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MILITARY STANDARD

OPTIONAL SPARE PARTS, MAINTENANCE
AND INVENTORY SUPPORT OF
SPACE AND MISSILE SYSTEMS



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MIL-STD-1545 (USAF)

DEPARTMENT OF THE AIR FORCE
Washington, D. C. 20360

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CONTENTS

	Page
Paragraph 1. SCOPE	1
1.1 Purpose	1
1.2 Application	1
2. REFERENCED DOCUMENTS (Not Applicable)	1
3. DEFINITIONS	1
3.1 Spare Parts	1
3.2 Spare Parts Selection List (SPSL)	1
3.3 Priced Spare Parts List (PSPL)	1
3.4 Mission Equipment (ME)	1
3.5 Support Equipment (SE)	1
3.6 Repair	2
3.7 Overhaul	2
3.8 Modification	2
3.9 Days	2
3.10 Acronyms Used in this Standard	2
4. GENERAL REQUIREMENTS (Not Applicable)	2
5. DETAILED REQUIREMENTS	2
5.1 Spare Parts Selection	2
5.2 Spare Parts Acquisition	3
5.3 Inventory Management	3
5.3.1 Inventory Management Procedures	3
5.3.2 Critical-to-Launch Spare Parts Lists	4
5.4 Repair/Overhaul (Self-Support)	4
5.4.1 Procedures	4
5.4.2 Spare Parts Modification Program	4
5.5 Repair/Overhaul (Work Requests)	4
6. NOTES	5
6.1 Tailored Application	5
6.2 Data Requirements	5

1. SCOPE.

1.1 Purpose. This standard establishes procedures under which the contractor will provide spare parts, inventory and maintenance services for space and missile systems.

1.2 Application. This standard is applicable to space and missile systems, subsystems or equipment during Research Development Test Evaluation (RDTE) or preoperational phases. Contracts invoking this standard will specifically identify the appropriate portions thereof in the contract work statement. In no case will the entire standard be invoked contractually. This standard will be used when there is a requirement for one or a combination of the following:

a. A contractor is to recommend, and the Government is to approve spare parts requirements prior to procurement.

b. A contractor is to provide inventory services for management of a Government-owned spare parts inventory.

c. A contractor is to provide maintenance and repair services for Government property accountable to a contract.

2. REFERENCED DOCUMENTS (Not applicable)

3. DEFINITIONS

3.1 Spare Parts. The term spare parts includes assemblies, subassemblies, components, parts, repair kits and raw materials required or anticipated to be required as replacement of like items during operation, maintenance, repair or overhaul of Aerospace Vehicle Equipment (AVE), Mission Equipment (ME), Support Equipment (SE), or any other equipment identified as part of the contract including Government Furnished Property (GFP).

3.2 Spare Parts Selection List (SPSL) (DI-V-6180). A list of all spare parts including not to exceed prices the contractor recommends for procurement or fabrication or those items previously released for procurement or fabrication under interim release procedures when authorized under the terms of the contract. The SPSL is prepared and submitted as specified in the Contractor Data Requirements List (CDRL) appended to the contract.

3.3 Priced Spare Parts List (PSPL) (DI-V-6181). A list of all items and quantities in the approved SPSL and any approved revisions thereto, showing firm unit and total prices. This list, upon negotiation and acceptance of prices by the Government is contractually established as the Spare Parts Exhibit. The PSPL is prepared and submitted as specified in the CDRL appended to the contract.

3.4 Mission Equipment (ME). That configured equipment which is a functional part of a system that is required to perform mission operations and functions. It includes items such as aerospace vehicles, launch equipment, telemetry equipment, and ground tracking control and receiving equipment; but excludes support equipment.

3.5 Support Equipment (SE). Support equipment includes all equipment required to perform the support function, except that which is an integral part of the mission equipment. It does not include any of the equipment required to perform mission operations

MIL-STD-1545 (USAF)

functions. Support equipment should be interpreted as including tools, test equipment, Automatic Test Equipment (ATE) (when the ATE is accomplishing a support function), organizational, field, and depot support equipment, and related computer programs and software.

3.6 Repair. Partial disassembly, rework, assembly, adjustment and test of equipment and spare parts. Repair is normally accomplished at the test or launch site and includes such day-to-day maintenance as required.

3.7 Overhaul. Complete disassembly, cleaning, inspection, replacing or repairing of equipment, subassemblies, components and parts, reassembly, adjustment and testing of equipment, spare parts or components thereof, which have deteriorated or worn out. Overhaul is normally at the manufacturing facilities.

3.8 Modification. The physical alteration of equipment and spare parts to change their capabilities or characteristics. This includes any change or correction in structure, arrangement, equipment or accessories.

3.9 Days. The term "days" means calendar days.

3.10 Acronyms Used in this Standard.

- a. ACO - Administrative Contracting Officer
- b. ATE - Automatic Test Equipment
- c. AVE - Aeronautical Vehicle Equipment
- d. CDRL - Contract Data Requirement Test
- e. GFE - Government Furnished Equipment
- f. GFP - Government Furnished Property
- g. ME - Mission Equipment
- h. PCO - Procurement Contracting Officer
- i. PSPL - Priced Spare Parts List
- j. RDT&E - Research Development Test Evaluation
- k. SE - Support Equipment
- l. SPSL - Spare Parts Selection List

4. GENERAL REQUIREMENTS (Not Applicable)

5. DETAILED REQUIREMENTS

5.1 Spare Parts Selection. The contractor shall be responsible for developing a SPSL as required by the CDRL. In developing said listings the contractor shall:

- a. Assume that spare parts will be required for maintenance of contract items (after acceptance by the Government) and Government Furnished Equipment (GFP) for a period of time as specified in the contract.
- b. Ensure that the selection of spare parts, determination of quantities and internal distribution is based on the provision of adequate support at the lowest possible inventory level, to minimize obsolescence due to design changes and to minimize logistics deterrents to engineering changes.
- c. Ensure, where feasible (with particular emphasis on high cost and critical spare parts), that inventory costs are minimized by recommending stockage of parts and

MIL-STD-1545 (USAF)

components, and repair/overhaul and modification kits (relatively low cost items) in conjunction with a preplanned, flexible and expeditious repair, overhaul and modification program, as opposed to stocking assemblies, subassemblies and modules (relatively high cost items).

d. Recommend the utilization of existing assets. Where practical, equipment and parts that can be reclaimed from completed laboratory static and field tests shall be included as part of the SPSL.

e. When specifically authorized in the contract, identify DOD federally cataloged spare parts which may be available from DOD sources. When provided with excess lists of items in long supply within DOD activities, said lists shall be reviewed for applicability to the items being supported. When DOD parts meet the program reliability requirements they shall be included as a part of the SPSL. The fact that DOD parts are not available from DOD sources in time to meet required contractual dates does not relieve the contractor of his responsibilities to meet established program schedules. Therefore, in recommending spare parts be made available from DOD sources the contractor shall allow sufficient lead time to effect procurement/fabrication for nonavailable items.

5.2 Spare Parts Acquisition. The following procedures shall be used to provide spare parts to support contract articles identified in the contract:

a. Within twenty (20) days after receipt of an SPSL or revision thereto, the Procurement Contracting Officer (PCO) disapproves the SPSL or forwards to the contractor a written order for spare parts. The order will be issued on a Standard Form 30 (Amendment of Solicitation/Modification of Contract). Simultaneously with the spare parts order, funds will be obligated to cover the items ordered.

b. Upon receipt of said order the contractor shall either fabricate or procure the approved spare parts from other contractors, subcontractors, or vendors (using existing government qualified products listings).

c. As soon as firm prices have been established for the spare parts, but not later than sixty (60) days after receipt of an order, a PSPL shall be forwarded to the Administrative Contracting Officer (ACO) as specified in the CDRL appended to the contract. In no case shall the price of individual spare parts on the PSPL exceed the price of the spare parts on the preceding SPSL.

d. After the contractor and the ACO agree on the prices and delivery schedule for the spare parts as set forth in the PSPL, the listing shall be appended to the contract as a Spare Parts Exhibit by supplemental agreement. Additions or deletions to the Spare Parts Exhibit shall be in the manner prescribed above.

e. When specifically authorized in the contract schedule, the contractor may with ACO approval and subject to the dollar limitations on interim release set forth in the contract schedule, proceed to procure/fabricate essential quantities of spare parts prior to the receipt of an approved SPSL. Interim release may be exercised to meet critical scheduled event dates, projected work stoppage or other emergency conditions. Interim release authority shall terminate upon issuance of the first SPSL submitted after receipt of the contract.

5.3 Inventory Management:

5.3.1 Inventory Management Procedures. The contractor shall provide the necessary services and facilities to ensure proper handling, receipt, issue and storage of spare

MIL-STD-1545 (USAF)

parts procured by or delivered to the contractor in support of the contractual effort. The contractor shall develop internal working procedures which encompass the following requirements.

a. Inventory levels shall be programmed to vary with anticipated utilization. Shipments in advance of estimated requirements will not be made except when it is clearly in the best interest of the program to do so.

b. Maximum utilization shall be made of existing assets. Where practical, equipment and parts will be reclaimed from completed laboratory, static, field or flight testing. The equipment or parts will be repaired/overhauled or modified to a suitable condition for use in support of tests or support tasks. Only those spare parts which are dimensionally and functionally interchangeable with production units will be selected for reclamation.

c. Stock levels shall be minimized by economical reliance on repair, overhaul and modification of available assets. Repair, overhaul and modification turn-around time will be a prime determinant in establishing the minimum stock level for each item. Spare parts repaired or overhauled are subject to the same serviceability, reliability and quality requirements as new production equivalents.

5.3.2 Critical-to-Launch Spare Parts Lists. Contractors providing spare parts support to launch programs shall develop and maintain listings of "critical-to-launch" spare parts showing quantities required and available at launch sites during the 30-day period prior to scheduled launch Status reports of "critical-to-launch" spare parts (U) DI-L-30314 shall be submitted as authorized by the CDRL appended to the contract.

5.4 Repair/Overhaul (Self-Support). The contractor shall provide the necessary services and facilities to accomplish repair, modification and overhaul as required for all end items, spares and GFP included as part of the contract.

5.4.1 Procedures. Repair or overhaul and subsequent acceptance testing shall be in accordance with the contractors established overhaul and repair procedures and applicable Configuration Item (CI) specification in effect at the time component was originally accepted by the Government including subsequently approved modifications thereto or as directed by the PCO. Repair/overhaul may be accomplished at test and launch sites or at contractor's, subcontractor's or vendor's plants as determined by the contractor.

5.4.2 Spare Parts Modification Program. The contractor shall establish a spare parts modification program as necessary to assure the continued compatibility of spare parts design with configuration of the equipment. Cost of spare parts modification shall be subject to separate negotiation in conjunction with negotiation of costs of equipment configuration changes.

5.5 Repair/Overhaul (Work Requests). The contractor shall provide the necessary services and facilities to accomplish repair as required for all contract items, spare parts and GFP included as part of the contract. In the event the equipment requires overhaul, said overhaul shall be performed in accordance with the Work Requests clause cited in the contract. Repair or overhaul and subsequent acceptance testing shall be in accordance with the contractors established overhaul and repair procedures and applicable CI specifications in effect at the time each contract item was originally accepted by the Government including such approved modifications thereto or as directed by the PCO.

MIL-STD-1545 (USAF)

6. NOTES

6.1 Tailored Application. The cost of imposing each requirement of this standard shall be evaluated against the benefits that will be realized. Provisions (sections, paragraphs or sentences) not required for the specific application should be excluded.

a. Paragraph 5.2 will be cited as a separate line item in the contract schedule when acquisition of spare parts is a contractual requirement (Ref ASPR 20-30).

b. Paragraphs 5.4 and 5.5 contain alternative procedures for repair/overhaul. In no case will both of these paragraphs be cited in the contract.

6.2 Data Requirements. Data requirements of this standard shall not be prepared or delivered to the purchasing office unless specified by the CDRL. The data normally required for delivery under this standard includes:

- a. DI-L-30314, Critical to Launch Spares Report. (formerly (U) L-681-SAMSO)
- b. DI-V-6180, Recommended Repair Parts List (RRPL) Preoperational.
- c. DI-V-6181, Repair Parts/GSE Price List.

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