTION (Selected. Options include: Both Parts (default), Part I only)				
NUMBER OF SYSTEMS SUPPORTED BY MAINTENANCE LEVEL: C,O,F,H,G,L,D (Throughput)	Task Code	CA	5110	Optional
SSC DESCRIPTION OPTION (Selected)				

Element Name	Data Element Name	Entity	Data Type Number	Data Element Requirement
OUTPUT				
PART I - MAN-HOUR SUMMARY (Header)				
SSC	Skill Specialty Code	CD	4810	One or the other is required
	New or Modified Skill Specialty Code			
MAINTENANCE LEVEL (Header)				
[TASK CODE]	Task Code (3rd position)	CA	5110	Required
MAN-HOURS BY SSC, MAINTENANCE LEVEL & NO. OF SYSTEMS SUPPORTED (Calculated)				Automatically generated
[SUBTASK PERSON ID]	Subtask Person Identifier	CD	3890	Required to perform calculations
[TOTAL ANNUAL MAN HOURS] (Calculated)				Required to perform calculations
[SUBTASK MEAN MAN MINUTES]	Subtask Mean Man Minutes	CD	3230	Required to perform calculations
NUMBER OF SYSTEMS SUPPORTED BY MAINTENANCE LEVEL: C,O,F,H,G,L,D (Throughput)	Task Code	CA	5110	Required
TOTAL NUMBER OF MAINTENANCE TASKS (Calculated)				Required to perform calculations
PART II - PERSONAL SKILL AND TASK SUMMARY (Header)				
SSC	Skill Specialty Code	CD	4810	One or the other is required
	New or Modified Skill Specialty Code			
LCN	Logistics Support Analysis Control Number	CA	2970	Required
NOMENCLATURE	Logistics Support Analysis Control Number Nomenclature	XB	2950	Optional
LCN TYPE	Logistics Support Analysis Control Number Type	CA	2980	Required
ALC	Alternate Logistics Support Analysis Control Number Code	CA	1200	Required
TASK CD	Task Code	CA	5110	Required
TASK IDENTIFICATION	Task Identification	CA	5150	Required
TASK FREQ	Task Frequency	CA	5140	Required
MB	Task Annual Operating Requirements Measurement Base	CA	3380	Required
SSE	Skill Specialty Evaluation Code	CD	4820	Optional
PERS ID	Subtask Person Identifier	CD	3890	Required
TRG EQP	Training Equipment Requirement Code	CA	5480	Optional
M-H PER PERS ID (Calculated)				Automatically generated
[SUBTASK MEAN MAN MINUTES]	(Subtask Mean Man-minutes)	CD	3230	Required to perform calculations
ANL M-HR/ITEM (Calculated)				Automatically generated
[M-H PER PERS ID]				Required to perform calculations



Element Name	Data Element Name	Entity	Data Type Number	Data Element Requirement
[TASK FREQ]	Task Frequency	CA	5140	Required to perform calculations
TOTAL ANL M-H (Calculated)				Automatically generated
[ANL M-HR/ITEM]				Required to perform calculations
[NUMBER OF SYSTEMS SUPPORTED PER MAINTENANCE LEVEL] (Throughput)				Required to perform calculations
FGC	Technical Manual Functional Group Code	XB	5260	Optional
PART III - SKILL SPECIALTY CODE DESCRIPTION (Header)				
SSC AND DESCRIPTION	Skill Specialty Code	CD	4810	If SSC selected, qualified SSCs
	Skill Specialty Code Description	GA	4815	Optional
NEW OR MODIFIED SSC AND DESCRIPTION	New or Modified Skill Specialty Code	CD	4810	If NM SSC selected, qualified NM SSCs
	Skill Specialty Code Description	GB	4815	Optional

4.1.9 Format

Figure 2 is a recommended view of the data. The performing activity may be able to provide an alternate view of the same or similar data. Check with the performing activity for the most cost effective method of producing a similar summary.

REQUESTER: J. Doe

LOGISTICS PRODUCT DATA

TIME: 14:20

DATE: 2020/01/07

PAGE: 1

ANNUAL MAN HOURS BY SKILL SPECIALTY CODE AND LEVEL OF MAINTENANCE (LSA-001)

XB.eiac	XB.lcnomen	XB.lcn	XB.alc	XB.lcntype	XB.lcn	XF/XC.uoc	CA.taskcode	CD.skspc	CD.skspc	CD.skspc	SELECTED
EIAC	LCN NOMENCLATURE	START LCN	ALC	TYPE	STOP LCN	UOC	SERV DES	SSC	SSE	PARTS	
REFRIG UNT	REFRIGERATION UNT	0	00	F		DCY	ARMY				BOTH
	COLD STORAGE WALK										
	-IN										

SELECTED

SSC DESCRIPTION OPTION: YES

THROUGHPUT

NUMBER OF SYSTEMS SUPPORTED BY MAINTENANCE LEVEL:	OPERATOR/CREW	(C):	5000
	ORGANIZATIONAL/AVUM/ON EQUIP	(O):	5000
	INTERMEDIATE/DS AVIM/AFLOAT/OFF EQUIP	(F):	5000
	INTERMEDIATE/GS/ASHORE	(H):	5000
	ASHORE AND AFLOAT (NAVY)	(G):	0
	SPECIALIZED REPAIR ACTIVITY	(L):	5000
	DEPOT/SHIPYARD	(D):	5000

PART I - MAN-HOUR SUMMARY

CA.taskcode

MAINTENANCE LEVEL

CD.skspc	CD.nomskspc	OPERATOR/ CREW (C)	ORGANIZATIONAL/ ON EQUIP (O)	INTERMEDIATE/DS- AVIM/AFL/OF EQP (F)	INTERMEDIATE/ GS/ASHORE (H)	INTERMEDIATE/ NAVY ASH/AFL (G)	SPECIALIZED REPAIR ACT (L)	DEPOT/ SHIPYARD (D)
SSC		calc	calc	calc	calc	calc	calc	calc
35B20AAA1		0.00	2770.00	0.00	0.00	0.00	0.00	0.00
35B30AAA1		0.00	3440.00	1759.15	0.00	0.00	0.00	0.00
44B10AAA1		0.00	0.00	213.50	0.00	0.00	0.00	0.00
44E10AAA1		0.00	0.00	1186.60	0.00	0.00	0.00	0.00
52C10AAA1		0.00	24.57	315.00	0.00	0.00	0.00	0.00
52C20AAA1		0.00	614.30	1219.20	0.00	0.00	0.00	0.00
76J10AAA1		0.00	0.00	0.00	0.00	0.00	127.00	1005.15

TOTAL NUMBER OF MAINTENANCE TASKS: 33

Figure 2 – Format for LSA-001, Annual Man-Hours by Skill Specialty Code and Level of Maintenance

PART II - PERSONNEL SKILL AND TASK SUMMARY															
CD.skspc	CA.lcn XB.lcnomen	CA.lcntype CA.alc	CA.taskcode	CA.taskid	CA.tskfreq	CA.taannormb CD.skspevlc	CD.stprsnid CA.trneqrqc	CALC PERS	CALC TRG	CALC M-H	CALC PER	CALC ANL	CALC M-H	CALC TOTAL	XB.tmfgc
SSC	LCN NOMENCLATURE	LCN-TYPE ALC	TASK CD	TASK IDENTIFICATION	TASK FREQ	MB	SSE	ID	EQP	PERS	ID	ITEM		ANL M-H	FGC
35B20AAA1	002	F	GGOAGAA	INSTALL WIRE HARNESS	.2000	O	M	AAA	N	0.67		0.13		670.00	02
	WIRE HARNESS ASSY	00		ASSY											
	00204	F	HGOAAAA	REPLACE LIGHT ASSY	.8400	O	A	AAA	N	0.50		0.42		2100.00	0204
	LIGHT ASSEMBLY	00													
35B30AAA1	002	F	GGOAGAA	INSTALL WIRE HARNESS	.2000	O	M	AAF	N	1.34		0.27		1340.00	02
	WIRE HARNESS ASSY	00		ASSY											
	00201	F	JGFOGAA	REPAIR POWER CONTROL	.2330	O	A	ABB	Y	1.51		0.35		1759.15	0201
	POWER CONTROL ASSY	00													
	00204	F	HGOAAAA	REPLACE LIGHT ASSY	.8400	O	A	AAF	N	0.50		0.42		2100.00	0204
	LIGHT ASSEMBLY	00													

PART III - SKILL SPECIALTY CODE DESCRIPTION	
CD.skspc	GA.skspcdsc
SSC	SSC DESCRIPTION
35B20AAA1	ELECTRICAL JOURNEYMAN

Figure 2 – Format for LSA-001, Annual Man-Hours by Skill Specialty Code and Level of Maintenance (Continued)

4.2 Maintenance Summary (LSA-003)

4.2.1 Introduction

The intent of this summary is to compare the status of an item versus the requirements for the same item. LSA-003 compares the required manpower plan or budget with the calculated requirements for manpower based on tasks to be performed.

4.2.2 Associated Statutes, Regulations, Policy, Standards, Handbooks, and Data Item Descriptions

- SAE TA-STD-0017A and MIL-HDBK-502A. The following activity is applicable: Activity D.1, Task Analysis.

4.2.3 Tailoring

Who: Users may include: (1) Commercial/Industry, (2) All Armed Services, (3) Program Executive Offices, (4) Program Managers and, (5) Product Support Managers. This is a management/analyst review summary. It is often cited as a deliverable.

What: During development, this summary should be used as an analysis tool to compare the required manpower plan or budget with the calculated requirements for manpower throughout the development process. The data on this summary is input to a Maintenance Plan.

When: Though the formatted summary is not typically delivered as part of a contractual requirement, the data or summary may be delivered IAW DI-SESS-81758/DI-SESS-81759 via Contract Data Requirements List (CDRL). The data should be delivered as part of a LPD file as the contract specifies.

How: Data in this summary is an output of Maintenance Task Analysis (SAE TA-STD-0017A, Activity D.1).

Why: This summary compares the required manpower plan or budget with the calculated requirements for manpower based on tasks to be performed. It aids in identifying shortages in manpower.

4.2.4 Scope

This summary compares the current status of the system maintenance parameters with the requirements recorded on the A entities.

4.2.5 Selection Options

Mandatory: EIAC, Start LCN, LCN Type, UOC, Service Designator (Task Code, fourth position), Annual Operating Requirement (AOR), Measurement Base (MB), and Wartime/Peacetime (W/P) Indicator (default value is Peacetime).

Optional: ALC and Stop LCN

4.2.6 Processing/Business Rules

The intent of this summary is to compare the status of an item versus the requirements for the same item. Therefore, for the "Required" line to be displayed, there must be an exact match with the Start LCN in Entities AC and/or AD. If no AC/AD Entity values exist for the Start LCN, then do not display the "Required" line; only calculate the "Actual" line dependent on the selection range. If "Required" line exists ("A" Entity LCN), "Actual" line values should be calculated based on a roll-up of LCNs subordinate to the "A" entity LCN (Required line) and within the selection range. The same qualifying criteria is used throughout this summary. Task Codes are qualified by matching on selected Service Designator Code (Task Code, fourth position).

- Qualified tasks must have an entry in Entity CA with a Mean Man-Hour value (Measured Mean Man-Hours first precedence, Predicted Mean Man-Hours second precedence), a Mean Elapsed Time entry (Measured Mean Elapsed Time first, Predicted Mean Elapsed Time second), and a Task Frequency entry.
- Task Code first position (Function) of "O", "T", "U", "V", and "Y", and Task Code second position (Interval) of "Y" are not used in the LSA-003 summary calculations.
- The elapsed time and man-hour values displayed on the "Actual" line of the summary are calculated from data on the "C" entities:

$$\bar{t}_e = \frac{\sum_{i=1}^n (f_{ti})(t_{ei})}{\sum_{i=1}^n (f_{ti})} \quad (\text{Eq. 1})$$

$$\overline{t_p} = \frac{\sum_{i=1}^n (f_{ti})(t_{pi})}{\sum_{i=1}^n (f_{ti})} \quad (\text{Eq. 2})$$

where:

$\overline{t_e}$	=	Mean Elapsed Time
$\overline{t_p}$	=	Mean Man-Hours
t_{ei}	=	Elapsed Time for task i (Measured Mean Elapsed Time 1st, Predicted Mean Elapsed Time 2nd)
t_{pi}	=	Total Man-Hours for task i (Measured Mean Man-Hours 1st, Predicted Mean Man-Hours 2nd)
f_{ti}	=	Task Frequency for task i
n	=	Total number of tasks performed for the range of LCNs

The preceding computations are performed for each of the following groupings of tasks at Crew and Organizational Operations/Maintenance Levels:

- d. Daily Inspection (Task Code first position is "A" and second position is "C").
- e. Preoperative Inspection (Task Code first position is "A" and second position is "A").
- f. Post Operative Inspection (Task Code first position is "A" and second position is "H").
- g. Periodic Inspection (Task Code first position is "A" and second position is "E" or "B").
- h. Mission Profile Change (Task Code first position is "M").
- i. Turnaround (Task Code fifth position is "F").

Also, the preceding computations are performed for Unscheduled Tasks (Task Code, second position is F, G, or J) at all maintenance levels.

- j. The scheduled and unscheduled values for annual man-hours per end item are derived utilizing data from the "C" entities for a given LCN and using the interval codes (Task Code, second position) F, G, and J to qualify unscheduled tasks and all remaining interval codes (except Y - Task Code, second position) qualifying as scheduled. Calculations are performed at each maintenance level:

$$(t_{ps})_a = \sum_{i=1}^n (f_{ti})(t_{ps})_i \quad (\text{Eq. 3})$$

$$(t_{pu})_a = \sum_{i=1}^n (f_{ti})(t_{pu})_i \quad (\text{Eq. 4})$$

where:

$(t_{ps})_a$	=	Annual Man-Hours for scheduled maintenance
$(t_{pu})_a$	=	Annual Man-Hours for unscheduled maintenance
f_{ti}	=	Task Frequency for task i
$(t_{ps})_i$	=	Man-Hours for scheduled maintenance task i
$(t_{pu})_i$	=	Man-Hours for unscheduled maintenance task i
n	=	Total number of tasks performed for the range of LCNs

The scheduled and unscheduled values are summed to yield total annual man-hours per end item for each maintenance level.

- k. The "Actual" percentile for a given maintenance level is calculated by dividing the qualified tasks with Elapsed Times less than or equal to the "required" MAX TIME TO REPAIR value by the total number of qualified tasks at that Maint Level X 100:

$$\text{Actual Percentile} = \left(\frac{\text{Number of Qualified Tasks per } M/L \text{ with Elapsed Time } \leq \text{Max TTR Value}}{\text{Total Number of Qualified Tasks per } M/L} \right) \times 100 \quad (\text{Eq. 5})$$

- l. The scheduled and unscheduled man-hours per operating hour (Actual) are calculated by dividing the annual man-hours per end item from Equations 3 and 4 by the AORs specified on the selection criteria. Values should be calculated to the one-hundredths (two positions right of the decimal). This calculation is performed for each Operations/Maintenance (O/M) Level. The scheduled and unscheduled values are summed to yield total man-hours per operating hour per maintenance level.
- m. The "Actual" totals (at the bottom of the output) are calculated by summing the Annual Man-Hours and M-H per Operating Hour (Scheduled, Unscheduled, and Total) actual values for all maintenance levels.

4.2.7 Sequence

The Crew and Organizational Inspections section is always shown first, with the Crew Inspections shown before the Organizational Inspections. The remainder of the summary is sequenced by ascending maintenance level (crew/operator to depot).

4.2.8 Data Sources

The data sources listed in Table 4, include those data elements which appear on the summary and those which are needed to generate the summary (for instance, those data elements used in calculations). The data source listings were developed by viewing each summary in a left-to-right, top-to-bottom sequence. The table can be used both as a map to the location of the data in the summary and as a list of predefined data elements which display on the summary.

The Data Table is organized in two major segments defined as "Selection Options" and "Output." Data Elements are listed in the position they appear on the Summary and may appear more than once, including those from the same entity.

The Element Name column contains the data element names as listed on the summary, headers for the data, and data elements necessary to process the summary. The Data Element Name column lists the matching data element from SAE GEIA-STD-0007C. The Data Type Number column can be used to locate the definition of the data element in SAE GEIA-STD-0007C. The Data Element Requirement column indicates whether that data element is required or optional and contains more specific guidance as necessary.

Additional information related to the Element Name is shown in parentheses (). Examples may include "Throughput" – an entry in a field that will appear on the summary, or "Manually Entered" – an entry in a field, i.e., decision point, that may not appear on the summary.

Element Names required to generate the summary, but do not appear in the summary, are shown in brackets [].

Note that not all data may be required to generate the summary and not all parts of the summary are necessary. See the tailoring section of this summary and the Data Element Requirement column for specific guidance.

Table 4 – Data Sources for the Maintenance Summary (LSA-003)

Element Name	Data Element Name	Entity	Date Type Number	Data Element Requirement
SELECTION OPTIONS/HEADER				
EIAC	End Item Acronym Code	XB	2040	Required
LCN NOMENCLATURE	Logistics Support Analysis Control Number Nomenclature	XB	2950	Required
START LCN	Logistics Support Analysis Control Number	XB	2970	Required
ALC	Alternate Logistics Support Analysis Control Number Code	XB	1200	Optional
TYPE	Logistics Support Analysis Control Number Type	XB	2980	Required
STOP LCN	Logistics Support Analysis Control Number	XB	2970	Optional
UOC	Usable On Code	XF/XC	5790	Required
SERV DES	Task Code (4th position)	CA	5110	Required
AOR	Annual Operating Requirement	AG	1210	Required

Element Name	Data Element Name	Entity	Date Type Number	Data Element Requirement
MB	Annual Operating Requirement Measurement Base	AG	3380	Required
PEACE/WAR	Reliability Operational Requirements Indicator	AG	3710	Required
OUTPUT				
ORGANIZATIONAL INSPECTIONS (Header)				
DAILY INSPECTIONS				
REQUIRED M-H	Daily Inspection Mean Man Hours	AD	3220	Optional
REQUIRED ELAP	Daily Inspection Mean Elapsed Time	AD	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
PREOP INSP				
REQUIRED M-H	Preoperative Inspection Mean Man Hours	AD	3220	Optional
REQUIRED ELAP	Preoperative Inspection Mean Elapsed Time	AD	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
POSTOP INSP				
REQUIRED M-H	Postoperative Inspection Mean Man Hours	AD	3220	Optional
REQUIRED ELAP	Postoperative Inspection Mean Elapsed Time	AD	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated



Element Name	Data Element Name	Entity	Date Type Number	Data Element Requirement
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
PERIODIC INSP				
REQUIRED M-H	Periodic Inspection Mean Man Hours	AD	3220	Optional
REQUIRED ELAP	Periodic Inspection Mean Elapsed Time	AD	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
MISS PROF CHG				
REQUIRED M-H	Mission Profile Change Mean Man Hours	AD	3220	Optional
REQUIRED ELAP	Mission Profile Change Mean Elapsed Time	AD	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
TURNAROUND				
REQUIRED M-H	Turnaround Inspection Mean Man Hours	AD	3220	Optional
REQUIRED ELAP	Turnaround Inspection Mean Elapsed Time	AD	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated



Element Name	Data Element Name	Entity	Date Type Number	Data Element Requirement
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
MAINTENANCE LEVEL (Header)				
[TASK CODE]	Task Code (3rd position)	CA	5110	Required
UNSCH MAINT				
REQUIRED M-H	Unscheduled Maintenance Mean Man Hours	AC	3220	Optional
REQUIRED ELAP	Unscheduled Maintenance Mean Elapsed Time	AC	3210	Optional
ACTUAL M-H (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN MAN HOURS]	Measured Mean Man Hours	CA	3220	Required. 1st precedence
[PREDICTED MEAN MAN HOURS]	Predicted Mean Man Hours	CA	3220	Required. 2nd precedence
ACTUAL ELAP (Calculated)				Automatically generated
[TASK FREQUENCY]	Task Frequency	CA	5140	Required for calculation
[MEASURED MEAN ELAPSED TIME]	Measured Mean Elapsed Time	CA	3210	Required. 1st precedence
[PREDICTED MEAN ELAPSED TIME]	Predicted Mean Elapsed Time	CA	3210	Required. 2nd precedence
MAX TIME				
REQUIRED MAX TIME TO REPAIR	Maintenance Level Maximum Time to Repair	AC	3170	Optional
REQUIRED PCT	Maintenance Level Percentile	AC	3880	Optional
ACTUAL MAXIMUM TIME TO REPAIR		CA`	3170	Optional
ACTUAL PCT (Calculated)				Automatically generated
ANNUAL M-H PER END ITEM				
REQUIRED SCHED	Maintenance Level Scheduled Annual Man Hours	AC	1210	Optional
REQUIRED UNSCHED	Maintenance Level Unscheduled Annual Man Hours	AC	1210	Optional
REQUIRED TOTAL (Calculated)				Automatically generated
ACTUAL SCHED (Calculated)				Automatically generated
ACTUAL UNSCHED (Calculated)				Automatically generated
ACTUAL TOTAL (Calculated)				Automatically generated
M-H PER OPER HOUR				
REQUIRED SCHED	Scheduled Man Hour per Operating Hour	AC	3120	Optional
REQUIRED UNSCHED	Unscheduled Man Hour per Operating Hour	AC	3120	Optional
REQUIRED TOTAL (Calculated)				Automatically generated
ACTUAL SCHED (Calculated)				Automatically generated
ACTUAL UNSCHED (Calculated)				Automatically generated



Element Name	Data Element Name	Entity	Date Type Number	Data Element Requirement
ACTUAL TOTAL (Calculated)				Automatically generated
ACTUAL TOTALS FOR ALL MAINT LEVELS (Header)				
SCHEDULED ANNUAL M-H PER END ITEM (Calculated)				Automatically generated
SCHEDULED M-H PER OPER HOUR (Calculated)				Automatically generated
UNSCHEDULED ANNUAL M-H PER END ITEM (Calculated)				Automatically generated
UNSCHEDULED M-H PER OPER HOUR (Calculated)				Automatically generated
TOTAL M-H PER END ITEM ANNUAL M-H PER END ITEM (Calculated)				Automatically generated

4.2.9 Format

The format shown in Figure 3 is a recommended view of the data. The performing activity may be able to provide an alternate view of the same or similar data. Check with the performing activity for the most cost effective method of producing a similar summary.

REQUESTER: J. Doe

LOGISTICS PRODUCT DATA

TIME: 14:20

DATE: 2020/01/07

PAGE: 01

MAINTENANCE SUMMARY (LSA-003)

XB.eiac	XB.lcn	XB.lcn	XB.alc	XB.lcntype	XB.lcn	XF/XC.uoc	CA.taskcode	AG.annopreq	AG.anoprqmb	AG.reloprqi
EIAC	LCN NOMENCLATURE	START LCN	ALC	TYPE	STOP LCN	UOC	SERV DES	AOR	MB	PEACE/WAR
REFRIG UNT	REFRIGERATION UNIT	0	00	P	DCY		AIR FORCE	07200		P

ORGANIZATIONAL INSPECTIONS

	DAILY INSP		PREOP INSP		POSTOP INSP		PERIODIC INSP		MISS PROF CHG		TURNAROUND	
	M-H	ELAP	M-H	ELAP	M-H	ELAP	M-H	ELAP	M-H	ELAP	M-H	ELAP
	AD.dlyinmmh	AD.dlyinmet	AD.propimmmh	AD.propimet	AD.popinmmh	AD.popinmet	AD.prdinmmh	AD.prdinmet	AD.msprcmmh	AD.msprcmet	AD.trnaimmmh	AD.trnaimet
REQUIRED	.25	.25	.25	.25	.15	.15	.51	.51	1.00	1.15	.00	.00
CALC (ALL ROW VALUES)												
ACTUAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CA.taskcode	MAINTENANCE LEVEL		CREW/OP		MAX TIME		ANNUAL M-H PER END ITEM			M-H PER OPER HOUR		
	UNSC MAINT											
	M-H	ELAP	TO REPAIR		PCT	SCHED	UNSCHE	TOTAL	SCHED	UNSCHE	TOTAL	
	AC.uscmmmmh	AC.uscmmmetm	AC.mtlmxttr		AC.mtlvperc	AC.mtlvsamh	AC.mtlvuamh	CALC	AC.schmhph	AC.uscmhph	CALC	
REQUIRED	.00	.00	.00		.00	.0	.0	.0	.00	.00	.00	
CALC (ALL ROW VALUES)												
ACTUAL	.00	.00				.5	.0	.5	.00	.00	.00	

MAINTENANCE LEVEL	ORG		MAX TIME		ANNUAL M-H PER END ITEM			M-H PER OPER HOUR			
	UNSC MAINT										
	M-H	ELAP	TO REPAIR		PCT	SCHED	UNSCHE	TOTAL	SCHED	UNSCHE	TOTAL
REQUIRED	.00		.00		.00	.00	.00	.00	.00	.00	.00
ACTUAL	1.68	1.54				.00	5.1	5.1	.00	.00	.00

MAINTENANCE LEVEL	INT(F)		MAX TIME		ANNUAL M-H PER END ITEM			M-H PER OPER HOUR			
	UNSC MAINT										
	M-H	ELAP	TO REPAIR		PCT	SCHED	UNSCHE	TOTAL	SCHED	UNSCHE	TOTAL
REQUIRED	4.00	4.00	5.00		95	75.0	18.0	93.0	.02	.05	.07
ACTUAL	.69	.53	5.00		100	.0	1.9	1.9	.00	.00	.00

CALC	ACTUAL TOTALS FOR ALL MAINT LEVELS:	ANNUAL M-H	M-H PER OPER HOUR
		PER END ITEM	
SCHEDULED		0.5	0.00
UNSCHEDULED		7.0	0.00
TOTAL M-H PER END ITEM		7.5	0.00

Figure 3 – Format for LSA-003, Maintenance Summary

4.3 Maintenance Allocation Chart (LSA-004)

4.3.1 Introduction

The LSA-004 is a summary of the man-hour allocations by maintenance function and maintenance level. The Maintenance Allocation Chart (MAC) can be produced directly from the LSA-004, Maintenance Allocation Chart Summary.

The MAC is a list of equipment maintenance functions showing the maintenance level at which each maintenance task is authorized. The MAC is arranged in functional group code (FGC) sequence or in top-down, breakdown sequence in the logical order of disassembly. Additionally, the MAC documents the details of a system's maintenance plan. It is a list of equipment maintenance functions showing the maintenance level for the performance of maintenance functions on an identified end item or component.

Thus, the MAC identifies and authorizes specific maintenance functions (e.g., inspect, test, replace, repair, etc.) for each maintenance level to be performed. The MAC is arranged in functional group code sequence or in top-down, breakdown sequence in the logical order of disassembly which is also used by the Repair Parts and Special Tools List (RPSTL) in its order of assembly/subassembly listings. Also, the MAC establishes a time standard for each authorized maintenance function as a functional group entry, lists the tools and test equipment required for each maintenance function to the various maintenance levels, and contains supplemental instructions and explanatory notes for a particular maintenance function.

4.3.2 Associated Statutes, Regulations, Policy, Standards, Handbooks, and Data Item Descriptions

- MIL-STD-40051-2. States the technical data and instructions developed by the requirements of PSA/Logistics Product Data (LPD) and DoD Requirements for LPD, (including the MAC) are used as the baseline to prepare Technical Manuals (TMs). For equipment that does not have LPD data available, either a Preliminary Maintenance Allocation Chart (PMAC) or the MAC can be used as the baseline to prepare TMs.
- SAE TA-STD-0017A and MIL-HDBK-502A. The following activities are applicable. Activity D.1, Task Analysis.
- PSM Guidebook. States the Preliminary Maintenance Allocation Chart (PMAC) is required during the Definition Phase and the full Maintenance Allocation Chart is required during Development Phase. Note that the LSA-019 contains similar data to the PMAC.

4.3.3 Tailoring

Who: This summary is typically required as a deliverable to the U.S. Army. Other users may include: Commercial/Industry, All Armed Services, Program Executive Offices, Program Managers and Product Support Managers

What: During development, this summary should be used as an analysis tool to identify the man-hour allocations by maintenance function and level. U.S. Army Provisioners often use the LSA-004 summary for developing SMR codes. Additionally, during fielding, the MAC appears as Appendix B to organizational level maintenance manuals.

When: The data or summary may be delivered IAW DI-SESS-81758/DI-SESS-81759 via Contract Data Requirements List (CDRL). The data should be delivered as part of a LPD file as the contract specifies.

How: The data for the MAC is an output of Task Analysis (SAE TA-STD-0017A, Activity D.1).

Why: This summary is a key exit document in both the Definition Phase (PMAC) and Development Phase (MAC) phases of the life cycle. It is also the baseline to preparing a Maintenance Allocation Chart (MAC) for Technical Manuals.

4.3.4 Scope

The Maintenance Allocation Chart (MAC) is a summary consisting of four sections, three of which are obtainable from the logistics product data. Section I, Introduction, is "boiler plate" information developed IAW MIL-STD-40051-2. Sections II, MAC; III, Tool and Test Equipment Requirements; and IV, Remarks are produced as separate sections of this summary. The summary is provided in standard or aviation format IAW MIL-STD-40051-1 and MIL-STD-40051-2. It is used as source information for the final MAC contained in the organizational maintenance manual. Spacing between rows and columns is not critical on the draft MAC.

4.3.5 Selection Options

Mandatory: EIAC, Start LCN, LCN Type, Service Designator Code (Task Code, fourth position), and Draft/Proof/Aviation option

Optional: ALC, Stop LCN and UOC, LCN/Item Name Selection, Item Category Codes, Tool List option, Technical Manual Code, Display Option (LCN or TMFGC), and Technical Manual Designation (provided by requiring authority)