DoD Manual 4140.01, Volume 1

DoD Supply Chain Materiel Management Procedures: Operational Requirements

Originating Component: Office of the Under Secretary of Defense for Acquisition and Sustainment

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Approved by: Robert H. McMahon, Assistant Secretary of Defense for Sustainment

Purpose: This manual is composed of several volumes, each containing its own purpose. In accordance with the authority in DoD Directive 5134.12 and the July 13, 2018 Deputy Secretary of Defense Memorandum:

- The manual:
  - Implements policy, assigns responsibilities, and provides procedures for DoD materiel managers and others who work within or with the DoD supply system consistent with DoD Instruction 4140.01.
  - Establishes standard terminology for use in DoD supply chain materiel management.
- This volume prescribes procedures for DoD supply chain management (SCM) processes dealing with DoD supply chain operational requirements.
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SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY. This issuance applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this issuance as the “DoD Components”).
SECTION 2: RESPONSIBILITIES

2.1. ASSISTANT SECRETARY OF DEFENSE FOR SUSTAINMENT. Under the authority, direction, and control of the Under Secretary of Defense for Acquisition and Sustainment, the Assistant Secretary of Defense for Sustainment establishes procedures for DoD SCM processes dealing with DoD supply chain operational requirements.

2.2. DOD COMPONENT HEADS. The DoD Component heads implement the procedures prescribed in this volume and ensure that DoD Component supplemental guidance and procedures are in accordance with DoDI 4140.01 and this volume.
SECTION 3: SCM STRATEGIES

3.1. ELEMENTS OF SCM STRATEGIES. The DoD Components:

   a. Structure materiel management to provide responsive, consistent, secure, and reliable support to the warfighter during peacetime and war.

   b. Establish end-to-end processes focused on achieving warfighter readiness goals and meeting customer needs in the most efficient way possible within the bounds of acceptable risk, including security risk.

   c. Provide best-value materiel and services to support rapid power projection and operational sustainment of U.S. forces as required by the National Military Strategy.

   d. Use the supply chain operational reference processes of “plan,” “source,” “make and maintain,” “deliver,” and “return” as a framework for developing, improving, and conducting materiel management activities.

   e. Consider all life-cycle costs associated with materiel management; including acquisition, distribution, transportation, storage, maintenance, repair, protection, and disposal costs.

   f. Identify a dominant supply chain strategy from supply chain characteristics and apply the strategy consistently for a given type of item, commodity, class, customer, or supplier.

   g. Perform supply chain risk management (SCRM) by employing strategies to identify, assess, and mitigate potential supply chain risks, to include disruptions:

      (1) Within the DoD supply chain (e.g., terrorism, cyber threats, attacks, insufficient quality, unreliable suppliers, imbedded threats or access points, machine break-down, uncertain demand, obsolescence, vulnerability from interruptions and interdiction of supplies, including fuel and electric power).

      (2) Outside the DoD supply chain (e.g., flooding, terrorism, cyber threats, attacks, labor strikes, natural disasters, large variability in demand).

   h. Reduce exposure to potential SCRM-identified disruptions by:

      (1) Monitoring the supply chain to provide as much early warning as possible.

      (2) Mitigating the effects of problems that do occur.

   i. Maintain records and documentation for purposes of audits prescribed in this manual.

   j. Protect DoD missions by implementing materiel management procedures that prevent the introduction of unauthorized or counterfeit materiel.
k. Provide safe, counterfeit-free, authentic materiel through DoD materiel management processes, programs, and systems.

l. Apply operations security to protect critical information throughout SCM processes in accordance with DoD Directive 5205.02E.

3.2. COLLABORATION. Supply support providers will work collaboratively with customers to ensure a common understanding of requirements that considers and controls all acquisition and sustainment life-cycle costs and minimizes total costs to the maximum extent practical.
SECTION 4: SCM PROCESSES

4.1. OPERATIONAL REQUIREMENTS PROCESSES. Supply chain operational requirements align with the following processes:

a. Demand and supply planning.

b. Materiel sourcing and acquisition.

c. Materiel production and maintenance.

d. Materiel delivery.

e. Materiel returns and disposition.

4.2. DEMAND AND SUPPLY PLANNING. The DoD Components will:

a. Conduct demand and supply planning to optimize the use of DoD supply chain resources in meeting established support strategies and collaborate between supply support providers and their customers. Volume 2 of this manual prescribes procedures for demand and supply planning.

b. Establish secondary item inventories that minimize total DoD supply chain costs while meeting peacetime, war, and other high tempo requirements.

4.3. MATERIEL SOURCING AND ACQUISITION. The DoD Components will perform materiel sourcing and acquisition, manage sourcing infrastructure, and apply total life-cycle support management to supply chain materiel management. The DoD Components will adopt and adapt best commercial business practices to increase supply chain performance and reduce total life-cycle systems cost. Volume 3 of this manual prescribes procedures for sourcing and acquiring materiel.

4.4. MAKE AND MAINTAIN MATERIEL. The DoD Components will optimize the relationships between materiel managers and commercial sources of supply through production, manufacturing, repair, modification, overhaul, and testing functions at organic or private sector facilities or through public and private partnerships at those facilities. Volume 4 of this manual prescribes procedures for making and maintaining materiel.

4.5. MATERIEL DELIVERY. The DoD Components will manage requisitions, orders, distribution depots and other storage locations, and transportation networks and other delivery infrastructure in order to provide responsive, secure, and reliable materiel support to DoD supply chain customers. Volume 5 of this manual prescribes procedures for DoD supply chain materiel.
management processes dealing with materiel delivery and storage operations, including physical inventoring.

4.6. MATERIEL RETURNS AND DISPOSITION. DoD Components will administer customer returns of defective or discrepant materiel, excess materiel, and materiel requiring maintenance, repair, or overhaul. Volume 6 of this manual prescribes procedures for returning materiel to the retail or wholesale supply system, determining materiel disposition, and disposing excess, surplus, and foreign excess personal property. DoD Components will:

   a. Use serviceable materiel on hand to the extent practicable:
      
      (1) Before procuring duplicate materiel.
      
      (2) Before disposal of materiel as excess.
      
      (3) Prior to repairing unserviceable items.

   b. Dispose of materiel in contingency operations in accordance with the warfighter’s mission and in the best interest of the U.S. Government, using sustainability principles.

   c. Develop, apply, and maintain life-cycle management controls to detect, remediate, and determine appropriate disposition of counterfeit materiel within the DoD supply chain, in accordance with DoDI 4140.67 and DoDI 4140.01.
**SECTION 5: SCM BEST PRACTICES**

5.1. BEST PRACTICE REQUIREMENTS.

a. The DoD Components will continually monitor and adopt or adapt emerging business practices that provide best-value by securing materiel and services, improving DoD supply chain performance, and reducing total life-cycle systems cost.

b. When developing new processes, the DoD Components will align decision authority and responsibilities with the organization best positioned to analyze and make decisions from a total systems perspective, while collaborating with other stakeholders.

5.2. ITEM LIFE-CYCLE MANAGEMENT.

a. Life-Cycle Requirements.

   (1) DoD Component use weapon system life-cycle management requirements in DoDI 5000.02 and item life-cycle management requirements in this volume.

   (2) The DoD Components will accomplish item life-cycle management requirements that span three life-cycle phases: item introduction in paragraph 5.2.b, item sustainment in paragraph 5.2.c, and item end of life in paragraph 5.2.d. DoD Components may elect to have additional phases that are subordinate to the three general phases for their own internal management.

   (3) Materiel managers should assign and maintain item life-cycle indicators as aids in forecasting and setting inventory requirements levels through the life of the items they manage.

b. Item Introduction.

   (1) The DoD Components will introduce new items to the supply system as: part of a weapon system acquisition program; replacements for existing items; or part of a transition from contractor logistics support (CLS) to organic support.

   (2) For new items entering the supply system as part of a weapon system acquisition program, DoD Components will:

      (a) Initiate item introduction requirements with provisioning and end item introduction requirements when the items move from provisioning to sustainment in accordance with Volume 2 of this manual and DoDI 5000.02. Refer to Volume 1 of DoD Manual (DoDM) 4140.26 for procedures on item management coding and logistics assignment of consumable items.

      (b) Initiate provisioning when the DoD decides to commit resources to developing the program. Complete provisioning before initiating program full deployment as shown in Figures 2 and 4 of DoDI 5000.02.
(c) Perform provisioning cataloging and item classification coding in accordance with Volume 2 of this manual.

(d) Acquire item initial spares that support demand through the item’s demand development period in accordance with Volume 2 of this manual.

(e) Provide item data needed for weapon system product support in accordance with Volume 7 of this manual.

(3) For items entering the supply system as replacements for existing items, DoD Components will:

(a) Initiate item introduction requirements before the new item is scheduled for phase in and the old item is no longer in the supply system.

(b) Expedite actions to minimize the impact of the new item’s introduction on DoD acquisition and logistics support efforts and readiness.

(c) In accordance with Volume 9 of this manual, perform item reduction studies on items being replaced. These studies are intended to control the cost of maintaining those items by determining if they should be grouped in interchangeability and substitutability families with their replacement items, or subject to phase-out.

(d) Make sourcing decisions in accordance with Volume 3 of this manual.

(e) Catalogue and code items in accordance with the provisioning and item classification procedures in Volume 2 of this manual.

(4) For items entering the supply system as part of a transition from CLS to organic support, DoD Components will:

(a) Initiate item introduction requirements before phasing in items to organic support, and end item introduction requirements when items are supported organically.

(b) Perform all item cataloging and coding procedures in accordance with the provisioning and item classification procedures in Volume 2, before initiating phase-in, if possible.

(c) If CLS includes government ownership of contractor-managed inventory, transfer physical custody as part of the phase-in.

(d) If CLS does not include government ownership of contractor-managed inventory, acquire initial item spares in accordance with Volume 2 of this manual.

c. Item Sustainment.

(1) When managing items in the sustainment phase, materiel managers will:
(a) Collaborate with program managers and system engineers on changes to item usage evolving from weapon system enhancements, engineering change requests, diminishing manufacturing sources and materiel shortages, and system retirements.

(b) Inspect item codes for accuracy in accordance with Volume 2 of this manual.

(c) Set goals for inventory requirements and compute requirements in accordance with Volume 2 of this manual.

(d) Maintain item catalog data in accordance with the Federal Logistics Information System (FLIS) procedures in DoDM 4100.39.

(2) When changing management of items in the sustainment phase, DoD Components will:

(a) Follow the procedures in Volume 4 of DoDM 4140.26 when transferring consumable items from a Military Service to the Defense Logistics Agency (DLA) or the General Services Administration (GSA).

(b) Follow the procedures in DoDM 4140.68 when changing an item management code for a reparable item or adopting a reparable item. Maintain item catalog data in accordance with DoDM 4100.39.

d. Item End of Life.

(1) The DoD Components will remove any items from their supply systems that no longer have an application because the end item the item supports is being phased out or because the item itself is obsolete and being replaced. When removing and phasing out an item, DoD Components will:

(a) Follow DoD Item Reduction Program procedures in accordance with Defense Standardization Program Office Standardization Directory 23 and Volume 9 of this manual to ensure that the item is removed and not retained in an interchangeability and substitutability family.

(b) Follow the DLA’s FLIS Technical Procedures to identify the acquisition advice code (AAC) that indicates the item is terminal.

1. Use AAC “V” for items with assets in stock and AAC “Y” for items with no assets in stock.

2. Restrict procurement of AAC “V” and “Y” items.

3. Repair unserviceable assets for AAC “V” items only on-demand and if cost-effective.

(2) DoD Components will follow the procedures in Volume 3 of DoDM 4160.28 when disposing of items with demilitarization requirements. For DLA-managed items, the Military
Services will provide demilitarization codes for each item application. DLA will use the highest code in the event one item has more than one code.

(3) When phasing out an item as part of retiring a weapon system, DoD Components will adjust item forecasts and item requirements to account for reductions in end item quantities in accordance with Volume 2 of this manual. To enable DLA to adjust forecasts and item requirements for DLA managed items, the Military Services will notify DLA’s Weapon System Support program and cognizant DLA inventory control points that a weapon system is being phased out and share the system retirement date as soon as known.

(4) DoD Components will:

(a) Identify items with no demand in 10 or more years as potentially inactive items subject to review in accordance with item reduction procedures in Volume 9 of this manual.

(b) Use item reduction reviews to determine if an item’s registered user or materiel manager has an authorized requirement or contingency reason for retaining the item.

(c) Conduct item reduction reviews every three years to ensure that inactive items are removed from the DoD supply system.

(d) Consider stratifying inactive items in accordance with the procedures in Volume 6 of this manual.

(5) If a DoD Component does not find that a registered user for an item for three years or more, the inactive item will be subject to removal from the supply system in accordance with the procedures in Volume 6 of this manual.

5.3. TECHNOLOGIES. The DoD Components will implement modern business practices, processes, and technologies, such as enterprise resource planning, automatic identification technology, automated planning system, and materiel requirements planning. The DoD Components will maintain materiel control and visibility of the secondary inventory down to, and including, retail inventories. Refer to Volume 7 of this manual for the procedures for supporting technologies.

5.4. ACCOUNTABILITY. The DoD Components will:

a. Provide for item level accountability in accordance with Volume 11 of this manual.

b. Provide unique item level traceability for all items meeting the criteria established by DoDI 8320.04 and Volume 11 of this manual.

c. Ensure all applicable safety and security measures are incorporated when managing materiel in the DoD supply chain.
d. Participate in the Joint Small Arms and Light Weapons Coordinating Group in accordance with the procedures in Volume 11 of this manual.

5.5. **SALES AND OPERATIONS PLANNING.** The DoD Components will establish a business management decision framework to produce and use a balanced and actionable demand and supply plan in accordance with the procedures in Volume 12 of this manual.
GLOSSARY

G.1. ACRONYMS.

AAC  acquisition advice code
CLS  contractor logistics support
DLA  Defense Logistics Agency
DoDI  DoD instruction
DoDM  DoD manual
FLIS  Federal Logistics Information System
GSA  General Services Administration
SCM  supply chain management
SCRM  supply chain risk management

G.2. DEFINITIONS. These terms and their definitions are for the purposes of this volume and will serve as standard terminology for DoD supply chain materiel management.

AAC. A single digit alphabetic code indicating how and under what restrictions an item will be acquired.

accountability. The obligation imposed by law, lawful order, or regulation; and accepted by an organization or person, for keeping accurate records to ensure control of property, documents, or funds, with or without physical possession. The obligation, in this context, refers to the fiduciary duties, responsibilities, and obligations necessary for protecting the public interest; however, it does not necessarily impose personal liability upon an organization or person.

acquisition. Obtaining logistics support, supplies, or services under an acquisition agreement or under a cross-servicing agreement. This includes purchasing (whether for payment in currency, replacement-in-kind, or by exchange for equal value), renting, leasing, or any method of temporarily obtaining logistics support, supplies, or services.

counterfeit materiel. Defined in DoDI 4140.67.

critical component. Defined in DoDI 5200.44.

customer. An organization or end user that consumes materiel through the DoD supply chain.
**Defense Logistics Manual.** A set of manuals that prescribe logistics management responsibilities, procedures, rules, and electronic data communications standards for use in the DoD to conduct logistics operations in functional areas such as supply, maintenance, and finance.

**demand.** An indication of a requirement, a requisition, or similar request for an item of supply or individual item. Demand is categorized as either recurring or non-recurring.

**end-to-end.** All stages of the DoD supply chain.

**excess.** Materiel at a retail supply activity that is excess to that activity's requirements and is subject to return to the wholesale materiel manager, redistribution within the DoD supply chain, or disposal by DLA Disposition Services.

**Federal Catalog System.** A federal program administered by the DoD in conjunction with the GSA. It names, describes, classifies, and numbers each item repetitively used, bought, stocked, or distributed by the Federal Government so that only one distinctive combination of letters or numerals (or both) identifies the same item throughout the Federal Government.

**FLIS.** The comprehensive government-wide system used to catalog, assign stock numbers, and maintain and disseminate logistics information for items of supply. FLIS represents the common data system that provides the supply item data reflected in the Federal Catalog System.

**inactive item.** An item without a wholesale demand in the last five years for which no current or future requirements are anticipated by any registered user or the materiel manager.

**interchangeability and substitutability family.** A group of items that possess physical and functional characteristics to provide comparable performance for a given requirement under given conditions. This applies when two or more items have an interchangeability and substitutability relationship with another. The head of the family is called the master item, i.e., an item with an interchangeability and substitutability relationship with every member of the family.

**inventory.** Materiel, titled to the U.S. Government, held for sale or issue, held for repair, or held pending transfer to disposal.

**life-cycle.** The total phases through which a system or an item passes from the time it is initially developed until the time it is either consumed in use or disposed of as being excess to all known materiel requirements.

**life-cycle cost.** The total cost to the U.S. Government of acquiring and owning a system or an item over its useful life. It includes the cost of developing, acquiring, supporting, and disposing of it.

**logistics.** Procurement, maintenance, and transportation of military materiel and personnel to include organizing, supplying, equipping, training, servicing, mobilizing, demobilizing, administering, and maintaining forces; constructing, outfitting, and repairing military equipment;
constructing, maintaining, and repairing buildings, structures, and utilities; and acquiring, managing, and disposing of real property or natural resources.

**materiel.** All items necessary to equip, operate, maintain, and support military activities without distinction as to their application for administrative or combat purposes, excluding real property, installations, and utilities. Materiel is either serviceable (i.e., in an issuable condition) or unserviceable (i.e., in need of repair to make it serviceable).

**materiel management.** The phase of military logistics that includes managing, cataloging, demand and supply planning, requirements determinations, procurement, distribution, overhaul, and disposal of materiel.

**materiel manager.** Any DoD organization or Defense Agency that has been assigned materiel management responsibilities for the DoD and participating federal agencies. The term includes responsibilities performed by either wholesale materiel managers or retail materiel managers. Those responsibilities include managing, cataloging, demand and supply planning, determining and defining requirements, and performing activities such as procurement, distribution, overhaul and repair of reparable materiel, and disposal of materiel.

**nuclear weapons-related materiel.** Classified or unclassified assemblies and subassemblies (containing no fissionable or fusible material) identified by the Military Departments that comprise or could comprise a standardized war reserve nuclear weapon (including equivalent training devices) as it would exist once separated or removed from its intended delivery vehicle. A delivery vehicle is the portion of a weapon system that delivers a nuclear weapon to its target. This includes cruise and ballistic missile airframes as well as delivery aircraft.

**organic.** The capability of a Military Service or a Defense Agency to sustain logistics operations through U.S. Government organizational structures.

**personal property.** All property (systems, equipment, materials, and supplies) except for real property (land and improvements to land (e.g., facilities)) and records of the Federal Government.

**power projection.** The capacity to rapidly and effectively deploy and sustain forces in order to apply all or some element of military power.

**requisition.** An order for materiel initiated by an established, authorized organization (i.e., a DoD or non-DoD organization that has been assigned a DoD activity address code) that is transmitted either electronically, by mail, or by telephone. The order may be submitted to a supply source within the DoD or external to the DoD (GSA, the Federal Aviation Administration, or other organizations assigned management responsibility for categories of materiel). Orders must be submitted according to procedures specified in Defense Logistics Manual 4000.25-1 and Defense Logistics Manual 4000.25, Volume 2.

**retail.** Level of inventory below the wholesale level, either at the consumer level for the purpose of directly providing materiel to ultimate users or at the intermediate or region level for the purpose of supplying consumer levels or ultimate users in a geographical area.
SCM. Meeting customer-driven materiel requirements through the acquisition, maintenance, transportation, storage, and delivery of materiel to customers, and managing materiel returns, movement of reparable materiel to and from maintenance facilities, and ensuring the exchange of information among customers, maintainers, supply chain managers, and suppliers.

SCRM. The process for managing risk by identifying, assessing, and mitigating threats, vulnerabilities, and disruptions to the DoD supply chain from beginning to end, to ensure mission effectiveness. Successful SCRM maintains the integrity of products, services, people, and technologies, and ensures the undisrupted flow of product, materiel, information, and finances across the life-cycle of a weapon or support system. DoD SCRM encompasses all subsets of SCRM, such as cybersecurity, software assurance, obsolescence, counterfeit parts, foreign ownership of sub-tier vendors, and other categories of risk that affect the supply chain.

secondary item. An item of supply that is not defined as a principal item and includes reparable components, subsystems and assemblies, consumable repair parts, bulk items and material, subsistence, and expendable end items, including clothing and other personal gear.

supplier. Organic or commercial sources for items of supply.

supply chain. The linked activities associated with providing materiel to end users for consumption. Those activities include supply activities (such as organic and commercial inventory control points or retail supply activities), maintenance activities (such as organic and commercial depot level maintenance facilities or intermediate repair activities), and distribution activities (such as distribution depots and other storage locations, container consolidation points, ports of embarkation and debarkation, and ground, air, and ocean transporters).

supply support provider. Any organization responsible for providing supply support.

sustainability. Principles that create and maintain conditions under which humans and nature can exist in productive harmony and that permit fulfilling social, economic, and other requirements of present and future generations.

sustainment. For purpose of materiel management, the life-cycle phase for an item of supply that deals with the planning and execution of materiel management activities starting when the item is introduced into the DoD supply system and ending when a determination is made to remove the item from the DoD supply system.

wholesale. The highest level of organized DoD supply that procures, repairs, and maintains stocks to resupply the retail levels of supply. Synonymous with wholesale supply, wholesale level of supply, wholesale echelon, and national inventory.
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