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NASA Procedural Requirements

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Responsible Office: Office of Procurement

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Chapter 1. Policy

1.1 Goal

The Spare Parts Acquisition Policy establishes a uniform policy for the acquisition and provisioning of NASA spare parts.

1.2 definitions

1.2.1 BREAKOUT: Breakout means the purchase of spare parts, either by the Government or a contractor, directly from the original equipment manufacturer (OEM) or another source close to the original manufacturer. The goal of breakout is to eliminate any added costs that can be incurred because of subcontractor tiers, when no value added or enhancements are made. Breakout is best used on reprocurments or replenishing initial spare stock levels to the probability of sufficiency as determined from history.

1.2.1.1 Excluded from breakout are situations where the prime contractor has an existing contract in place and the cost of the part is lower by purchasing it through a prime contractor rather than generating a new contract with OEM.

1.2.1.2 Value added means that the part, subassembly, or subsystem is enhanced by the addition or inclusion of a necessary capability or function. Enhancement may involve a physical change in the part, subassembly, or subsystem, or additional testing.

1.2.2 INITIAL PROVISIONING: Initial provisioning means the process by which a list of proposed spare parts and related purchase quantities is developed (usually by the major system prime contractor) and submitted to the Government for consideration. This list is generally based on use of Logistics Support Analysis or supportability assessments per MIL-HDBK-502. NASA makes the initial purchase and inventory-stocking decisions to acquire the spare parts necessary to maintain the major system in its early phases of operation. Initial provisioning shall be done as part of the original major system acquisition.

1.2.2.1 The determinants evaluated include probable future acquisition method, technical data needed, and probabilistic equations using parameters such as predicted/designed mean-time-between-failure, repair turnaround time, and predicted/designed consumption rate.

1.2.2.2 This strategy is best used on major developments of new technology with high quantity end items and long sustained production runs. Generally, high quantity is in excess of 50 end items, e.g., 50 airplanes built over a period of 7 or more years. The intent is to provide a limited number of spares to support an initial period of time and allow the system to mature and then adjust spares stock levels based on usage data. This strategy also eliminates the risk of large quantities of spares becoming obsolete due to design changes made to correct deficiencies during this initial period. Note: Generally, production spares are used to cover any development testing that is part of the Design, Development, Test and Evaluation phase, and initial provisioning is for operational use.

1.2.3 INITIAL PROVISIONING PERIOD: Initial provisioning period means a specified length of time with a finite end consisting of an operational test and evaluation and an initial operational period.

1.2.4 LIFE OF TYPE BUYS: Life of type buys means to execute lot procurements of the total quantity of spares needed to support a system/subsystem for its intended operational life based on predicted demand rates. Life of type procurements are used on limited production programs due to obsolescence or where vendors are closing production lines. These are one-time purchases of hardware with no plan to reprocur these items later in the program's life cycle. Programs will rely on repair capabilities to sustain the equipment throughout its intended life.

1.2.5 REPLENISHMENT: Replenishment means the process of pricing, ordering, and stocking spare parts needed to maintain or repair a major system over its life based upon the initial provisioning list and usage patterns established during the initial provisioning period. Replenishment begins when the initial provisioning period ends. Either the Government or a designated contractor, where it has proven to be cost effective, may accomplish replenishment.

1.2.6 SPARE PART: Spare part means a replacement part (reparable or expendable supplies) purchased for use in the maintenance of systems such as aircraft, launch vehicles, spacecraft, satellites, ground communication systems, ground support equipment, and associated test equipment. It can include line-replaceable units, orbit replaceable units, shop-replaceable units, or piece parts used to repair subassemblies.

1.2.7 SPARES ACQUISITION INTEGRATED WITH PRODUCTION (SAIP): SAIP means consolidating spare part buys along with the end item initial production procurements and manufacturing. The goal of SAIP is to reduce spares costs by using concurrent procurements. Spares material buys are consolidated with the end item production material buys, which reduces costs by increasing volume. This approach requires early identification and acquisition of spare parts during the production phase.

NASA's policy is to support its major systems by applying sound management and engineering judgment in selecting and acquiring spare parts, determining the quantities of spare parts necessary for major systems, and acquiring spare parts at fair and reasonable prices consistent with program needs. While the lowest cost is certainly a factor upon which to acquire spare parts, it is not the only factor. The quality of a part and the fact that it meets minimum specified parameters is also a critical factor. To the maximum extent practicable, NASA major systems program managers shall use breakout and competitive procurement of spare parts, with particular emphasis on procurement of replenishment parts.

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