FM 10-27

GENERAL SUPPLY IN THEATERS OF OPERATIONS

HEADQUARTERS, DEPARTMENT OF THE ARMY

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FIELD MANUAL
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HEADQUARTERS
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GENERAL SUPPLY IN THEATERS OF OPERATIONS

TABLE OF CONTENTS

Page

PREFACE vi

CHAPTER 1. SUPPLYING THE THEATER OF OPERATIONS

Section I. PRE-WAR SUPPLY SUPPORT 1-1
War Reserve Stocks 1-1
Pre-Positioned Materiel Configured to Unit Sets 1-2
Initial Preplanned Supply Support 1-2
Host-Nation Support 1-2
Transition to War 1-3

Section II. SUPPLY SUPPORT DURING SUSTAINED OPERATIONS 1-4
Wartime Supply Stockage Levels 1-4
Direct Support System 1-4
Sealift and Containerized Surface Distribution 1-5
Rail Networks and Inland Waterways 1-6
Air Delivery of Supplies 1-6
Ground Movement of Supplies 1-7

Section III. SUPPLY SUPPORT FOR DIFFERENT TACTICAL OPERATIONS 1-9
Airland Battle Doctrine 1-9
Covering Force Operations 1-9
Close Battle Area Operations 1-10
Rear Operations 1-10
Contingency Force Operations 1-11
Special Operations 1-11
Air Assault Operations 1-12
Airborne Operations 1-13
Low-Intensity Conflict 1-14

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Page

Retrograde Operations 1-15
Deep Operations 1-15
Heavy-Light and Light-Heavy Operations 1-16

Section IV. SUPPLY SUPPORT OF OPERATIONS IN DIFFERENT ENVIRONMENTS 1-16
Nuclear, Biological, and Chemical Operations 1-16
Smoke Operations 1-18
Night Operations 1-18
Urban Operations 1-19
Desert Operations 1-20
Counterguerrilla Operations 1-21
Jungle Operations 1-22
Amphibious Operations 1-23
Cold Weather and Mountain Operations 1-24

CHAPTER 2. MANAGING GENERAL SUPPLY SUPPORT

Section I. MANAGERS AND MANAGEMENT OBJECTIVES 2-1
General Supply Item Managers 2-1
Secondary Items Management 2-1
Supply Stockage Objectives 2-1
Supply Performance Objectives 2-1
Direct Support System and Air Lines of Communication 2-2

Section II. REQUIREMENTS FOR GENERAL SUPPLIES 2-4
Reorder Point 2-4
War Reserve Requirements 2-4
Consumption Rates and Planning Factors 2-4
Supply and Storage Requirements 2-5

Section III. SUPPLY SUPPORT SYSTEMS 2-5
Direct Support Unit Standard Supply System Supply Support 2-5
Standard Army Intermediate Level Supply Subsystem Support 2-6
Standard Property Book System - Redesigned 2-7
Standard Army Retail Supply System Supply Support 2-7
Automated Backup Procedures 2-7
Manual Supply Support 2-8
Wartime Property Accountability 2-9

Section IV. SUPPLY ASSISTANCE 2-9
Logistics Intelligence File 2-9
Supply Assistance Request 2-9

Page

Management Information Research Assistance Center 2-9
Remote Terminal Access Inquiry System 2-10

CHAPTER 3. PROVIDING CLASS II, III PACKAGED, AND IV SUPPLIES

Section I. MANAGEMENT 3-1
Issue Controls 3-1
Mobility Constraints 3-1
Clothing and Textile Repair Constraints 3-1
Procurement 3-1

Section II. CLASS II SUPPLY REQUIREMENTS 3-2
Clothing, Individual Equipment, Tentage, and
Administrative and Housekeeping Supplies 3-2
Basic and Operational Load Requirements 3-3
Inventory Requirements 3-3

Section III. MAP SUPPLY SUPPORT 3-4
Initial Issue 3-4
Theater Reserve Stocks 3-4
Requirements 3-4
Requisition Procedures 3-5
Requisition and Distribution Flow 3-6

Section IV. CLASS IV SUPPLY REQUIREMENTS 3-6
Construction and Barrier Materials 3-6
Basic and Operational Load Requirements 3-7
Inventory Requirements 3-7

Section V. DISTRIBUTION OF CLASS II AND IV SUPPLIES 3-7
Distribution of Class II Items 3-7
Distribution of Class IV Items 3-8
Theater Sources of Class II and IV Items 3-8
Supply Points 3-8
Clothing Exchange Sources 3-9
Salvage Collection Points 3-9
Theater Requisition and Distribution Flow 3-10
Automatic Return Items 3-13

Section VI. STORAGE AND DISTRIBUTION OF CLASS III PACKAGED SUPPLIES 3-13
Theater Sources 3-13
Theater Requisition and Distribution Flow 3-13
Receipt Procedures 3-14
Storage Procedures 3-14

Section VII. LIQUID AND COMPRESSED GASES 3-16
Requirements 3-16
Supply Source 3-16

Page

Hazards 3-16
Identification Markings 3-16
Storage and Handling Precautions 3-17

CHAPTER 4. PROVIDING CLASS VII SUPPLIES

Section I. MANAGEMENT 4-1
Major Items Management 4-1
End Item Usage Profiles 4-1
Class VII Losses 4-1
Wartime Replacement Factors 4-2
Weapons Systems Replacement 4-2
Operational Readiness Float 4-2

Section II. CLASS VII SUPPLY REQUIREMENTS 4-3
Major End Items 4-3
Inventory Requirements 4-3

Section III. DISTRIBUTION OF CLASS VII SUPPLIES 4-4
Theater Sources 4-4
Theater Requisition and Distribution Flow 4-4

CHAPTER 5. PROVIDING CLASS IX SUPPLIES

Section I. MANAGEMENT 5-1
Importance of Repair Parts 5-1
Automated Support 5-1
Zero Balance 5-1

Section II. AUTHORIZED STOCKAGE AND PRESCRIBED LOAD LISTS 5-2
The Authorized Stockage List 5-2
Authorized Stockage List Item Stockage Criteria 5-2
Authorized Stockage List Changes 5-2
Standardized Combat Authorized Stockage List 5-2
Standardized Combat Prescribed Load List 5-3
Prescribed Load List Stockage Levels 5-3
Records of Demands 5-3
Prescribed Load List Changes 5-3

Section III. SOURCES OF REPAIR PARTS 5-4
Shop Supply 5-4
Quick Supply Store 5-4
Cannibalization 5-5
Controlled Exchange 5-5
Supply Requests 5-6

Page

Section IV. REQUISITIONS AND DISTRIBUTION 5-7
Divisions 5-7
Corps, Separate Brigades, and Regiments 5-9
Communications Zone 5-10

CHAPTER 6. PROVIDING CLASS VI AND X SUPPLIES

Section I. MANAGEMENT 6-1
Class VI Support Concerns 6-1
Support of Civil Affairs 6-1
Procurement 6-1

Section II. CLASS VI SUPPLY 6-3
Personal Demand Items 6-3
Ration Supplement Sundries Packs 6-3
Sales Teams 6-4
Storage Concerns 6-4

Section III. CLASS X SUPPLY 6-4
Nonmilitary Program Items 6-4
Sources of Supply 6-5
Requisition and Issue Procedures 6-5
Distribution Procedures 6-5
Accountability 6-5

APPENDIX A THE THREAT A-1

APPENDIX B GENERAL SUPPLY CLASSES B-1

GLOSSARY Glossary-1

REFERENCES References-1

INDEX Index-1

PREFACE

GENERAL SUPPLIES

For purposes of this manual, general supplies are supplies which have been grouped together based on their storage and distribution requirements rather than their end use. General supplies include the following:

- Subsistence (Class I, covered in AR 30-21).
- Clothing and organizational equipment (Class II).
- Packaged petroleum and industrial gases (Class III).
- Construction materials (Class IV).
- Health and comfort items (Class VI).
- End items listed in SB 700-20 and included in authorization documents (Class VII).
- Repair parts (Class IX).
- Standard maps and map products.
- Nonmilitary items (Class X).

Appendix A describes the threat to CSS operations, including regional threats and potential threats to weapons systems. Appendix B provides a list of general supply classes and their subclasses. Since there is not a separate manual for heavy materiel and since Class II and IV supplies are often grouped together for distribution purposes, construction and fortification materials (Class IV) are also included. This manual is one of a series that provides guidance on how supply systems support forces in a theater of operations. The complete set includes the following:

- AR 30-21, which describes Class I subsistence supply.
- FM 10-23, which describes Army field feeding.
- FM 10-27, which describes how Class II, III packaged, IV, VI, VII, IX, and X supplies are provided for theater operations.
- FM 10-67, which explains Class III bulk petroleum supply.
- FM 9-6, which covers Class V ammunition supply.
- FM 8-10, which deals with Class VIII health service support.
- FM 10-52, which describes water supply and distribution.

PURPOSE

This manual is a guide for meeting the Class II, III packaged, IV, VI, VII, IX, and X supply requirements of supported units. It is for commodity and inventory managers, logistics staff officers from S4 to G4 and their assistants, and instructors in supply areas. This manual should be used with FM 10-1. Commanders and staff officers of DS and GS units may use this manual, also. This manual can--

- Help logisticians improve general supply support immediately before and after hostilities start.
- Provide logistics staff members at all organizational levels with a reference manual that can help them plan, manage, and sustain general supply support for a theater of operations.
- Describe the requisition and flow of general supplies from the time they are requested or requisitioned until they are issued to the requesting or supporting unit.

SCOPE

FM 10-27 provides guidance for supply support, including that needed during transition to war and sustained war. It covers the effects of different wartime environments on supply requirements, supply routes, and supply trains. Successful supply support requires advance planning, procurement, and pre-positioning of supplies. Therefore, this manual also covers class managers, supply objectives, logistics files, and automated systems designed to help

managers forecast requirements and improve supply support. Other areas covered are general supply classes and their sources including:

- Basic loads and, if transportation assets are available, peacetime operational loads.
- Class II, III packaged, and IV distribution and supply points.
- Existing Army and Air Force Exchange Service, COMMZ.

Also, this manual describes how general supplies are requested, procured, stored, issued, turned in, and accounted for. Emphasis is placed on providing a basic overview of requisition and distribution flows and on maintaining adequate stockage levels.

RECOMMENDED CHANGES

The proponent for this publication is HQ TRADOC. Send comments and recommendations on DA Form 2028 to:

Commander
US Army Quartermaster Center and School
ATTN: ATSM-SPT-I
Fort Lee, VA 23801-5036

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1
SUPPLYING THE THEATER OF OPERATIONS
Section I
PRE-WAR SUPPLY SUPPORT

WAR RESERVE STOCKS

War reserve stocks are stocks acquired in peacetime to meet the increased military requirements that occur when war breaks out. War reserves support mobilization requirements and sustain operations until resupply can be established and expanded. War reserve stocks include decremented stocks, contingency stocks, and the types of items found in the various theater reserve stocks. AR 11-11 cites required stockage levels. An example is pre-positioned materiel configured to unit sets maintained in oversea areas. Policies and procedures for the management of war reserves are described in AR 710-1.

Pre-Positioned War Reserve Stocks

In a theater, the theater commander manages pre-positioned stocks. According to DA policy and guidelines, war reserve stocks may be pre-positioned oversea, on ships, or in areas within CONUS.

Oversea war reserves. These war reserves are positioned throughout a potential theater. They support post D-day combat consumption until supplies arrive from CONUS or other theater storage areas. Most war reserves are positioned in the COMMZ. A maximum of 10 days of supplies are positioned in forward deployed corps and TAACOM units for the transition to war. During peacetime, these stocks are controlled by a theater army. At or near the start of hostilities, they are released to the corps and TAACOMs where they are stored.

Supplies pre-positioned on ships. As part of the Near-Term Pre-Positioning Force, the US has chartered merchant ships which remain on station. These ships will join with the equipment pre-positioned at sea and then proceed to trouble spots. Vessels and cargo undergo cyclic inspection and maintenance to ensure good readiness posture. They can also provide selected sustaining supplies for Air Force and Army units.

CONUS war reserves. War reserves are held in CONUS when they cannot be pre-positioned at or near the point of probable conflict. Reserves may be held in CONUS depots for a specific force, area, or operational project. They may also be held for use as contingency support stocks.

Other War Reserve Materiel Stocks

These stocks consist of all other war reserve items. They include Class VII major end items, secondary end items, and repair parts. These assets will have purpose codes of C, D, or E, as explained in AR 725-50.

Deployment

During the early portion of the mounting phase, supplies must be brought up to required levels. Assault forces must be self-sustaining until they withdraw or link up with ground forces. In the event of a contingency or airhead operation, division elements deploy with prescribed amounts of all classes of accompanying supplies. These supplies are taken into the objective area by both assault and follow-on echelons. Three days of supply are desired in the airhead. The minimum safety level is two days. During the initial phase of deployment, this is the only source of resupply. Emergency resupply will likely be limited to Class I, III, and V items. Before beginning an operation, commanders should ensure that--

- Equipment shortages are made up.
- Reserve stocks of critical items are established.
- Priorities are established for issue of float stocks and other controlled Class II, IV, and VII items.

• Procedures and policies are established for aerial supply of Class I, III packaged, and V items.

• Procedures and channels for recovery, evacuation, and disposition of captured or abandoned items are reviewed.

• Data on availability and capability of transportation is available.

For more details on logistics preparation of the battlefield, see FM 10-1, Chapter 2.

PRE-POSITIONED MATERIEL CONFIGURED TO UNIT SETS

Pre-positioning part of a CONUS-based unit's equipment in an oversea theater reduces strategic lift requirements. This results in a quicker reaction time for a combat unit to meet a contingency. POMCUS items, consisting primarily of Class VII weapons systems, are located at storage sites, which are manned by a US Army combat equipment group.

INITIAL PREPLANNED SUPPLY SUPPORT

Initial preplanned supply support is the combat-essential materiel required early in a military operation. Precut requisitions are maintained at CONUS NICPs or TAMMCs. When alerted for deployment, a unit directs the NICP, MMC, or DAAS to release preplanned increments of 5 to 15 DOS. These increments help sustain deployed forces between the time accompanying supplies and pre-positioned stocks are exhausted and demand-supported resupply starts in a theater of operations. For more details, see AR 725-50, Chapter 12.

HOST-NATION SUPPORT

HNS is the civil and military assistance provided by host nations to allied forces and organizations. This support may occur in time of peace, transition to war, or war. As a rule, the location of forces on the battlefield determines whether you can use HNS. The rearmost areas are ideal for this support. Corps rear areas and echelons above corps are more static and lend themselves to HNS. However, in an undeveloped theater, HNS may be used wherever needed. AR 570-9 has DA policies and responsibilities for HNS. In the past, US forces relied on organic support. Today, logisticians must keep abreast of agreements on how their allies can help support the battle logistically.

Agreements

International agreements document commitments for HNS. Through agreements, the host nation sets forth its intent and willingness to support US requirements. For example, will host-nation civilians remain at war reserve storage sites after hostilities begin? Is the host nation to retain territorial responsibility and control of supply ports, rail facilities, and airspace? It may be that the host nation will turn over control of MSRs to another nation or alliance. Host-nation transport could be used to move supplies from seaports to GSUs and beyond. Support available in a given theater will depend on the host-nation's political climate; national laws; industrial development; and military, civilian, and commercial resources. Laundry, textile renovation, and CEB are CSS services which host nations could provide. These services would, in turn, affect Class II stockage and supply flow procedures.

Reasonably Assured HNS

Support based on signed national agreements, plans, or other acceptable documents maybe considered reasonably assured support. Such support affects the size and composition of our force support structure and, in turn, affects deployment plans, demand forecasts, and supply stockage levels.

Prudent Risk HNS

This is the risk that we accept as to the amount of support which may be provided to US forces. Army staff officers must consider the minimum force structure needed to meet and remain responsive to mission requirements. The theater commander, in coordination with HQDA, must determine the types and levels of HNS that can be accepted without placing mission accomplishment at an unnecessary risk.

Contingency Contracting

Supplies and services may be available in some nations where no HNS agreements are in place.

Contingency contracting may provide this source. Whereas HNS represents government-to-government agreements, contingency contracting is conducted directly with local businessmen or firms. Recent experiences have shown the value of local contracting to support the initial deployment phase of US forces. All the limitations noted above for HNS remain valid, however; and contingency contracting must be considered as primarily a short-term source.

TRANSITION TO WAR

The transition phase begins with advance warning of an impending war. It continues until SEALOC have been reopened and the necessary logistics structure is in place to sustain war. During the transition phase, all supplies and logistics functions nonessential to the war effort must be eliminated. The SSA initiates selective cancellation action on requisitions deemed nonessential for combat and unnecessary for individual health and welfare. For example, certain health and safety items, such as toilet paper, though not in the prepositioned war reserve materiel stocks and not coded combat essential, must be requisitioned because they are essential for health reasons. Procedures for preparing and processing cancellation documents are covered in AR 725-50, Chapters 3 and 4. Canceling nonessential requisitions lessens the strain on ADP equipment. It also reduces the number of requisitions on CSS units which must distribute CONUS war reserves, fill unit shortages, and equip all forces on deployment alert. On mobilization day, selected general supplies are removed from storage and transported to forward areas. Initially, combat forces must rely on accompanying basic loads, oversea war reserves, and air delivery of Class IX and maintenance-related Class II items. An emergency airlift of general supply items, normally shipped by SEALOC and surface transport, will probably be necessary.

Corps Transition Support

Forward deployed corps, COSCOM, and TAACOM units stock a maximum of 10 days of pre-positioned war reserve materiel stocks which consist of Class I supplies; selected Class II, III, IV, V, and VII supplies; and Class IX items not delivered by air. This enables the corps to support units through D+10. After these stocks are exhausted, the corps requisitions from the TAMMC, which directs the TAACOM to issue from its theater army area GSUs. These war reserves become the corps initial wartime ASL. The corps then becomes the source of surface resupply for divisional and nondivisional DSUs. The corps also makes the transition to war with a 30-day supply of essential, air-eligible, maintenance-related Class II, III packaged, and IX items.

TAACOM Transition Support

At the direction of the theater army commander, the TAMMC releases preplanned packages of surface-delivered supplies to the TAACOM. TAACOM GSUs are the main source of surface supply for TAACOM DSUs and for units passing through the COMMZ. Though managed by the TAMMC, war reserves are stored in TAACOM GSUs. Like the corps, the TAACOM goes to war with a 30-day supply of GS, maintenance-related Class II and Class IX items delivered by ALOC. These supplies support materiel operating in the COMMZ and repair of items evacuated to the rear.

Requisition and Materiel Flow

In peacetime, divisional, COSCOM, and TAACOM DS and GS units are resupplied by DSS from CONUS. During the transition-to-war phase, the units are resupplied from the 30 days of sustaining theater army stocks in TAACOM GSUs. As required, the TAMMC calls forward preplanned supply packages from CONUS depots. As the tactical situation changes, the TAMMC may request modifications in these supply packages.

Requests. In the BSA and the DSA, using units submit requests to the supply point run by their supporting DSU. If possible, high-priority requests are filled, and the DMMC is notified of the fill. All other requests are transrnitted to the DMMC. If

a request is for a controlled item, the DMMC transmits a requisition through the CMMC to the TAMMC.

Issue. Supplies are issued from the lowest level. If the item is on hand in a DSU, the MMC cuts an MRO directing the DSU to issue the item. (Main supply points may be directed to issue the item to a forward supply point.) If the item is not on hand at a DSU but is on hand at a GSU, the MMC directs the GSU to issue the item to the DSU.

Requisition. When the item is NOT on hand in the DSA, the DMMC prepares and transmits a requisition to the CMMC. When the item is NOT on hand in the corps rear area, the CMMC transmits the requisition to the TAMMC which queries the TAACOM MMC. When the item is not available at a TAACOM GSU or DSU, the TAACOM MMC transmits the requisition to the TAMMC. The TAMMC transmits replenishment requisitions and any requisitions for items not on hand in the theater to the appropriate NICP. The NICP cuts an MRO directing a depot to issue the item. In an emergency, the item may be airlifted to the theater. However, most general supply items are shipped by surface transport to the theater. When possible, supplies are throughput to DSUs. Other items are transported by HNS or transportation command assets to a TAACOM GSU. For more details and graphics, see FM 10-1, Chapter 5.

Section II
SUPPLY SUPPORT DURING SUSTAINED OPERATIONS

WARTIME SUPPLY STOCKAGE LEVELS

Adequate stockage levels help the transition to war and ensure sustainability during hostilities. DA prescribes stockage objectives for the theater in terms of DOS. Initial stockage is based on expected usage rates. After the war begins, range and depth of stockage are adjusted to meet wartime demand criteria. Quantities are computed based on actual or expected demand, OST, and safety levels. GSUs normally maintain a wartime sustaining level of 5 to 10 DOS plus OST for all classes except Class II and IX items to be delivered by ALOC. However, to provide sustained supply support, the theater army commander may allow up to 30 days of critical Class II and IX items to be stocked.

Direct Support Units

DSUs at all levels in division, corps, and TAACOM stock an RO for general supplies consisting of a 30-day operating level, a 5-day safety level, and actual OST by item. Stockage levels for all other classes are prescribed by the theater army commander. Stockage levels at corps and TAACOM GSUs vary depending on the class of supply. AR 710-2 shows the DOS for each class of general supply.

War Reserve Stockage List

The war reserve stockage list identifies items which are to be maintained as war reserve stocks. The list is used to compute war reserve requirements essential to sustain combat and to support sudden mobilization requirements.

DIRECT SUPPORT SYSTEM

General supplies, Class II, III packaged, IV, and VII, are distributed through a DSS. This supply distribution system is described in FMs 38-725-1 and 63-4. Under this supply distribution system, supplies are throughput from CONUS wholesale depots to the requesting SSA. Throughput reduces the need for an intermediate supply level. Theater SSAs supported by the DSS include DSUs and GSUs. For related automated procedures, see the appropriate 38-series TM. Units send requests to their SSA. Requisitions are transmitted from the SSA to the MMC. They are edited

for validity and PD. For selected items, the TAMMC screens theater assets to determine if requisitions with PDs 01 through 03 and NMCS requisitions can be filled from assets on hand which are below the 30-day safety level or war reserve stockage level. If there are safety level or reserve stocks on hand in the theater, the requisitions are filled. Partial issues can also be made. CMMCs, TAACOM, MMCs, and TAMMCs transmit requisitions to CONUS NICPs. An image copy of all transactions is maintained in the LIF data bank. The inventory control point then transceives an MRO to the supporting distribution depot when depot assets are available. An MRO is cut only on assets reported on hand. Consolidation and containerization points pack cargo according to theater distribution plans. Containerized shipments are then moved to the port of embarkation. Class IX and maintenance-related Class II DSS cargo is transported by ALOC. All other cargo is shipped to the theater by surface transportation. When supplies reach the theater port, MCCs coordinate with MMCs on routing. Routing instructions are based on transport assets, routes, and the tactical situation. Shipping containers or pallets are then transported to the requisitioning SSA or supply point. If possible, shipments are routed directly to the requisitioner. Containerized cargo en route at the outbreak of hostilities may be diverted to the appropriate GSU.

SEALIFT AND CONTAINERIZED SURFACE DISTRIBUTION

The logistics of rapidly supplying and sustaining forces and other US government agencies deployed in areas where little or no pre-positioned materiel is on hand or where no HNS is assured is staggering. More than 90 percent of all wartime cargo tonnage will go by sea, regardless of where the conflict is. With the exception of Class IX and maintenance-related Class II items, general supplies arrive in the theater through seaports in 20- and 40-foot general cargo containers. Nearly all general supplies are shipped to the theater and transported within the theater in containers. Close to 75 percent of Class IV items can be containerized. Only 20 percent of Class VII items can be shipped in containers.

Containerization

Intermodal container service is the preferred method of shipping DOD-sponsored surface cargo. Container resources of the commercial transportation industry are used when they are responsive to military requirements. When commercial containers do not meet military requirements, DOD-owned or leased containers may be used. Therefore, Army-owned containers and container-handling equipment must be compatible with commercial container ships, transporters, and handling equipment. Advantages in shipping supplies in containers include:

- Shorter time required to prepare shipments.
- Lower freight cost.
- Less breakage.
- Reduced documentation.
- Less pilferage.
- Better accountability.
- Less ADP effort.

Seaport Facilities

Fixed-port terminals provide suitable facilities to off-load containers and transfer them to inland transportation modes. Use fixed-port facilities to the maximum extent possible. They can discharge many containers rapidly, are equipped with container-handling equipment, and are located close to inland transportation hubs. Logistics over-the-shore operations can be used with fixed-port operations if berthing space is limited. See FM 55-17 for more details on terminal operations.

Fixed-port terminals. Equipped with modern MHE, these terminals are usually located at or near rail- or truck-loading sites. Commercial operators handle military container operations at fixed ports. The host nation may continue to operate existing facilities during wartime. For planning purposes, container ships may be discharged and back loaded at the pier in 24 to 48 hours. Transportation terminal service companies are organized to discharge and load containers. A

shore-based crane can pick up and position containers in three varying amounts per day depending on its make. The most efficient cranes can position as many as 40 containers per hour.

Logistics over-the-shore operations. Extra time and resources are needed to move containers from ships to and across the beach. Crane ships off-load containers to lighters. Lighters transport cargo to a beach transfer point. Terminal service companies are assigned the mission of discharge, loading, and beach operations. Trailers transport containers from the beach or shore to container marshaling areas and long-haul truck-loading points.

Roll-on, roll-off cargo ships. Fully loaded trailers maybe driven aboard especially designed cargo ships. This type of container ship can transport 900 to 1,500 containers. Trailers are hooked up to tractors and driven ashore at the oversea terminal.

Supply Distribution

Most of the cargo unloaded at seaports will be moved initially to TAACOM GSUs whose stocks are managed by the TAMMC. Some cargo may be transported to TAACOM DSUs. Whenever feasible, supplies should be throughput from seaport or marshaling areas to corps and division supply echelons.

Container Surface Distribution

Commercial and military containers (20 and 40 foot) transport supplies from CONUS directly to GSUs in the COMMZ and corps rear area and to DSUs throughout the theater. Part of the 30-day COMMZ general supplies may be temporarily stored in containers. Twenty-foot containers are used primarily in intratheater loops between GSUs and from GSUs to DSUs and DISCOM units. High-priority cargo and intensively managed high-cost Class VII items may be shipped in containers from CONUS and transported by truck directly to DSUs and DISCOMs. Units have 48 hours to strip and return containers to the transportation system.

Automated Control and Support

The DA Standard Port System-Enhanced provides automated support for water terminal operations during war as well as during peace. It provides management data on inbound and retrograde shipments. The theater army MCA maintains information on the location and status of all containers in the theater. It coordinates with the TAMMC on priorities for container shipments and reconsignment.

RAIL NETWORKS AND INLAND WATERWAYS

Road networks may be inadequate for the volume of traffic required to move units and sustainment forward and to evacuate damaged equipment and combat casualties. Using host-nation rail networks and inland waterways to move a portion of requirements can help alleviate potential congestion. Movement planners should plan for the use of rail and inland water modes when available and feasible.

Rail Networks

Though vulnerable to enemy aircraft, guerrilla actions, and sabotage, rail is the best mode to move large quantities of supplies and equipment over extended distances. For more details on rail operations, see FM 55-20.

Inland Waterways

Inland waterways help suppliers move cargo from an ocean terminal to an inland transfer point not accessible to ships with a deep draft. Using inland waterways relieves congested road networks and reduces the number of vehicles required to supply combat forces. For more details on Army water transport operations, see FM 55-50.

AIR DELIVERY OF SUPPLIES

Air transportation is a flexible and essential element of the transportation system. It becomes increasingly important as the intensity, depth, and duration of operations increase. Both the Army and Air Force provide air transportation. Army aviation in CSS air movement operations includes:

- Support for intratheater airlift.
- Logistics over-the-shore operations.
- Troop and personnel movements.
- Aerial preplanned and immediate resupply.

- Movement of critical Class IX and maintenance-related Class II supplies.
- Retrograde of reparables.
- Pre-positioning of fuel and ammunition.
- Movement of low-density and high-cost munitions when time, distance, situation, or condition of the roads inhibits ground transportation.

Air Force airlift and airdrop supplement the Army's transportation capability. They can be viable modes for CSS movement requirements under certain circumstances. However, they require much longer lead times to plan and coordinate than Army airlift assets. Army aviation assets are allocated by the theater army, corps, and division commanders to support CSS air movement operations. Once allocated, these assets are committed by the TAMCA, MCC, and MCO. Air Force aircraft are apportioned by the joint force commander. The Air Force provides the aircraft, civil air patrol services, and the personnel and equipment to load the aircraft. The Army provides the supplies, rigs them as necessary, transports them to the airfield, and off-loads them from ground transport. The QM airdrop equipment repair and supply company supplies airdrop equipment. The light and heavy airdrop supply company prepares supplies for airdrop. FM 10-512 shows how to prepare and rig typical supply loads of bulk material on platforms for airdrop.

Airlift Requests

FM 100-27 shows the flow of requests for airlift of supplies. FM 55-10 provides detailed request procedures for both Army and Air Force airlift. Request formats vary by oversea command based on standardization agreements, but generally contain the data elements found on DD Form 1974.

Sling-Load Operations

FM 55-40, Appendix G, describes responsibilities for loading equipment in support of air transport operations. Supporting unit personnel requisition slings, A-22 bags, cargo nets, and containers needed for sling-load operations. The supporting unit selects the pickup zone and provides ground crews to pack, rig, and inspect loads and to hook up the loads to the helicopter. It also provides the receiving unit with derigging and disposition instructions. The using unit selects the landing zone, derigs the load, and coordinates the recovery of air delivery items with the supporting unit. The using unit also inspects and maintains the slings.

Recovery and Evacuation of Air Delivery Equipment

Airdrop operations require special rigging equipment to deliver supplies. Air delivery equipment is expensive, in short supply, and hard to replace. Increased requirements for air delivery dictate that air delivery equipment be recovered and evacuated to the QM airdrop equipment repair and supply company. Recovery and evacuation priorities are listed in TM 10-500-7.

GROUND MOVEMENT OF SUPPLIES

Movement control organizations at all echelons plan the movement of supplies by all surface modes. Planning has two parts. First is the development of the distribution pattern, which considers the location of supported units, supply activities, and transportation units and facilities. Second is the development of the transportation network and movement programming to satisfy the daily programmed and unprogrammed requirements. More details on ground movement of supplies are in FM 55-10.

Transportation Planning

Transportation planners must consider the physical transportation network and facilities available, the size and disposition of the supported forces, and the location of the primary in-theater supply activities in their plans. They should select seaports, aerial ports, and rail and road networks to make it easy to distribute personnel and materiel into the area of operations. The facilities and networks selected must accommodate the expected volume of movement. When the facilities or networks are not well developed, the planner must influence the placement of the supported force and the location of supply and maintenance activities so that the operation can be supported with the

transportation resources available. The size of the transportation support structure depends on the following:

- Size of the force to be supported.
- Expected tonnage to be received and moved.
- Number of facilities (water ports, aerial ports, mode transfer points, and trailer transfer points) used.
- Physical size of the area to be supported.

Movements Plan and Program

The movements program is a result of movements planning. The program is prepared jointly by the MCC and the MMC at each echelon.

The movements plan. The movements plan includes a forecast of movement requirements and the available transport capability. Both requirements and capabilities are in general terms. When the plan is coordinated and approved, *specific* transportation resources are allocated against specific movement requirements. The movements plan then becomes the movements program. The three major logistics levels (division, corps, and TAA) should have mutually supporting movements programs. The seven basic steps in planning are:

- Assessing the distribution pattern.
- Determining movement requirements.
- Determining transportation capabilities.
- Balancing requirements against capabilities.
- Determining shortfalls.
- Recommending solutions.
- Coordinating, publishing, and distributing the plan.

The movements program. The movements program period varies with the stability of the situation and the ability of supply and personnel managers to forecast their requirements. Forecasts must be submitted far enough in advance for the transportation and supply systems to adjust their resources to carry out the program. A desirable cycle for the program is 14 days, for which there is a firm forecast of requirements for the initial 7-day period and a tentative forecast for the succeeding 7-day period. Daily adjustments should be made only for urgent unforecasted requirements.

Movement Control

The MCC or MCA controls transportation assets in the theater. The theater army MCA, MCC, and MCO control transportation assets by allocating and committing available transportation resources to satisfy movement requirements. They allocate and commit based on their commander's priorities. Transportation priorities are established by required delivery date, the issue priority of the cargo, or by preestablished command priorities by unit or commodity. When movement requirements exceed capabilities, movement planners request support from higher headquarters.

Movement control teams. MCTs are assigned to the corps MCC and TAMCA. They are positioned in the corps and COMMZ to allow close and constant coordination with the units they support. In the corps, MCTs are collocated with each CSG. They also operate in a geographic area or at specific sites to expedite, coordinate, and monitor traffic moving through the transportation system. MCTs process movement requests and arrange transportation for moving personnel and materiel. They receive and process programmed and unprogrammed transportation requests. They commit mode operators for programmed movements or select the mode for unprogrammed movements. The MCTs support highway regulation by receiving and passing clearance requests for movement on controlled MSRs. They also enforce movement priorities, monitor container use, and help customers.

Highway regulation. Highway regulation is a responsibility of the commander having area jurisdiction. He and his staff plan, schedule, route, and direct the use of highways. The MCC's highway traffic division regulates highway traffic. Subordinate highway regulating point teams carry out highway regulation plans. MPs support highway traffic regulation by performing traffic, straggler, and refugee control activities. Regulated movements include convoys, oversized or overweight vehicles, vehicles moving by infiltration, and troop

movements on foot. Responsibilities of the highway traffic division and its highway regulating point teams include circulation planning, routing, and scheduling of traffic. The traffic plan portrays the road network and how it is to be used and maintained. The plan normally includes restrictive route features; route designations; direction of movement; and locations of boundaries, units, highway regulating points, traffic control points, and major supply or shipping activities. Traffic is routed over designated routes to balance the vehicle and route characteristics (road surfaces, curves, and bridge capacities) and to reduce traffic congestion or conflicts. Traffic scheduling is the coordination of times for movement along specified routes to satisfy command movement priorities; minimize delays, conflicts, and congestion; and promote security and passive defense.

Section III
SUPPLY SUPPORT FOR DIFFERENT TACTICAL OPERATIONS

AIRLAND BATTLE DOCTRINE

AirLand battle is the Army's basic operational concept for fighting the next war. AirLand battle doctrine emphasizes the need for coordinated air and ground actions. It includes plans for three simultaneous operations--deep, close, and rear. AirLand battle can enable a well-organized, small force to defeat a poorly organized, larger force. The four tenets of AirLand battle are initiative, depth, agility, and synchronization. See Table 1-1. These principles apply to all levels of conflict, including low-intensity conflict which primarily involves peacekeeping and counteracting terrorist activities. For more details on AirLand battle, see FMs 100-5 and 100-10. QM supply companies can provide support to AirLand battle by--

- Ensuring continued logistical support.
- Shifting support to different user units without delay when directed by higher headquarters.
- Reacting to any rear area threat.
- Pushing CSS forward to those who can benefit most from the overall battle plan.

COVERING FORCE OPERATIONS

The covering force is normally the first ground maneuver force to make contact with the enemy. It operates between the forward edge of the battle area and the forward line of troops.

Table 1-1. Four tenets of AirLand battle

TENET	ACTION
Initiative	Anticipate and plan for offensive actions.
Depth	Consider the full width and depth of the battlefield.
Agility	Think and act quicker than the enemy.
Synchronization	Coordinate deep, close, and rear operations. Coordinate air and ground actions.

Operational Concept

The purpose of the covering force is to weaken and delay the enemy as it prepares to attack divisions and separate brigades in the main battle area. The size and makeup of the covering force depend on the terrain, the mission and mobility of the force, and the number of troops available. As a rule, the covering force does not have the strength or firepower to defeat the enemy. Instead, its mission is to disrupt enemy operations by harassing, disorganizing, deceiving, and delaying enemy forces. The covering force slows down the attack, gives divisions and separate brigades needed maneuver space and reaction time, and provides information about the enemy's strength, location, and direction of attack.

Supply Support

Supply support in the covering force area is provided by forward supply companies. The covering force must sustain itself until it is resupplied. It carries basic loads of Class I operational rations, Class II and IV items, and Class II and V supplies. If there is enough transportation available, more supplies can be moved. If Class III and V stocks are pre-positioned, transportation assets can be used for Class II, III, IV, and VII items. Critical Class VII items may be pre-positioned in a "ready-to-fight" condition. Details uncovering force operations are in FM 63-1.

CLOSE BATTLE AREA OPERATIONS

The close battle area is between the covering force and the brigade rear boundary. This is the area where heavy fighting takes place.

Operational Concept

The role of our forces in the close battle area is to repel, to counterattack, and to seize the initiative from enemy forces. Our forces must be able to shift locations and firepower to stop enemy attempts to break into our lines of defense. FM 71-100 covers operational concepts used in close battle to defeat enemy forces.

Supply Support

Combat units in the close battle area rely on their CSS elements and on DS backup units for battle support. Corps CSS units can be located in the BSA to support the majority of corps field artillery units being employed in the brigade area. Nondivisional combat units get both DS and GS from corps CSS units. Corps CSS units provide backup DS and GS to divisions. An FSB employed in the BSA provides DS to each division maneuver brigade. FM 63-20 provides information on FSBs. Though based in the DSA, an MSB provides support forward, as required, to include backup support to the FSB. CSS units that support the close battle area must be able to gather and distribute supplies and equipment rapidly. They must perform needed support functions in the battle area and in corps forward areas. Corps ground and air transportation elements provide resupply and emergency supply deliveries in the close battle area.

REAR OPERATIONS

The rear operations area of the AirLand battle covers the area from the brigade rear boundary to the division rear boundary. The corps rear area goes from the division rear boundary to the corps rear boundary. Each echelon has its own area and its own rear operations commander.

Operational Concept

Rear area operations may be directed against threats ranging from sabotage to airborne or air assault operations. The deputy corps commander in the corps rear CP coordinates with the RAOC. In the rear area, CS and CSS units are generally grouped together in bases or base clusters for protection or to support a specific mission. FMs 71-100, 100-5, and 100-15 explain the coordination and services provided by rear area units. These FMs also explain how CSS operations effect the AirLand battle.

Supply Support

Supply points and CSS units are scattered throughout the rear area. In the DSA, an MSB provides DS

to division units in the division rear. FM 63-21 covers the MSB. A CSB supports nondivisional forces employed in the division sector. Nondivisional units obtain DS and GS from CSGs. Forward CSGs also provide reinforcing DS maintenance, field services, and GS supply to division forces. Depending on the task organization of forward CSGs and CSBs, they could provide GS petroleum, GS ammunition, and GS general supplies to division forces. GSUs provide Class II, III packaged, IV, VII, and IX supply support for divisional and nondivisional DSUs. Corps units and above provide air and ground transportation needed to deliver new equipment, supplies, EPWs, and other personnel to forward areas. They also back haul disabled equipment to a backup DS unit in the corps or to a GS maintenance unit beyond the corps rear boundary. The rear area may become a battlefront just like the forward edge of the battle area. CSS soldiers must be trained to defend and protect themselves as well as provide mission support.

CONTINGENCY FORCE OPERATIONS

Contingency force operations are those conducted with a rapid response to a sudden crisis. Units must be prepared to deploy rapidly and on short notice. HNS may be questionable. Local third-country forces may be poorly trained and poorly equipped.

Operational Concept

Operations begin with a rapid show of force. Heavy reliance is placed on support from the other services. The scope and nature of the operation determine the force organization and operations. Forces should be more mobile than the enemy. Commanders should also use economy of force, surprise, and bold aggressive actions.

Supply Support

Force planners have reduced support to the essentials. There will be limited or no prestockage of supplies. Because of austere base development, DS and GS supply companies are often required early in contingency operations. FM 63-6 covers logistical support of contingency operations. Support is divided to provide accompanying and follow-on supplies.

Accompanying supplies. Sufficient supplies must accompany the assault force to enable it to sustain itself until it is resupplied. Accompanying and follow-on supplies for contingency force operations will be uploaded in modular unit-owned containers. They must not exceed the force's ability to carry and secure them. Supplies are usually limited to basic combat loads and a limited number of items critical to the operation. Class IV barrier and fortification materials are often critical to the initial phases of a contingency operation.

Follow-on supplies. Follow-on supplies must replenish combat losses. Airports and seaports may be few and far from CONUS. How the contingency force is deployed will indicate how it will be resupplied. If the force is deployed by sea, it will probably carry its initial supplies and be resupplied by SEALOC with critical items provided by air. If the force is airdropped or airlanded, initial supply would probably be by air. Resupply would be by ALOC until SEALOC and surface supply were established. Local transportation networks may be primitive. Therefore, enough transportation units must be assigned to ensure that airports and seaports do not become clogged with supplies. Until SEALOC can be established, replacement of Class VII weapons systems will be limited to those systems which can be recovered and repaired.

SPECIAL OPERATIONS

SO are military operations of a sensitive nature conducted by specially trained, equipped, and organized DOD forces. These forces are committed against strategic or tactical targets in pursuit of national, military, political, economic, or psychological objectives. These operations may be conducted during periods of peace or during hostilities. They may support conventional operations, or they maybe used independently when the

use of conventional forces is either inappropriate or unbearable.

Requirements

SO forces of the US Army have both standard and mission-peculiar supply requirements. More details on SO are in FMs 31-20, 90-8, and 100-25.

Standard supply requirements. Standard supply requirements are supported by the CSS GSU tasked to support the theater army special operations support command. The TASOSC is subordinate to the theater or unified SOC or SOTF. All supporting supply requirements of a standard nature are consolidated by the ARSOC and forwarded to the supporting GSU. Certain SO assets, normally psychological operations and civil affairs units, are traditionally attached to infantry, armor, and mechanized units at battalion, brigade, and division level as well as to corps headquarters. These units receive support for standard supply requirements directly from the organization to which they are attached.

Mission-peculiar supply requirements. Mission-peculiar supply requirements are supported through SOC or SOTF logistical channels. CSS GSU personnel furnish the support to the employed SO elements.

Supply Support

All supply requirements are planned for and coordinated by the SO units concerned prior to deployment. Plans for support of unit supply requirements are approved at the SOC and coordinated through the ARSOC.

Accompanying supplies. Sufficient supplies will accompany each SO unit to sustain it until the unit comes under ARSOC subsequent to deployment. Accompanying supplies include those required to support unit personnel and organizational needs. These supplies must not exceed organic transport capability. The unit must acquire and prepare supplies for deployment.

Force supplies. These supplies back up accompanying supplies. Force supplies include all classes of supplies. Force supplies are planned for by the units concerned. The ARSOC coordinates and supervises forward positioning of force supplies.

Reserve supplies. Reserve supplies are primarily for emergency use. Reserve supplies are planned for by the units concerned. The ARSOC coordinates and supervises the forward positioning of these supplies.

Follow-on supplies. Follow-on supplies are supplies which may be required to support employed SO assets. They include major backup items of equipment, Class V, and repair parts. They can also include those supplies anticipated for use by indigenous groups. Follow-on supplies are delivered into the operational area on an on-call or a preplanned basis. These supplies are maintained at the primary bases of the SO units concerned. Levels and amounts are determined prior to deployment.

Automatic follow-on supplies. Automatic follow-on supplies are delivered on a preplanned basis at times and locations coordinated prior to employment of SO assets. Al1 classes of supplies are included.

On-call, follow-on supplies. On-call, follow-on supplies are delivered upon request to SO assets in the operational area. They are usually of a contingency nature and are delivered when and where the using unit requests. On-call, follow-on supplies include all classes of supplies and are planned for prior to employment.

Routine supply requirements. Routine supply requirements are supplies requested and delivered through normal supply procedures. They are initiated following deployment. These supplies are issued on a routine basis except in emergencies. The ARSOC monitors routine supply requirements.

AIR ASSAULT OPERATIONS

Air assault operations involve using helicopters to deploy over extended areas. Air assault operations can be conducted anywhere in the world depending on weather conditions. More details on air assault operations are in FMs 10-27-2 and 10-27-3.

Operational Concept

In air assault operations, supplies, troops, and equipment are moved throughout the battlefield in aircraft, usually helicopters. Air assault operations may involve airlifting units for combat operations, shifting and relocating units within the combat zone, or moving and delivering supplies and equipment. Airlift in support of air assault operations is classified as either CS or CSS, depending on the mission and the kind of cargo airtitled.

Request Procedures

Requests for air assault support can start at any level of command. There are two types of support requests: requests for preplanned, immediate operations and requests for emergency airlift combat support. Both types are sent through operations and logistics channels to the commander with the authority and capability to approve them. FM 100-27 and the air delivery information in this chapter explain each request procedure. The unit requesting the support is generally responsible for planning, obtaining, and coordinating the supplies and personnel to be airlifted.

Supply Support

Because air assault forces must be able to deploy rapidly, they carry only essential supplies and equipment with them. These supplies need to be replenished frequently. Supplies and equipment not needed for survival or combat should be left in the rear and moved forward when needed. Supply support is generally provided by an independent unit with CSS elements attached.

Support for ground forces. Ground forces in an air assault operation carry enough essential items to sustain them for a limited time. GS items are provided by CSS units and other ground forces. Routine resupply items should be delivered as close as possible to ground forces instead of being stockpiled at a central location. This will help forces deploy more rapidly and relocate more quickly. Emergency ground force resupply should include prepackaged, mixed loads so that if the force gets only a few of the requested loads, it will get a mixture of essential supplies.

Support for the air element. The air element of an air assault operation requires special aircraft repair parts, supplies, and services. Generally, these are provided by a supporting aviation unit. A forward arming and refueling point may need to be set up to help sustain the aviation element of the operation. Special needs must be coordinated between the ground element and the aviation force commanders during the planning phase.

AIRBORNE OPERATIONS

An airborne operation involves moving and delivering forces, supplies, and equipment by air into an objective area. In addition to being airlanded into combat, airborne forces can parachute into combat.

Operational Concept

Divisional airborne brigades receive supply support from a forward supply company located in each BSA. Logistics units from the division base come under the control of the S&T battalion. A separate brigade receives CSS from the brigade support battalion. A separate brigade will be a satellite on a support command for CSS. FMs 10-27-2 and 10-27-3 explain the composition and organization of airborne and air assault brigades and divisions.

Supply Support

Until CSS units join ground forces during the follow-up operation, all supply support for an airborne operation is preplanned by the G4. The G4's estimates are based on the three phases of supply requirements involved in an airborne operation.

Accompanying supplies. Individual soldiers carry these supplies into the assault area. They include the supplies airdropped with the deploying unit. Maneuver units in airborne and air assault divisions normally carry a basic load of ammunition, a three-day stock of Class I and III packaged supplies, and a prescribed load of fast-moving repair parts. Accompanying supplies are the only source of supply during the first stages of the operation. They include unit, force, and reserve

supplies. Unit supplies include the basic loads of ammunition and the prescribed loads of the other classes of supply. The rigging, loading, recovery, issue, and control of unit supplies are the responsibility of the airborne unit. Force supplies are bulk supplies that act as backup for unit supplies. Force supplies include all classes of supply. The S4 of the deploying unit is responsible for controlling these supplies. Reserve supplies are set aside and stored at the division for later use. Also, they are used for special or emergency missions. The DISCOM is responsible for issuing and controlling reserve supplies.

Follow-up supplies. These supplies are delivered by air after the unit has made its initial assault. They help the unit operate until normal supply procedures can be set up. Follow-up supplies include all classes of supply. They are generally prepackaged, rigged, and stored at the beginning of the operation for immediate distribution. Quantities are based upon the G4's estimate of the unit's daily requirements. The battalion S4 requests follow-up supplies for the battalion. If more than one battalion requests follow-up supplies at the same time, the commander decides which has priority. A two-day level of extra stocks, including Class IV and a small stock of critical repair parts, is often kept near the departure airfield. These stocks are delivered automatically or on call. Automatic follow-up supplies are delivered on a preplanned schedule, normally once a day beginning with D+2. The amount delivered is based on an estimate of the quantities of supplies used daily by the requesting unit. Automatic follow-up supplies are either airdropped to the unit or airlanded at a central supply point. Because quantities are preplanned, they may not include the exact amounts of particular items deploying forces need. On-call, follow-up supplies are delivered to the deployed unit as needed. They are generally used for emergency purposes or to fill a routine request for a specific item. Emergency supplies must be delivered within 24 hours. On-call, follow-up supplies of a routine nature are delivered on a flexible schedule, generally between 24 and 72 hours after being requested.

Routine supplies. These supplies are requested and delivered through normal supply procedures. Routine supply generally begins once a CSS unit is attached to the airborne operation. After routine supply begins, the airborne unit generally does not request follow-up supplies, except in emergencies. The DISCOM commander decides when routine supply deliveries should begin. He bases his decision on the tactical situation and the supply status of the division.

LOW-INTENSITY CONFLICT

LIC is a political-military confrontation between contending states or groups. It is less than conventional war and more than the routine, peaceful competition among states. It frequently involves protracted struggles of competing principles and ideologies. LIC ranges from subversion to the use of armed force. It is waged by a combination of political, economic, informational, and military instruments. LICs are often localized, generally in the Third World, but contain regional and global security implications.

Operational Concept

LIC does not describe a specific operation. Operations in a LIC environment are divided into four general categories:

- Support for insurgency and counterinsurgency.
- Combating terrorism.
- Peacekeeping operations.
- Peacetime contingency operations.

Supply Support

As a rule, there are not enough logistics and health services in a LIC. CSS elements may precede combat or CS units into the area of operation or may be the only military force deployed. CSS elements may provide support for US government or allied civilian agencies as well as US military or allied forces. CSS elements may also provide humanitarian and civic assistance. Because CSS units must be tailored to fit the assigned mission

and situation, they must remain flexible. More details on LIC are in FMs 63-6 and 100-20.

RETROGRADE OPERATIONS

A retrograde operation is a movement to the rear or away from the enemy. Such an operation may be forced or voluntary.

Operational Concept

Retrograde operations gain time, preserve forces, avoid combat under undesirable conditions, or draw the enemy into an unfavorable position. Commanders use them to harass, exhaust, resist, delay, and damage an enemy. Retrograde operations are also used in operational maneuvers to reposition forces, to shorten lines of communications, or to permit the withdrawal of another force for use elsewhere. All retrograde operations are difficult, and delays and withdrawals are inherently risky. To succeed, they must be well organized and well executed. A disorganized retrograde operation in the presence of a stronger enemy invites disaster.

Supply Support

Supply efforts during a retrograde operation must be concentrated on the most critical supplies: Class III, V, and IX. The key to providing responsive supply support during a retrograde operation is to project force supply requirements throughout the operation and to distribute these supplies according to the projections. When projections are made, provisions are made to move forward only essential supplies. All other supplies are moved rearward to the new support areas. To avoid destroying or evacuating supplies unnecessarily in any retrograde action, commanders must control the flow of supplies into forward areas. When commanders contemplate a delay, withdrawal, or retirement, they should plan for early removal of excess supplies and early displacement of logistics facilities. By positioning supplies along routes of withdrawal, CSS commanders can simplify support and can reduce the enemy's ability to interfere with logistical operations. More details on supply support are in FM 63-6.

DEEP OPERATIONS

Deep operations are operations directed against enemy forces not in close contact. They are designed to influence the conditions in which future close operations will be conducted. At the operational level, deep operations include efforts to isolate current battles and to influence where, when, and against whom future battles will be fought. At the tactical level, deep operations are designed to shape the battlefield to assure advantage in subsequent engagements.

Operational Concept

Because of the relative scarcity of resources with which to perform deep operations, they must be directed against those enemy capabilities which most directly threaten the success of projected friendly operations. They must be attacked decisively, with enough power to assure the desired impact. Deep operations include--

- Deception.
- Deep surveillance and target acquisition.
- Interdiction (by ground or air fires, ground or aerial maneuvers, special operating forces, or any combination of these).
- Command, control, and communications countermeasures.
- Command and control.

Supply Support

There are two ways to sustain deep operations. The force can carry with it all the resources needed throughout the mission, or it can be sustained over a LOC. Sustaining deep operations forces depends on the situation. You must consider depth and duration of the operation, the size and organization of the force, the enemy situation, and the weather and terrain. Sustainment over surface LOC has the advantage of the capability to carry large tonnages of supplies and equipment to specific destinations. It is less subject to weather than ALOC. A disadvantage is that LOC extend far beyond the FLOT into territory that is subject to enemy influence and control. Sustainment over ALOC has the advantage of being fast and responsive.

It has the same disadvantage as sustainment over surface LOC. The LOC must be either temporarily or continuously secured. This requires temporary or continuing air superiority or, at least, parity. These conditions require close interservice cooperation, because much of the airlift capability belongs to the Air Force. More details on supply support in deep operations are in FM 63-2.

HEAVY-LIGHT AND LIGHT-HEAVY OPERATIONS

There are many who will argue that light forces do not have a role on a mid- or high-intensity battlefield against a mobile enemy. History has demonstrated that heavy-light combined arms forces can engage and decisively defeat such a force when employed properly.

Operational Concept

The key to effective employment of heavy and light forces as a combined arms team is to maximize the capabilities of both parts of the force and use the advantages offered by each to offset the vulnerabilities of the other within the framework of METT-T. Light forces are particularly effective when used as part of the combined arms team. Also, light forces are effective in economy of force operations and operations with the intent of denying terrain to an enemy force. Light forces, with proper augmentation based on METT-T, allow the maneuver commander freedom to employ armored and mechanized forces elsewhere on the battlefield. Light forces can be employed by heavy forces to conduct raids and ambushes, operations in restricted urban terrain, and rear operations.

Supply Support

Heavy forces use a combination of supply point or unit distribution systems to sustain the force in combat. Light forces are not structured to use the same system as a heavy force. Heavy-light operations require more logistical planning and coordination for both the heavy and light portions of the force than independent operations. Logistical planning and coordination for a light force is done at the brigade level. The light battalion, unlike a heavy battalion, does not have the organizational structure or capability to plan for its logistical requirements. Requiring a light infantry battalion or company to conduct its own logistical planning and support diverts its attentions and resources from its primary combat mission. A heavy brigade that has a light force must be prepared to plan and provide logistical support for the unit. This includes all classes of support and supply from casualty evacuation to food, water, and maintenance. Logistical support for a heavy-light force must be planned for and pushed to the force. FMs 63-2,63-20, and 63-21 have details on support of heavy-light mixes.

Section IV
SUPPLY SUPPORT OF OPERATIONS IN DIFFERENT ENVIRONMENTS

NUCLEAR, BIOLOGICAL, AND CHEMICAL OPERATIONS

Threat forces have specialized NBC troops and units. They also train all of their combat and CS soldiers in NBC warfare. US forces must be prepared to fight in an NBC environment. Combat units cannot fight for long without support. The units that provide the support are prime targets for NBC attacks. FMs 3-3, 3-4, 3-5, and 3-100 have details on NBC individual and collective protective measures, contamination avoidance, and decontamination techniques. NBC warfare will affect equipment supply routes, supply requirements, and supply trains.

Effect on Equipment

The electromagnetic pulse from a nuclear detonation can damage ADP and communications equipment that processes supply requirements. Tape disks can be wiped out. Cover critical supplies and equipment with tarpaulins, shelter halves, or ponchos to protect them from contamination. Monitor items exposed to contamination before use. Perform partial decontamination of unit equipment as far forward as possible. Only mission-essential surfaces need to be decontaminated using on-board decontamination apparatus. Complete decontamination requires the aid of battalion decontamination teams or units authorized special decontamination equipment. Perform complete decontamination only when absolutely necessary. CSS units may need to get replacement equipment if their vehicles and MHE were damaged or destroyed during the conflict. Recovery and salvage operations may be hampered by contamination of damaged equipment. The using unit decontaminates damaged unit equipment partially prior to evacuation.

Effect on Supply Requirements

A nuclear blast can crush supplies. Thermal radiation can cause fires at supply points. NBC defense companies and forward CSS units must stay highly mobile so that they can support units in contaminated areas on short notice. To ensure mobility, they carry a limited amount of protective items, replacement clothing, bathing supplies, and decontaminating material. They also maintain a limited ASL. Because of this, supporting units may need to stock greater quantities of protective overgarments than authorized in CTAs. As the NBC threat increases, units often widen the distance between supply points and supported units. Increased distances decrease the chances of more than one unit being destroyed or contaminated at the same time. The need for increased distances places added pressure on CSS units in providing supply support. Once an attack occurs, decontamination companies and the units they support also require increased deliveries of chemical antidotes and protective and replacement clothing and equipment. FMs 63-1, 63-2, and 63-3 discuss CSS operations and logistics support in separate brigades, divisions, and corps.

Class II. Commanders establish the level of MOPP gear that must be worn. Contaminated protective clothing must be burned, buried, or destroyed. As the threat of an NBC attack increases, units also need extra quantities of tarpaulins, plastic sheets, and other materials to use as protective coverings for vehicles and equipment. Heat from a nuclear blast can melt and deteriorate plastic and rubber items. CSS units will be called on to provide large quantities of protective and replacement clothing and equipment as well as decontamination materials and equipment. Class II items needed for decontamination operations are listed in tables in FM 3-21. Contaminated items of individual equipment that cannot be decontaminated by the soldier using the individual decontamination kit are decontaminated by battalion decontamination teams. Contaminated uniforms and other clothing items must be containerized or packaged to prevent the spread of contamination.

Class III packaged. Class III packaged supplies include NBC decontaminates. Other than for such items, Class III packaged consumption does not increase greatly during NBC operations. Heat from a nuclear blast can cause Class III packaged combustibles to ignite and lubricants and metal containers to melt. Flammable items should be kept separate from other supplies and equipment. Smoke screens generated by vaporizing fog oil in mechanical smoke generators and smoke pots may reduce the heat and blinding effects of nuclear blasts.

Class IV. Since CSS units are scattered widely during NBC operations, there is a greater possibility of theft, sabotage, and enemy attack. The need for tighter security causes increased requests for barbed wire, barrier materials, and other fortification supplies. Units also need more sandbags and building materials to construct emergency shelters and underground storage areas. After an NBC attack, CSS units supporting decontamination platoons need

additional construction materials to build sumps and decontamination sites.

Class VI. Decontamination units need large quantities of bathing, shaving, and sanitation supplies. As a rule, these types of supplies are part of Class I ration supplement sundries packs and are distributed with subsistence items. Ration supplement sundries packs are normally low-priority items. Dry shaving powder, scissors, and disinfectant may be added to the list of necessary Class VI items. During NBC operations, these items could become mission essential because they help ensure proper fit of MOPP gear. To maintain troop morale during sustained war, Class VI supplies are sold by sales teams or AAFES exchanges set up in the COMMZ or corps.

Class VII. Class VII supplies include protective masks and NBC apparatus. Since weapons systems and other Class VII equipment may be damaged or destroyed during a conflict, consumption of Class VII supplies will increase accordingly. Replacement items come from war reserves and operating stocks. They are issued first to units that can reenter the battle the quickest.

Effect on Supply Routes

Main supply routes may be blocked by fallen trees, rubble, and debris caused by nuclear blasts. Earth-moving equipment may have to be used to clear routes. Alternate supply routes and sources are needed. However, alternate supply routes can result in increased turnaround and increased need for cargo vehicles. Other units may be using these alternate routes to relocate to uncontaminated areas. If alternate routes are not passable, some of the MSRs may have to be cleared or decontaminated. This delay increases the OST for all supplies and equipment. Supplies may have to be airlifted to forward units. Resupplying by air has the advantage of flying over contaminated areas.

Effect on Supply Trains

During NBC operations, CSS units give support first to combat units in forward areas. Next, they support CS and other CSS units in forward areas. CSS units operating in rear areas have the lowest priority. MMCs divert supplies from their original destinations to forward CSS units. Only mission-essential supplies and equipment are stocked in the forward CSS units. Resupply to these forward units is generally done at night using unit pile or truck-to-truck distribution so that the supplies can be issued as far forward as possible.

SMOKE OPERATIONS

Our forces must be prepared to use smoke and to fight in a smoke environment against an enemy who may be better trained and better equipped for such operations. Smoke operations are covered in FM 3-50. Chemical smoke generator companies generate smoke by vaporizing packaged Class III fog oil.

Operational Concept

Smoke screens support not only combat operations but CSS operations as well. Smoke screens can help conceal MSRs and mark supply points for air delivery of supplies. By screening our logistics support operations and positions, smoke operations increase our battlefield effectiveness.

Supply Support

QM general supply companies, GS; S&S companies, DS; and main supply companies supply chemical smoke generator companies with the fog oil needed to produce smoke.

NIGHT OPERATIONS

Often the tactical situation is such that supplies must be delivered at night. Since the use of MHE is reduced by darkness, supplies should be prepared and loaded on trucks during the day for night delivery to forward supply points. The supply point external SOP should require supported units to send extra personnel to serve as walking guides and to help load supplies onto the trucks by hand. Blackout procedures in the internal SOP may require personnel to take the following actions:

- Use flashlights that have lens filters.
- Black out doors and windows of storage buildings.

- Block light from large tents with salvage tentage.
- Use ponchos as blackout flaps on other tents.
- Use blackout lights on vehicles and forklift trucks.

There are several factors to consider when your unit moves at night. They include the rate of march, vehicle density, and light discipline. Instruct your officers and NCOs on safety precautions to be followed in a night move. See FM 55-30 for more details on night convoys, including advantages and disadvantages.

URBAN OPERATIONS

US forces must be prepared to fight in areas where buildings and man-made obstacles block LOC. When soldiers fight in urban areas, buildings and terrain limit the mobility and capabilities of weapons systems. Unlike jungles or deserts, urban environments have no recurring physical feature. Units must be prepared to fight in small, mountain, farm villages and in densely populated cities. Combat operations are also hampered by civilians remaining in fighting zones. Units may need to provide food, shelter, and protection for internees or refugees. This may require supplies and manpower normally used to support combat activities. Also, security must be tightened when civilians are near, since sabotage, theft, and intelligence leaks increase. Buildings, low visibility, civilians, and close combat make it difficult to apply basic tactical guidelines. FMs 90-10 and 90-10-1 describe how to plan for and conduct operations in urban areas.

Effect on Equipment

Crowded and built-up areas limit the amount of movement and the use of combat equipment. Units should rely more on hand-carried or easily transported items. Limit recovery operations to moving disabled equipment to guarded areas along supply routes. Often vehicles and equipment cannot be evacuated because of rubble. Instead, units will have to rely on increased cannibalization. Units may be able to get replacement items and parts from local civilian manufacturers.

Effect on Supply Requirements

Urban areas may have warehouses, sheds, and buildings to use for storing and securing supplies. Units should use existing LOC and storage facilities as much as possible. This cuts down on the OST and reduces manpower and resources that would have been used to construct facilities.

Class II. Increase Class II stocks during urban operations to allow for those items that were damaged, destroyed, or lost.

Class III packaged. Using engineer and generator-powered equipment to clear rubble increases the need for packaged POL, especially diesel fuel. Units should stock enough Class III packaged supplies to cover supplies damaged or destroyed by fire or combat and to meet requirements for smoke screens.

Class IV. Close combat and the need for increased security operations increase the need for Class IV materials. Units need increased amounts of barrier materials, barbed wire, sandbags, and construction supplies to build shelters and to fortify and secure buildings and storage areas.

Class VI. There is no marked increase in sanitation and health items generated by operations in urban areas. Generally, the amount and type of personal health items contained in Class I ration supplement sundries packs meet the health and welfare needs of most units. If additional or different personal health items are needed, contact a medical supply support unit. In sustained war, Class VI items might be sold by sales teams or AAFES exchanges to support troop morale.

Class VII. Limited space and mobility in most urban areas limit requirements for Class VII items. However, units should increase their stocks of hand-held or portable weapons. In most cases, major equipment cannot be replaced or evacuated to rear areas for repair. If parts are not available to repair Class VII items, cannibalize severely damaged US equipment or captured enemy items.

Class X. Requirements for Class X items may double or triple during an urban conflict if units are responsible for providing clothing, food, shelter, and protection for civilians remaining in the battle area. Because of this, commanders may be faced with the problems of where and how to get these items, where to store them, and how to distribute them.

Effect on Supply Routes

As a rule, urban areas have railroads, ports, highways, and pipelines already set up. Use them to help deliver and distribute supplies and equipment. Sometimes supply routes may be jammed by civilian refugees or blocked by rubble. When this happens, you may have to set aside and secure supply routes for military use only. Use air support to help locate new routes. Engineer units can help clear them. In emergencies, supplies can be airlifted. However, an airlift or airdrop should be reserved for high-priority or mission-essential supplies that will help sustain combat.

DESERT OPERATIONS

As a result of their natural resources and strategic locations, desert areas are most important. Limited concealment and cover in a desert environment make logistics facilities easy targets. FM 90-3 has details on desert operations. It describes how to prepare for desert operations and how CSS units function in desert environments.

Effect on Equipment

The desert puts an extra strain on equipment. Engines have a tendency to overheat. Plastics, lubricants, and rubber deteriorate. Dust and sand add to these problems. Filters require frequent replacement. Air and fluids expand and contract more rapidly due to the extreme temperature changes. Desert winds can be destructive to large pieces of equipment. The harsh environment requires that equipment be carefully maintained.

Effect on Supply Requirements

Supply is vital in the desert, where water is scarce and mobility limited. Long distances between units slow resupply and make LOC vulnerable. Units in the desert should keep stocks at higher levels to cope with increased work loads. However, quantities should not be increased to the point that mobility is affected. Units need to make arrangements for unexpected requirements and mission-essential equipment to be moved by air to forward sites.

Class II. Class II consumption increases in the desert. Clothing exchange may not be possible in the early stages of a desert operation. In forward areas, it might not be possible at all. Increased clothing supplies are needed due to limited CEB points. A greater variety of clothing is needed to cope with extreme temperature changes. Clothing requirements will range from goggles and tropical wear to sleeping bags and heavy sweaters. In harsh rocky terrain, there will be a high demand for footwear. There is also an increased need for neck scarves and canteens. Extra tents and tarpaulins are needed to protect equipment from sand. A need for items such as tools increases because they tend to get lost more easily in the sand.

Class III packaged. The desert heat, dust, and sand increase the need for lubricants, oils, and antifreeze. High winds, dust storms, and air currents rising from hot sands make it difficult to maintain smoke screens generated from fog oil. However, it is possible to use fog oil to screen artillery positions and reduce muzzle flash in the early morning and late evening. Make sure motor oils with proper specifications are on hand for a hot desert environment.

Class IV. Requirements for Class IV items, such as sandbags and lumber, are increased to build fighting positions in desert operations.

Class VI. There is a high demand for Class VI supplies, especially for liquids and skin and eye ointments. Soap, toiletries, and disposable towelettes will be needed for bathing when the tactical situation and water scarcity prevent bath service. If transportation is limited, Class VI items are given low priority. Class I ration supplement sundries packs are needed in a desert environment. Medical units should receive priority for sundries packs

issue when there is limited transportation space. In sustained war, Class VI items are sold by sales teams or by AAFES exchanges.

Class VII. The intensity of battle regulates the demand for Class VII supplies in a desert environment. Refrigeration equipment will be needed to move remains to an area of interment.

Effect on Supply Routes

MSRs in the desert are possible targets for ambush during night operations. They are also subject to being mined. The following concealment tactics can lessen the threat to supply routes.

- Vehicles should not form a pattern when stationary or moving.
- Vehicles should follow existing tracks so that the enemy cannot tell how many vehicles have passed.
- All vehicles of a given type should look alike. This will allow water and fuel vehicles to blend in. Also, canopies will ensure vehicle disguise and help protect them from the sun's heat.
- Exhaust systems should be screened to reduce the chance of heat detection.
- Noise should be muffled. Doors can be removed to prevent them from being slammed.

Effect on Supply Points

Supply points that are widely dispersed are vulnerable to attack by ground and air forces. Their stocks should be kept as mobile as possible in the event that rapid displacement is necessary. Stockpiling of vehicles should be kept to a minimum. A supply point in the desert should be supported by additional transportation units. This enables greater mobility. When supported units move, it may be necessary to divide supply point operations. Some personnel and equipment may be sent to establish a new position. The rest can carry on operations at the original location until units move out. Because supply points are vulnerable to attack, emphasize selecting positions that offer concealment rather than tactical efficiency. This is especially true where air defense cover is limited. Camouflage nets, pattern painting, and mud covering on reflective surfaces help to ensure survival. To help conceal desert supply points--

- Place stocks irregularly to prevent a definite pattern from being formed and spotted from the air.
- Follow the local ground pattern. The shape of the area should not be square or rectangular.
- Pile supplies as low as possible, and dig in if possible.
- Cover stocks with sand, burlap, netting, or anything that blends with the terrain.
- Mix contents of each supply point. This prevents a shortage of one item occurring from destruction of stocks.
- Select a location where vehicles can use existing trails.

COUNTERGUERRILLA OPERATIONS

Because CSS units stock large amounts of food, ammunition, fuel, and other mission-essential supplies, they are prime targets for guerrilla attacks. Generally, CSS units are isolated and do not have combat troops assigned for protection and security. Therefore, CSS troops must perform security and defense activities in addition to their support missions. Jungle and mountain terrains make it easy for guerrilla forces to attack.

Effect on Supply Requirements

To lessen the effects of guerrilla attacks, CSS units are scattered to help prevent mass destruction. They also change locations frequently to maintain security. Supplies may need to be transported over roads that are not secure. Pack animals or personnel may be used to transport supplies. Forward CSS units should keep only a minimum of essential supplies on hand. This will give them greater mobility. It also reduces the number of personnel needed to maintain and protect the stocks. Some supplies can be airlifted to CSS units. However, airlift should be used only in emergency situations.

Class II. As sabotage and security operations increase, units need extra amounts of some Class II items. Also, Class II items are highly preferable,

and they will need to be replaced if destroyed. Use secure radios to communicate so that the guerrillas cannot detect you.

Class III packaged. Class III packaged consumption does not increase greatly during counterguerrilla operations. CSS units should keep enough stocks of Class III packaged on hand to replace losses caused by fires or damaged or destroyed containers.

Class IV. The need for barbed wire, barrier materials, and sandbags matches the need for tighter security. Construction materials may be needed to help camouflage supplies and equipment or to build decoy items. Engineer support used to build and repair bridges, sheds, and shelters also increases the need for fortification and construction supplies.

Class VI. Since only essential health and sanitation supplies are needed during counterguerrilla operations, there is a decrease in Class VI supply requests. Generally, the only Class VI supplies issued are in the Class I ration supplement sundries packs distributed with subsistence. When the tactical situation permits, sales teams or AAFES exchanges sell Class VI items.

Class VII. One of the major aims of guerrilla activities is to damage or destroy weapons systems. This increases the need for Class VII supplies. Forward CSS units may need to rely on other noncombat unit stocks for exchange of radios, small arms, and vehicles. Essential items are issued to units that can reenter battle first. Give Class VII supplies transportation priority so that fighting can continue.

Effect on Supply Routes

Use multiple supply routes. This makes it difficult for guerrilla forces to know where and when to attack.

Effect on Supply Trains

DS units support counterguerrilla operations from brigade trains. When a division is deployed, CSS units operate in the DSA. Supply trains provide supplies and services to units in the brigade area.

JUNGLE OPERATIONS

Jungle regions are potential battlefields. Climate, terrain, and vegetation vary with location. The jungle environment may include swamps, cultivated areas, grasslands, or densely forested areas. Dense vegetation, high temperatures, and high humidity require adjustments in supply support operations. Abundant rainfall can slow surface resupply operations. Climate and vegetation can restrict movement, observation, communications, and target acquisition. The degree to which units are trained to fight and support in the jungle will determine success or failure. FM 90-5 provides guidance on fighting and surviving in the jungle.

Effect on Equipment

Leather, canvas, and rubber are subject to mold and have a tendency to wear out quickly in the jungle. High temperature and humidity may cause equipment to rot and may aid the growth of bacteria. Equipment requires daily cleaning in a jungle environment.

Effect on Supply Requirements

Use unit distribution to deliver supplies directly to forward companies. Supplies can be moved more quickly by air from field trains than over land from combat trains. Waterways can also be part of a transport supply system. However, pack animals or humans are often the only means of moving supplies in jungle operations.

Class II. The tropical environment causes Class II items to deteriorate rapidly. Use tarpaulins to protect equipment from the rain. Combat boots and socks seldom last long. Extra stocks should be stored at supply points. Clothing may require treatment with fungicides and might have to be exchanged every five or six days. Wet weather poncho liners may be needed. Screens and filters help keep insects from getting into equipment.

Class III packaged. Since there are only a limited number of vehicles forward during jungle operations, supplying Class III packaged items is not a great problem. Helicopters can supply the forward positions with 55-gallon drums of diesel fuel, motor fuel, and fog oil using cargo nets. Protective

lubricants, lacquers, and varnishes are required to help prevent rust. In jungle operations, requirements for fog oil increase when tactics call for smoke measures or smoke screen countermeasures.

Class IV. Construction materials and special barrier equipment are heavy and bulky. Using large amounts of Class IV materials creates transportation problems. Lift helicopters are a practical method of moving these items in a jungle environment.

Class VI. Lotions to protect personnel from insect bites and poisonous plants are needed in a jungle environment. Personal demand items help to build morale.

Class VII. Major end items need to be protected from a jungle environment. Vehicles need to be inspected frequently. Major end items not in use should be sent to the rear areas.

Effect on Supply Routes

In the jungle, supply vehicles are easily ambushed, mined, or booby trapped. Road-clearing and mine-clearing operations should be repeated each morning before traffic starts to move. Patrols provide security against ambush and attack. Clearing vegetation near roads will help prevent ambush. If supply vehicles are ambushed, escort vehicles, combat vehicles, and attack helicopters should assist in countering the attack.

Effect on Supply Trains

Supply trains are located in the forward areas. Since most resupply is done by air, the combat trains may be located with the field trains in the brigade trains area. Combat trains provide rations, ammunition, lubricants, medics, and a maintenance element. Field trains provide POL, vehicles, ammunition, rations, and an aid station. Airlift supply allows fewer supplies to be stockpiled in the combat trains.

AMPHIBIOUS OPERATIONS

Amphibious operations involve assaults from seacraft or aircraft against enemy shores. Using sea vessels as bases increases force mobility. Since forces are gathered aboard ships or in aircraft, there is a less noticeable buildup of troops, supplies, and equipment. This gives commanders an edge in choosing where and when to attack. Using helicopters and amphibious vehicles to move troops and supplies from sea bases to attack points requires detailed planning and coordination. FM 20-12 describes amphibious embarkation of landing forces. FM 31-12 tells how to plan, prepare, and train for amphibious operations.

Effect on Equipment

Water damage can be a major problem. Proper waterproofing will reduce equipment breakdown and damage. Commanders should set up areas to ensure that vehicles and other equipment are returned to mission-capable condition.

Effect on Supply Requirements

Initial or assault supplies are carried in amphibious vehicles or helicopters during the assault. These supplies provide initial support for landing forces and operations. Commanders should plan on a 5- to 15-day stock of survival and mission-essential supplies. This will allow operations to continue until resupply can occur. Weather and sea conditions may hamper resupply operations. Assault supplies should be carefully selected and packed to allow rapid unloading and distribution and to make the best use of transportation and storage space. Careful packing will also serve to reduce congestion in beach support areas during the early critical stages of the assault. Only limited amounts can be sent as assault supplies. Commanders should ensure that follow-up supply quantities are increased to make up deficiencies. Resupply levels need to be high enough to lessen the need for air delivery of emergency supplies. When setting resupply levels, commanders should increase those supplies needed by CSS units as well as those needed by combat or CS activities. Assault teams submit requests for emergency supplies to the division. Emergency supplies are airlifted to the landing area or beachhead or placed on floating dumps.

Class II. The environment that amphibious forces will face upon landing determines the need for an increase or decrease in Class II supplies. In most cases, units should consider increasing clothing and individual equipment and waterproofing substances.

Class III packaged. The quantity of Class III packaged supplies which units need to stock depends on the area in which the amphibious operations take place. As a rule, large quantities of 55-gallon drums of diesel and motor fuel are needed. Protective lubricants are needed to prevent rust.

Class IV. Units need increased amounts of construction materials and barrier equipment during amphibious operations. Use these materials to secure the beachheads and build temporary storage areas and shelters. Class IV stockage depends on the mission and the number of combat units assigned to accomplish the mission.

Class VI. Issue personal demand items as soon as practical to build up morale. As a rule, these items are in Class I ration supplement sundries packs issued with subsistence. If more items are needed, units may contact medical support companies.

Class VII. Salt water can deteriorate and severely damage Class VII items. Commanders must plan for replacement items for all mission-essential equipment as well as possible airlift of essential items. Units should try to get as many replacement items and repair parts as possible from cannibalizing captured enemy equipment or nonreparable US items.

Effect on Floating Dumps

Floating dumps are supply points made up of landing craft and amphibious vehicles. Shore parties depend on floating dumps until enough items can be stocked at the beachhead or until resupply operations can begin. When landing craft are available, commanders should request them. Their speed increases mobility. Landing craft are loaded with supplies and equipment which shore parties need to carry out and sustain operations. There may be 6 to 10 floating dumps per assault landing team. Each dump should carry a basic load of mission-essential and survival supplies and equipment. Supplies are delivered to the shore parties as they are needed.

COLD WEATHER AND MOUNTAIN OPERATIONS

Cold weather and mountain operations pose a special challenge to CSS units. Winter and mountain weather increase the time required to perform supply support. Mobility in mountain or cold weather areas is difficult. Proper equipment is vital to successful operations. FMs 9-207, 31-71, and 90-6 provide guidance on mountain and cold weather operations. They describe how CSS units can plan for and support operations in this weather.

Effect on Equipment

Cold weather, high altitudes, and rough terrain require special clothing and equipment. Army BDUs and combat boots wear out quickly in rocky terrain. Adequate stocks of clothing must be available to replace damaged and worn-out items.

Effect on Supply Requirements

It may be necessary to disperse support units in mountainous terrain. Though this reduces vulnerability, it increases local security and command and control problems. To ensure a continuous flow of supplies, CSS units must be well protected against ground and air attack. Unit distribution is often used in mountain operations. Deliver supplies as far forward as terrain and weather permit. Communication is limited. Airfields, good roads, and railroads are also limited. Their scarcity hampers supply flow. You may need pack animals, tracked vehicles, sleds, and skis to deliver supplies. Successful supply operations require flexibility and advance planning on the part of logisticians and supply class managers.

Class II. Rugged terrain increases the need for replacement of clothing, boots, and other personal items. Cold weather items such as parkas, liners, mitten inserts, sleeping bags, and goggles are also in high demand. White coverings or cold weather

camouflage nets simplify the camouflaging of troops, equipment, and supplies in snow-covered areas.

Class III packaged. Increased stocks of Class III packaged lubricants, antifreeze, and fuels are needed. Tanks operating in mountainous terrain need 30 to 50 percent more fuel and coolant. Fuel cans are frequently required to refuel vehicles in forward areas when terrain conditions restrict the use of tank and pump units. Class III packaged goods should be constantly checked for package warping and product deterioration resulting from temperature changes. Since smoke screens last longer under extreme cold conditions, less fog oil is required.

Class IV. Using local materials reduces Class IV needs and demands on the transportation system. Mountainous areas often contain trees which can be used to erect fortifications and barriers and prepare cold weather shelters.

Class VI. Lip balm and skin lotion are needed. They combat the effects of cold weather.

Class VII. Transporting large end items to forward units is difficult in cold weather and mountainous areas. Therefore, emphasize maintenance, repair, and return to user of such items rather than the use of replacement end items.

Effect on Supply Routes

Routes to and through supply train areas are important when deciding on site selection. Establishing a number of supply routes will help reduce the amount of traffic and lessen the chance of enemy attack. Cold weather or a mountain environment often provides ideal terrain for enemy attacks and ambushes on supply route traffic. Enemy units can be dropped by air or can infiltrate from the rear to seize important road junctions. It may be necessary to establish route patrols and observation posts to secure MSRs. Observation posts along supply routes should have surveillance devices to help improve the ability to operate in bad weather and at night.

Effect on Supply Trains

Locate supply trains as far forward as possible. To increase dispersion, battalion trains are divided into combat and field trains. Combat trains may be set up in valleys or ravines on the near slope of the terrain that the unit is occupying. Keep trains small and mobile so they can be relocated quickly.

CHAPTER 2
MANAGING GENERAL SUPPLY SUPPORT
Section I
MANAGERS AND MANAGEMENT OBJECTIVES

GENERAL SUPPLY ITEM MANAGERS

Grouping items into classes and materiel categories enables managers to provide better support to our forces. Position 1 of the materiel category structure code on the AMDF identifies who has wholesale managerial responsibility for an item. Item managers for supply Classes II, III packaged, IV, VI, VII, IX, and X are listed in Table 2-1, page 2-3. Item managers must consider a variety of supply data and supply management areas in the performance of their duties. In addition to the unique characteristics of the supply class for which they are responsible, item managers must be concerned with the following:

- Operating levels, safety levels, and ROPs.
- Criteria to add and retain items in stock.
- Management controls which may be imposed.
- Equipment authorizations (Class VII only).
- Authorized war reserve levels.
- Projected activity levels and consumption rates.
- Capacity of automated systems to generate demand and asset data.
- Ability of the using unit to prepare formal requests.
- Funding ceilings.

SECONDARY ITEMS MANAGEMENT

Secondary items include Class I, II, IV, and IX items and maps. There are approximately 3.5 million secondary items in defense supply systems. They amount to approximately 80 percent of all Army-managed items and about 47 percent of all items used by the Army. Approximately 300,000 secondary items are stocked in CONUS depots. About 90 percent of these items have an annual acquisition value of $5,000 or less.

SUPPLY STOCKAGE OBJECTIVES

AR 710-2 prescribes stockage objectives for the theater of operations in terms of DOS. The theater army commander prescribes levels for the combat zone and the COMMZ. DSUs in the BSA stock an RO of 10 DOS and ROP of 7 DOS. In mobile situations, divisions may maintain only those supplies needed to sustain operations until more supplies can be delivered. If mobility is not impeded, an additional small stock of reserve items may be maintained to cover interruptions in supply schedules. DSUs in the DSA, COSCOM, and TAACOM stock an operating level of 30 DOS and an ROP consisting of a 5-DOS safety level and actual OST. Theater army GSUs maintain 5 to 10 days of all classes except Class II and IX items delivered by ALOC. Details on supply levels are in ARs 11-11 and 710-2.

SUPPLY PERFORMANCE OBJECTIVES

AR 710-2, Chapter 1, prescribes a series of supply performance objectives and management levels for SSAs below the wholesale logistics level. Objectives set by AR 710-2 are attainable goals under normal operating conditions. Management levels are acceptable ranges of performance. They are expressed as percentages or upper and lower allowable limits. Performance NOT in the allowable range should receive intensive management. The formulas, supply objectives, and management levels in AR 710-2 have been developed to enable managers to monitor the following:

- Demand satisfaction.
- Zero balance with due-outs.
- Inventory accuracy.
- Materiel release denial rate.
- Receipt processing.
- Request processing.

- Location survey.
- Mobility index, forward and rear.
- Excess cycle.
- Disposition excess indicator.
- Automated system cycles.
- SSSC or QSS zero balance.
- Inventory adjustment rate.
- High-priority requisition rates.

DS4 Supply Performance Report (PCNAGL-C17)

This is the key management report for measuring support provided to customer units. The report gives the percent of demand satisfaction and number of demands. It also gives balance statistics on the number of ASL lines (less QSS and SSSC). It lists statistics for each DSU and for the division as a whole. (NOTE: The balance file statistics are a "snapshot" of the ABF as of the date the report is prepared.) A separate page is prepared for Class IX common, aircraft, and missile items as well as for Class II, III packaged, and IV. Entries are explained in TM 38-L32-13. The supply performance report is a weekly or monthly report.

DS4 Stock Status Report List (PCNAGL-C21)

The item manager generates this report weekly. The stock status report lists balances for all ASL and non-ASL items and levels computed for ASL items. This report is the primary source for management and catalog data on ASL and NSL items with on-hand balances. Managers may use it to identify problem areas and imbalance conditions. This includes due-outs with assets on hand, due-outs with no due-ins, zero balances with no due-ins, and excess quantities of unserviceable items on hand. Since the DS4 stock status report list is the basic management document that lists all assets on hand, it is essential to continue operations when a system failure occurs.

SAILS Reports

These reports are intended to be produced on a monthly basis and give all supply actions which occurred during a specified control period, or as of the report's cutoff date. Separate reports are produced for secondary and PA items and for medical and nonmedical activities. These reports provide statistical data required to do the following:

- Evaluate the supply activity management performance for secondary and PA items.
- Evaluate the supply activity performance against established standards.
- Evaluate the supply activity support of authorized customers and evaluate the supply activity support from its source of supply.
- Determine the supply activity actual work load and identify potential and actual problems that may occur in providing required support.

DIRECT SUPPORT SYSTEM AND AIR LINES OF COMMUNICATION

In wartime, DSS and ALOC, described in FM 38-725, provide rigid OST standards for each segment of the requisition processing cycle. DSS and ALOC OST objectives are listed in FM 38-725 and in AR 710-2. By knowing the OST objective, the requisitioner can take action to help resolve problems and to ensure that orders are received within the required time. Requisitioners can send a DSS and ALOC problem flasher message to the Commander, US Army Materiel Command, ATTN: AMCSM-MTS-D, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001.

Table 2-1. Item managers for general supply items

General Supply Class	Item Manager Code	Materiel Category	Inventory Manager, Materiel Readiness Command, or Service Item Control Center
II, VII	B	Ground forces support materiel	US Army Troop Support Command St Louis, Missouri 63120-1798
II, IV	E	General supplies	US Army General Materiel & Petroleum Activity New Cumberland, Pennsylvania 17070-5008
II	F	Clothing, textiles, and nonmedical toiletries	US Army Support Activity Philadelphia, Pennsylvania 19101-3460
II, VII	G	Communications and electronics equipment; electronics	US Army Communications & Electronics Command Fort Monmouth, New Jersey 07703-5006
II, VII	H	Aircraft and aircraft materiel	US Army Aviation Systems Command St Louis Missouri 63120-1798
II, IV	J	Ground forces support materiel	US Army General Materiel & Petroleum Activity New Cumberland, Pennsylvania 17070-5008
VII, II	K	Combat, tactical, and support vehicles and components; repair parts related to mobility	US Army Tank-Automotive Command Warren, Michigan 48090-5000
VII, II, IX	L	Missiles and missile materiel	US Army Missile Logistics Center Redstone Arsenal, Alabama 35898-5000
VII, II, IX	M	Ammunition, weapons, tracked combat vehicle weapons, special weapons, and chemical and fire control materiel	US Army Armament, Munitions, and Chemical Command Rock Island, Illinois 61299-6000
II, IX	Q	Electronic materiel	US Army General Materiel & Petroleum Activity Fort Monmouth, New Jersey 07703-5006
III, II	R	Bulk & packaged petroleum fuels, packaged petroleum products, containers and accessories, and certain chemical and solid fuels	US Army General Materiel & Petroleum Activity New Cumberland, Pennsylvania 17070-5008
II	T	Industrial supplies	US Army General Materiel & Petroleum Activity New Cumberland, Pennsylvania 17070-5008
VII, IX	U	COMSEC materiel	US Army CECOM Communications Security Logistics Activity Fort Huachuca, Arizona 85613-7090
VI	NA	Personal demand, comfort, and hygiene items	Defense Personnel Support Center 2800 South 20th Street Philadelphia, Pennsylvania 19101-3460
X	NA	Nonmilitary program items	US Army General Materiel & Petroleum Activity New Cumberland, Pennsylvania 17070-5008

Section II
REQUIREMENTS FOR GENERAL SUPPLIES

REORDER POINT

The ROP helps managers maintain the RO and avoid out-of-stock conditions. When the ROP is reached, stock replenishment action should be taken. An ROP must be set for all demand-supported items. Managers should check the ROP quantity with the current asset position of an item biweekly. This check ensures that an item does not reach an unfavorable stock position.

WAR RESERVE REQUIREMENTS

Classes I, II, III packaged, IV, VII, and IX and maps may be included in war reserve stocks. War reserve levels are computed according to AR 11-11. AR 710-1, Chapter 8, describes basic unclassified materiel management policies and procedures for computing war reserve requirements. It also references classified directives and USAMC plans used to compute requirements.

General Supply Usage or Consumption Rates

The amount of war reserve stocks that must be procured and retained is based in part on usage and consumption rates. Use and consumption rates for chemical items are provided by the Deputy Chief of Staff for Military Operations. Rates for other Class II items are provided in supply bulletins and by materiel readiness commands and TRADOC. Expected wartime use of Class III packaged is found by adjusting current average peacetime monthly demands. Class IV use is based on the theater barrier plan. Class VII requirements are based on wartime replacement factors. Map requirements are determined by the S2 or G2 in cooperation with the S3 or G3.

Secondary Item Requirements

The item manager manages secondary war reserve items until they are issued to the field. Item managers are listed in Table 2-1, page 2-3.

Procurement appropriation-funded secondary items. The materiel readiness commands advise oversea commands of the total computed requirements. They also inform oversea commands when shortages have been found so that requisitions may be placed on the supply system. No requisition funding is required when shortages of these items occur.

Stock fund secondary items. Materiel readiness commands also compute requirements for stock fund secondary items for oversea commands. Oversea commanders must find these requirements.

War Reserve Stockage List

The war reserve stockage list may be used to determine sudden mobilization requirements. AR 710-1, Chapter 8, lists criteria for including an item on the war reserve stockage list. The list identifies the commodity manager responsible for the item and the supply class. Section I of a war reserve stockage list groups items by commodity manager in LIN sequence. Section II lists POL, expendable items (except ammunition), and items without a LIN. Those items are grouped by commodity manager in NSN sequence. An "X" indicates that the item is authorized for stockage in the specific command.

CONSUMPTION RATES AND PLANNING FACTORS

Use consumption rates and planning factors to determine requirements for a given operation. They can be expressed as ratios, rates, lengths of time, or consumption quantities. They will vary because of differences in the types and intensity of operations, types of units, force structure, terrain, climate, and geographic area. AR 700-8 cites the proponents responsible for developing basic consumption rates and planning factors. The US Army Combined Arms Support Command, Fort Lee, Virginia, has primary responsibility for developing

basic logistics planning factors. The US Army Quartermaster Center and School, Fort Lee, Virginia, is responsible for developing logistics planning doctrine for Class I, II, III, IV, VI, VII, and IX supplies.

SUPPLY AND STORAGE REQUIREMENTS

DISCOMs, COSCOMs, TAACOMs, and TAMMCs determine quantities of each item required within their commands. Requirements are based on tactical plans, demand data, previous experience, troop strength, supply level or DOS, and item density.

Initial Requirements

Supplies required for the initial period of operations are based on the following:

- TOE.
- TDA.
- Equipment modification lists.
- Authorization documents (CTAs).
- Troop strength data.
- Type of conflict (short and intense or sustained).

Replacement or Consumption Requirements

These include the supplies needed to keep initial equipment at authorized quantities. They replenish items expended, lost, contaminated, or destroyed. These requirements depend on the following:

- Authorized DOS.
- Troop strength.
- Revision of consumption rates or replacement factors.
- Changes in forces supported.
- Seasonal and other requirements.

Requirements Formulas

FM 101-10-1/2 lists the formulas to use to estimate supply, resupply, storage, and supply level buildup requirements. Use the formulas when both the strength to be supported and the level of supply or DOS needed are known. Consumption rates used in the formulas may vary considerably, depending on force structure, mission, area of operation, and intensity of combat. These rates will need to be adjusted to the type of conflict, level of operation, strength of the opposing force, and tactical situation.

Section III
SUPPLY SUPPORT SYSTEMS

DIRECT SUPPORT UNIT STANDARD SUPPLY SYSTEM SUPPLY SUPPORT

DS4 automates routine supply procedures for divisional and nondivisional units. The system is designed for management of Class II, III packaged, IV, VII (ORF), and IX items. The DMMC can manage stocks in 10 DSUs. Nondivisional units have a stock control section and storage facility which uses DS4 procedures and an organic minicomputer to manage DSU stocks.

Request

Units submit prepunched DA Forms 2765 to their supporting DSUs. An initial supply of two prepunched request cards is provided for each item on the unit PLL. Replacement cards are provided as requests are received. If a prepunched DA Form 2765 is not available, units must prepare the card manually. TM 38-L32-11, Chapter 3, shows divisional and nondivisional unit supply personnel the procedures to request supplies.

Receipt

TM 38-L32-12 has details on how to process receipts. Non-DSS shipments should be processed according to DA Pamphlet 710-2-2. Forward support

DSUs receive items from main or other forward DSUs on a machine-generated MRO. When the item is received and stocked, the MRO is converted to a materiel receipt card and returned to the MMC or to a materiel receipt card stock control section.

Issue

As a rule, requests are sent to the supporting DSU or stock control section for routine machine processing. MMCs may also direct main DSUs to issue replenishment stocks to a supported unit or to a unit supported by another forward or main DSU. TM 38-L32-12 shows DSU storage personnel how to process MROs.

Turn-In

TMs 38-L32-11, 38-L32-12, and 38-L32-13 describe procedures and forms for processing turn-ins. Using units turn in excess items to the supporting DSU that handles the item. The MMC or stock control section identifies excess items in forward and main DSUs. Machine-generated MROs direct storage sections to turn in excess items to higher sources of supply or the division's main ASL. Materiel release confirmations are sent to the MMC or stock control section to update the availability balance files.

DS4 Contingency Procedures

When each day's processing is completed, the cyclic files at each computer site should be put on backup tapes. Store this backup set of tapes away from the primary ADP site.

STANDARD ARMY INTERMEDIATE LEVEL SUPPLY SUBSYSTEM SUPPORT

SAILS is used to process requirements for general supplies at echelons above division. SAILS automates processing for Class II, III packaged, IV, VII, and IX supplies as well as bulk Class III and selected Class VI materiel. System controls permit selective management of individual items. SAILS output transactions are compatible with DS4.

Request

TM 38-L03-19, Chapter 4, shows how to prepare and process requests. Supply requests are submitted on DA Form 2765 or DD Form 1348-6. Input card formats are covered in TM 38-L03-21-1. DSUs and GSUs are provided with prepunched DA Forms 2765 for submission to the MMC. A prepunched card is provided each time a request for a recurring issue is received from the DSU or GSU.

Receipt

DSS receipt cards are processed according to TM38-L03-19, Chapter 14. TM 38-L03-17, Chapter 3, describes procedures used by stock control activities to process receipts. Unit receipt procedures are in TM 38-L03-19, Chapter 7. Documents received with support supply shipments may include–

- An MRO (DD Form 1348-1).
- An in-transit data card.
- An in-transit receipt detail card.
- A materiel receipt acknowledgment card.
- A replacement in-transit data card (DA Form 2765).

Issue

The basic issue document is the MRO (DD Form 1348-1). The MRO may be marked to show materiel release confirmation, denial, or reversal. Issue card formats are covered in TM 38-L03-21-1. Issue procedures are covered in TM 38-L03-17, Chapter 7.

Turn-In

Recoverable items and supplies are turned in through the same channels from which they were requisitioned. If the situation makes this impractical, the commander may establish a turn-in point. TM 38-L03-17 tells COSCOM DSUs and GSUs how to process unit returns. TM 38-L03-19 covers DSU turn-ins to the stock control activity.

Contingency

At the end of each day's processing, all system files at each computer site should be put on tape. The tapes should be stored away from the computer site, preferably with a sister computer system. If one of the computers becomes inoperative, the remaining equipment should be used to perform essential supply functions (request, receipt, store, issue, and edit). If several computers become

inoperative, supply actions may be processed on devices at storage sites. Supply requirements may be filled or passed to the next supply echelon (TAMMC or CONUS). After the computers are repaired or replaced, the master files should be rebuilt using storage site files.

STANDARD PROPERTY BOOK SYSTEM-REDESIGNED

The SPBS-R is a fully interactive, menu-driven, automated property accounting system. It operates in a centralized or decentralized mode whenever there is a requirement for property accountability or asset visibility of major items of equipment. SPBS-R can enhance combat readiness, reduce cost, provide instant supply management information, and protect commanders from reports of survey by providing accurate records of property accountability. The system also--

- Allows DMMC to manage all property book accounts for assigned or attached units loaded for asset visibility support.
- Provides asset visibility support to corps, US Army Reserve, and ROTC units and activities when directed by the MACOM.
- Provides a consolidated property and hand-receipt listing as required. The system provides 35 other output reports and listings for management of property accountability.
- Interfaces with other automated logistical systems.
- Removes property book records of transferring units and activities from its files by means of processing a single transaction. Units and activities being transferred will be provided their records on floppy diskettes. The gaining property book team will upload these diskettes.

STANDARD ARMY RETAIL SUPPLY SYSTEM SUPPLY SUPPORT

A standard Army retail supply system will replace DS4 in divisional and nondivisional DSUs and SAILS at corps and echelons above corps. SARSS will provide automated stock record accounting and supply management for Classes II, III packaged, IV, VII (ORF), and IX throughout the theater of operations. It is being designed so that no major change will be required during mobilization for war. SARSS is divided into various levels.

SARSS Level I

This level will perform stock record accounting for division and separate brigade DSUs.

SARSS Level II

SARSS Level II is divided into two separate subsystems. SARSS IIA maintains asset visibility and directs lateral issues among its subordinate supply activities. SARSS IIB performs non-time-sensitive functions such as document history analysis, catalog update, and stockage levels computation.

AUTOMATED BACKUP PROCEDURES

Loss of information hinders the supply mission. Power failures or electromechanical problems can cause ADP equipment outages. ADP equipment or MMCs may be damaged or destroyed as a result of enemy action. However, units still need supplies, and DSUs still need to supply their supported units. Use the following procedures during equipment outages.

Short-Term Outage

During outages of 72 hours or less, units should continue to follow standard procedures and submit requests to their DSU. In turn, DSUs should follow standard procedures in dealing with their MMC or stock control section. High-priority requests and requisitions should be processed manually as a postpost transaction. DS4 backup procedures are covered in TM 38-L32-13. During the outage period, DSUs should--

- Issue stocks to units arriving at the storage site with high-priority requisitions until all stocks are depleted.
- Issue stocks for low-priority requisitions after 48 hours. Depending on stockage levels, low-priority transactions may be held until the end of the outage period.
- Receive and store all deliveries.

• Prepare paperwork needed to transmit the data to the MMC or stock control section when the information flow is reestablished.

• Complete all processing actions previously received from the MMC.

Long-Term Outage

During long-term outages, supply operations may have to be transferred to a similar or replacement system or to an alternate MMC using COOP procedures. Machine time can be shared. The MMC or stock control section should run only essential processes. If replacement ADP equipment can be set up, hold input documents that can be delayed to run at that time.

MANUAL SUPPLY SUPPORT

In war, automated supply systems are vulnerable to disruption, damage, and destruction from enemy action. MMCs are prime targets. The electromagnetic pulse of nuclear explosions can affect computer tape disks. Nothing can be done on the battlefield to harden equipment against electromagnetic pulse effects. This problem must be addressed in the design and manufacturing stage. However, contingency and backup procedures exist to ensure continued supply support during outages and equipment failures. During short-term outages, low-priority transactions may be held until the end of the outage period. However, high-priority requests and requisitions will have to be processed manually. During long-term outages, the MMC may order that requests or requisitions be prepared manually until computer operations can be transferred to an alternate site or until documents can be run on replacement equipment.

Request

DA Pamphlet 710-2-1 describes manual request procedures for using units. DA Pamphlet 710-2-2 tells DSUs and GSUs how to process requests from units. Supply support activities without ADP equipment follow the MILSTRIP in AR 725-50. Units submit requests to their DSU. Requests may be sent by courier, electrical message, telephone, or radio. DSUs and GSUs send requisitions to the supporting MMC. AR 725-50 shows how to prepare the required forms and how to process the requisitions.

Receipt

Receipt and shipping documents should accompany received supplies. Using units maintain a document register and process receipt documents according to instructions in DA Pamphlet 710-2-1. DSUs and GSUs process receipts according to instructions in DA Pamphlet 710-2-2 and AR 725-50. Each container, package, or document number in a combined DSS shipment should have a corresponding DD Form 1348-1, transportation shipping document, and materiel receipt acknowledgment card. Supplies received from commercial sources usually have an accompanying DD Form 250 or DD Form 1155.

Issue

AR 725-50 and DA Pamphlet 710-2-2 show how to process MROs.

NOTE: According to AR 710-2, MROs with PDs 01 through 03 and NMCS MROs must be processed within 24 hours of the time that they are received. This is on a seven-day workweek, 24 hours-a-day basis. MROs with PDs 04 through 15 must be processed within two days on a regular workweek, regular shift basis.

Turn-In

Using units turn in items to the supply support activity that would normally issue them. DSUs turn in excess items to corps GSUs. All other serviceable or unserviceable reparable, excess items are to be sent to a theater collection and classification point. Combat-loss reports support items dropped from property records.

Using units. Using units turn in items on DA Form 2765-1. They use the procedures in DA Pamphlet 710-2-1. They use DA Form 2765-1 to turn in items that had hidden defects and items that were not requested. They turn in salvage items on DD Form 1348-1.

DSUs and GSUs. These units process unit turn-ins on DA Form 2765-1, following procedures in DA Pamphlet 710-2-2, Chapter 14. They turn in excess items to the supply source using DD Form 1348,

DD Form 1348M, or DD Form 173/1. AR 725-50, Chapter 7, tells how to prepare and process these forms.

WARTIME PROPERTY ACCOUNTABILITY

In times of war or emergency, wartime accountability procedures may be relaxed. The Secretary of the Army approves wartime accountability.

Using Unit Modifications

Though property book accounting remains in effect for OCIE, postings do not have to be supported by documents. In addition, hand receipts are not required. For all other organizational property, property book accounting is reduced to maintaining a running balance of equipment on-hand. Document files are not required. Instead, on-hand quantities are supported by combat-loss reports and daily logistics status reports.

Supply Support Activity Modifications

Though accounting records and files must continue to be kept, vouchers which support entries do not have to be kept after posting is done. Summary accounting techniques apply.

Section IV
SUPPLY ASSISTANCE

LOGISTICS INTELLIGENCE FILE

The LIF is an on-line computerized data base. It centralizes the collection, correlation, and retrieval of supply and transportation data on Army-sponsored requisitions placed on the wholesale logistics system. The LIF is maintained by the AMC Logistics Control Activity. The purpose of the LIF is to furnish supply and transportation pipeline progress of a requisition from the time it is sent through the DAAS to the time materiel is received and posted to the accountable record at the requisitioning activity. The requisition status, receipt posting, reject customer cancellation, and transportation lift notices are recorded in this file. The LIF provides complete historical information on each requisition. It is used to measure DSS performance and focus management attention on specific pipeline segments needing improvement. The data base does not include Class I or III. Customers may use a number of modes to access the LIF data base for requisition status. See AR 725-50, DA Pamphlet 700-30, or FM 38-725. Requisition data can be provided daily or at a set interval. You may send urgent inquiries via DSN or priority message.

SUPPLY ASSISTANCE REQUEST

Any command echelon may request assistance on requisitions with PDs 01 through 08. AR 725-50 tells how to request such assistance. Figure 2-1, page 2-11, shows a sample request on DD Form 173/2. The request must not exceed seven document numbers. The first line of message requests must contain the words, "Supply Assistance Request." Supply sources are the only activities that may send requests to storage activities. They may request that storage activities--

- Check on the status of requisitions.
- Support requirements in a more timely manner.
- Substitute or interchange items.
- Release or cancel back-ordered requisitions.
- Divert a shipment.

MANAGEMENT INFORMATION RESEARCH ASSISTANCE CENTER

CDA provides worldwide "HOTLINE" management data research assistance. The MIRAC is an extension of the cataloging and data bank service offered by CDA. It is manned by an experienced staff oriented to item identification and supply management data problems. Its personnel can help analyze problems and obtain solutions on items of supply. They can verify NSNs, unit prices, units of issue, and other data found in the AMDF. MIRAC personnel answer telephones from 0715 to 1545 Eastern time, Monday through Friday. During nonduty hours, telephone answering equipment

calls from worldwide locations. MIRAC personnel respond to these inquiries the following workday. Replay messages can be recorded on the telephone answering equipment for overseas callers who arrange for this service and who call back after normal CDA duty hours. Call DSN 977-7431 or WATS (717) 770-7431. MIRAC can be reached by electronic mail using the MIRAC address at AMC HQ. Include--

- Item name and NSN (or description).
- Reference publication.
- End item application or manufacturer's code and part number.
- Point of contact and telephone number.
- Information needed.
- Complete address, including office symbol, of requesting agency or activity.

REMOTE TERMINAL ACCESS INQUIRY SYSTEM

The RTAIS provides access to users of AMDF and related logistics management data. The RTAIS permits over 125 different types of computer terminals to directly access the AMDF through various telecommunications lines. This includes a "1-800" service and the Defense Data Network. It does all this at little or no cost to the user, as opposed to the substantial fees charged by commercial vendors providing similar services. In addition to NSN, LIN, and reference number information, other types of data such as commercial and government entity and search for characteristics data are currently available. Component list data, hazardous materiel data, inquiry by nomenclature, inquiry for DIDS data for non-Army NIIN queries, and inquiry for automatic return items are available through this system.

JOINT MESSAGE FORM | SECURITY CLASSIFICATION

PAGE OF	DTG/RELEASER TIME: DATE, TIME	MONTH	YR	PRECEDENCE: ACT	INFO	CLASS	SPECAT	LMF	CIC	ORIG/MSG IDENT

BOOK | MESSAGE HANDLING INSTRUCTIONS

FROM: (INSERT ADDRESS)

TO:

SUPPLY ASSISTANCE REQUEST:

This command is having serious problems due to lack of items in the following documents. Request accelerated delivery and improved estimated shipping date.

Docu No with Suffix (CC 30-44)	NSN (CC 8-20)
1. FB2300/4152/0111/B	8305001234567
2. FB2300/4155/0013/	8310002345678

SAMPLE

DISTR:

DRAFTER TYPED NAME, TITLE, OFFICE SYMBOL, PHONE | SPECIAL INSTRUCTIONS

RELEASER: TYPED NAME, TITLE, OFFICE SYMBOL, AND PHONE

SIGNATURE | SECURITY CLASSIFICATION | DATE TIME GROUP

*DD FORM 1 MAR 79 1732 (OCR) PREVIOUS EDITION IS OBSOLETE

Figure 2-1. Sample request for supply assistance on PDs 01 through 08 requisitions

CHAPTER 3
PROVIDING CLASS II, III PACKAGED, AND IV SUPPLIES
Section I
MANAGEMENT

ISSUE CONTROLS

Because of high cost and the possibility of unforeseen demands, Class IV items (and some Class II) may be placed under controls not applied to other classes of supply. These controls include selective stockage and command approval of items before they are issued.

Selective Stockage

The MMC selects the type and amount of items to be stocked at supply points. As a rule, these items are stocked only after they have been requested a set number of times in a given period. This prevents large inventories that would impede mobility.

Command Approval

Issues must often be controlled if items in short supply are to be on hand for priority requests. Expensive, highly technical, or scarce items are often placed on regulated or command-controlled lists. Items on these lists are critical to a local command for an indefinite period. Division commanders may compose a list of command-controlled items critical to their command. Command approval is required before an item on this list can be issued. Requests for the item must be sent through channels to the commander who made the list. DA prints the lists, and only the commander who initiated the list may take an item off the list.

MOBILITY CONSTRAINTS

There are specific mobility requirements that apply to DSUs and their subordinate elements. The ASL mobility index is the percentage of the total cube of essential stocks that can be transported in one lift with transportation assets that are organic to the DSU. Mobility requirements are in AR 710-2. All ASL items that can be stored in bins must be truck- or van-mounted. DSU forward elements supporting a brigade (maintenance company or supply company, FSB) must be able to move 90 percent of their ASL items within 30 minutes and the remainder within 4 hours. All DSU elements supporting division or large combat units must be 50 percent mobile in one lift and must be able to move the remainder of their ASL by shuttle. Weight and cube data are listed on the AMDF and can be provided by ADP equipment. If corps transportation assets are not dedicated, DSUs need to request transportation from their battalion. Requests would then be passed from the DISCOM MCO to the COSCOM MCO. He coordinates with the DTO who then coordinates with the COSCOM MCT or MCC.

CLOTHING AND TEXTILE REPAIR CONSTRAINTS

The decision on whether or not to repair a clothing or a textile item is based on the total cost to repair that item. For personal clothing items to be economically reparable, the cost of repair must not be more than 35 percent of the cost of the item. For textile items, the cost to repair the item must not exceed 65 percent of the cost of the item. The repair cost includes labor, materials, transportation, and overhead. The theater commander may need to publish a repair policy that would relax these repair limitations for critical items and items in short supply.

PROCUREMENT

Most secondary items are procured with stock funds. A MAT CAT code enables the requisitioner to know if funds are required to requisition the item. It also identifies the type of funds used to procure the item locally. A requisition for stock-funded or OMA-funded items requires that the

requester have OMA funds and the requisitioner have either OMA funds or stock fund obligation authority available. An alphabetic character in the second position of the MAT CAT indicates that an item is procurement appropriation-financed. This means that it is generally a free issue. The third position of the code shows whether an item is reparable or nonreparable.

Section II
CLASS II SUPPLY REQUIREMENTS

CLOTHING, INDIVIDUAL EQUIPMENT, TENTAGE, AND ADMINISTRATIVE AND HOUSEKEEPING SUPPLIES

There are over 100,000 Class II items listed in the AMDF. Class II items include clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, and administrative and housekeeping supplies and equipment. Parkas, combat boots, general-purpose tents, general mechanic tool sets, hammers, file cabinets, and paper towels are examples of each type. Class II also includes NBC-related items. Class II subclasses are identified in Appendix B. The Defense Personnel Support Center procures and manages most of the Class II clothing and individual equipment used by the Army.

Authorized Clothing Allowances

CTAs 50-900, 50-909, and 50-970 list basis of issue allowances for Class II items. Clothing allowances for contingency plans and mobilization must conform with that shown in the "Active Army-Mobilization" column of CTA 50-900. The only exceptions to this are special issue and clothing allowances authorized by special lists or movement orders. Mobilization clothing allowances are mandatory. However, because of existing climatic conditions, commanders should use caution in prescribing full clothing allowances throughout a given command.

Discretionary allowances. An additional allowance may be authorized by movement orders for the health and comfort of soldiers assigned duty in certain climatic zones. Parka liners and mitten inserts are examples of discretionary items authorized for operations in cold climates. Discretionary allowances are listed in CTA 50-900, Appendix I. They are issued at the discretion of the major commander or major Army subcommander. The authority to issue discretionary items may be delegated to subordinate commands.

Contingency force allowances. When allowances are considered inadequate for possible deployment to a specific zone of operation, contingency force commanders may obtain approval from DA to modify the allowances listed in the "Active Army-Mobilization" column of CTA 50-900. An additional canteen and canteen cover for hot desert areas is an example of a special allowance which may be authorized to meet contingency force requirements.

Requirements

Requirements for clothing and individual equipment are based on seven climatic zones. These zones are explained in CTA 50-900, Appendix D. Clothing may also be issued on the basis of MOSs listed in CTA 50-900, Appendix F. The theater or contingency force commander or the FORSCOM or readiness command commander designates those items in the "Active Army-Mobilization" column of CTA 50-900 which are to be worn or carried and those which are to be transported. Requirements for other items of Class II, such as administrative supplies, are based on unit, organization, or activity needs. CTA 50-970 lists initial issue and initial stockage levels for expendable and durable

items. Replenishment quantities must be based on demands and anticipated requirements.

Consumption Rates

In 1987, FM 101-10-1/2 listed the consumption rate for Class II as 3.67 pounds per person per day. The rate may vary depending on force size.

BASIC AND OPERATIONAL LOAD REQUIREMENTS

MACOMs designate the units which must keep basic loads of Class II supplies. Basic loads sustain operations in combat for a prescribed number of days. The method for determining the stockage level will be prescribed. AR 710-2, Chapter 2, authorizes up to 15 days stockage of expendable CTA 50-970 Class II operational load items to sustain peacetime operations. A seven-day level should be enough when operational load items are also available through an SSSC. Operational load supplies may be moved into combat if transportation assets are available after essential lift requirements are met.

Responsibility and Accountability

The commander is responsible for durable items in the basic load. Hand-receipt procedures are used to assign responsibility for durable items but are not required for expendable items. Property book accountability is not required for durable and expendable Class II basic load items.

Replenishment

Basic load items must be on hand or on order at all times. Replenish these items as they are used.

Records

Though property book records are not kept for Class II durable and expendable items, maintain records of demands for basic load items. Document registers must also be kept, but post only the document number, description, quantity, and date.

Load List

A list of Class II basic load items must be on file at the using unit. Give a copy of the initial list to the SSA. Give list changes to the SSA after the first and every other periodic review. Prepare a new list for the using commander's approval, and send it to the SSA after the second and every other periodic review.

INVENTORY REQUIREMENTS

AR 710-2, Chapter 2, requires that all items be inventoried at least annually. Inventory Class II basic load items during the regular review period. Inventory durable items in Class II operational loads annually or upon change of responsibility. Inventory components when the end item is inventoried.

Property Book Items

Account for Class II items on property books. Account for items in the "authorized column" of authorization documents when the quantity in the required column is less than that authorized. Account for CTA 50-900 items (except insignia and initial and supplemental clothing issued according to AR 700-84). Account for CTA 50-909 items and on-hand or on-request nonexpendable special tools and test equipment authorized by an MTOE, a TDA, a JTA, or a CTA and which are listed in a TM or which are not separately type-classified. AR 710-2 requires that property book items be inventoried--

- Upon receipt. (The receiving person must conduct a complete inventory.)
- Prior to being turned in.
- When issued on a hand receipt. (The receiving person must conduct a complete inventory.)
- Upon change of responsible officer.
- Upon change of PBO.
- When directed by the commander.
- During the required annual property book inventory.
- During the annual responsible officer inventory.

When property books are kept at other than the using unit level, the PBO may require a cyclic, monthly, quarterly, or semiannual inventory in place of the required annual inventory. The PBO must conduct an annual inventory of items not issued on hand receipts.

OCIE

OCIE must be inventoried when the soldier has been dropped from the rolls, hospitalized, hospitalized for

more than 60 days (and OCIE was not previously inventoried), ordered to permanently change station while on emergency leave, or placed in an absent-without-leave status.

Wartime Inventories

Inventory requirements during actual wartime conditions depend on the level of organization and the tactical situation. Requirements for using units to perform inventories cease in wartime. Inventories should be taken merely to determine the quantity on hand and the condition or status of property. However, these inventories do not have to be documented. If the situation allows, a cyclic inventory may be conducted. Though discrepancies should be recorded, they do not have to be reported.

Section III
MAP SUPPLY SUPPORT

INITIAL ISSUE

Since a large percentage of logistical planning is done using maps, a major requirement for any operation is an adequate supply of maps. Requirements vary depending on force structure, probable duration of planned operations, quantity of map stocks set aside for the task force, quantity in unit basic loads, and anticipated battlefield mobility. The initial issue of maps for three corps (12 divisions) ranges from 2.7 to 3 million copies (weighing from 135 to 150 tons). However, the Defense Mapping Agency shipped more than 45 million maps (about 2,250 tons) to Southwest Asia in support of only two corps during Operation Desert Shield. Small- and medium-scale maps are issued in small quantities to headquarters only. Quantities vary depending on the size and mission of the headquarters. Large-scale maps are the standard maps normally issued in the main battle area. Initial issue allowances for large-scale maps depend on the type of unit. Small quantities of joint ground-to-air operation graphics are issued to headquarters. Two copies are issued per organic Army aircraft. One copy should be issued per air defense artillery fire unit. Road maps are issued on the basis of one map per vehicle. Limited quantities may also be issued to unit headquarters. Small quantities of maps and map products are issued to interagency teams, such as law enforcement, in support of peacetime contingency operations.

THEATER RESERVE STOCKS

For operations on a mobile battlefield to be effective, topographic data and pre-positioned stocks must be available in deployed units. Actual stockage levels vary according to the types of units. NATO nations have accepted production responsibilities to ensure that preplanned stocks of standard maps are available for interchange between allied forces.

Division Reserve

The division reserve may equal one brigade basic load.

Corps Reserve

The corps reserve may equal one division basic load plus an equal amount of blank paper and printing supplies. A 10-day corps reserve could equal 400,000 to 650,000 copies and weigh 20 to 32.5 tons.

Theater Army Reserve

This reserve may equal a five-division basic load plus an equal amount of blank paper and printing supplies. A QM map supply detachment assigned to the QM supply company, GS, maintains a 30- to 60-day reserve stockage of topographic supplies. A 45-day theater depot reserve could range from 5.4 to 9.0 million copies and weigh 270 to 450 tons.

REQUIREMENTS

From 100,000 to 120,000 copies may be needed daily to resupply three corps (12 divisions). This requirement is based on the map replenishment percentages listed in FM 101-10-1/1, Chapter 6. The formula in Table 3-1, page 3-5, may be used to estimate map requirements for an operation.

Table 3-1. Formula for estimating map requirements

Total Copies (each scale)	=	*Coverage for a Scale	x	Initial Issue	+	Replenishment

*This is determined by using the Catalog of Maps, Charts, and Related Products published by the DOD DMA.

Replenishment Estimates

Replenishment of small-scale maps is 50 percent of initial requirements. Replenishment of medium- and large-scale maps may reach 100 percent of initial requirements.

Operation Plan Requirements

AR 115-11 requires that topographic guidance be included in all OPLANs and orders. OPLANs must include topographic appendixes or sections which describe the map support needed to complete a tactical operation. These OPLANs should include the following:

- Size and makeup of the envisioned task force.
- Initial map issue allowances.
- Existence, quantity, and currency of map stocks which have been or will be set aside for the task force.
- Quantity held by task force units in unit basic loads.
- Possible duration of the tactical operation.
- Degree of allied topographic support anticipated.
- Anticipated map shortfall.
- Ways to decrease any shortfall. This may include anticipated support from indigenous governmental and civilian agencies.
- Deployment phasing and security considerations.

REQUISITION PROCEDURES

The DMA publishes catalogs of standard maps, charts, and map products. Catalogs are available down to separate-company level. All standard map products have a unique number that identifies the map series, sheet, and edition. Maps may be requisitioned using ADP systems and the DMA catalog number as a manufacturer's part number.

Theater Requisition

A catalog of maps may be prescribed for use within a theater. Instructions for preparing requests are listed in the catalog or map index. Maps needed to support critical situations are requisitioned according to MACOM instructions. The S2 or G2 validates requests for nonstandard map products.

Classified Requisitions

AR 380-5 shows how to prepare classified requisitions. According to AR 115-11, requisitions for maps must be classified when map indexes indicate that a map is classified, when size or nature of the requisition indicates a classified operation, or when geographic coverage reveals the location of a classified operation. All classified product requisitions and supplies are handled by intelligence channels. However, GS map supply points store classified maps.

Special Map Products

Requests for special maps and map products go through command channels to supporting engineer map elements. Special products are those items historically provided to commanders by Army topographic engineers. These products include terrain intelligence products, analysis and surveys of all kinds, map overprinting, and overlays. Special products are produced in response to specific command requests. These products do not enter the supply system. If the need is great enough or DMA cannot obtain suitable maps from

any source, engineer topographic units in the theater have the ability to print small quantities of maps. Requirements for small-quantity, quick-service map printing is normally validated by the requesting unit S2 or G2. The request is forwarded to the engineer topographic control detachment. This unit coordinates with the MMC to requisition any standard products to satisfy overprints or other special preparation of map products. If directed by local commanders, some engineer-produced special products may be assigned local control numbers and be stocked and distributed by the GSU map storage site.

REQUISITION AND DISTRIBUTION FLOW

The DMA provides standard maps. Engineer cartographic units in the theater update and, as necessary, prepare locally unique nonstandard maps. Requisitions for unclassified maps flow through supply channels to a QM map supply detachment. Requisitions for classified maps must be sent through S2 or G2 channels. The Quartermaster Corps proponent units are assuming the mission for the receipt, storage, and issue of standard maps and map products.

Brigade Support Area

Using units submit requests for maps to their supporting forward Class II, III packaged, IV, and VII supply point run by a supply company in the BSA. These requests are transmitted to the supply company in the DSA.

Division Support Area

Using units in the DSA submit requests to their Class II, III packaged, IV, and VII supply point run by supply company personnel. This company transmits requests to the DMMC. The DMMC may cut an MRO directing the issue or prepare and transmit requisitions to the CMMC. Battalion S2s verify, consolidate, and transmit requisitions for classified maps to the division G2, who may then send the requisitions to the corps G2.

Corps Rear Area

In the corps, personnel in QM general supply companies run a corps map supply point. Requisitions which cannot be filled in the corps are sent to the TAMMC.

Communications Zone

All units in the COMMZ submit requisitions for maps through their supporting DSU in the same manner as units in the corps rear areas. If the theater is developed enough to have a TAMMC, it acts as the item manager for maps. DMA may operate one or more map depots in the area in peacetime and will continue to operate them in war. The theater army map depot may be collocated with the DMA theater depot. In order to satisfy requisitions, DMA may procure maps from allied or other sources or draw from CONUS depots.

Section IV
CLASS IV SUPPLY REQUIREMENTS

CONSTRUCTION AND BARRIER MATERIALS

There are nearly 4,000 Class IV items in the AMDF. They range from construction materials, such as nails and lumber, to fortification and barrier materials such as blackout curtains and barbed wire. Class IV items are often bulky and are often required in large quantities. They are often under the control of engineer construction organizations. Most Class IV construction supplies are procured by the Defense Construction Supply Center of the Defense Logistics Agency.

Requirements

The GS supply base maintains 4 to 10 days of Class IV supplies plus OST. Requirements for items such as bridge equipment are based on barrier plans. Requests for such items normally

require command approval. CTA 50-970 authorizes basis of issue allowances for Class IV items.

Consumption Rates

FM 101-10-1/2 sets 8.5 pounds per person per day as the Class IV consumption rate. When the force is a corps or larger, the consumption rate used must be adjusted to allow for the buildup of stocks to support base development and to repair war damage to critical facilities. For each of the following periods, multiply the 8.5 rate by the factor shown:

Period	Factor
D-Day to D+30	2.4
D+31 to D+60	1.6
D+61 to D+90	1.6
D+91 to D+120	1.6
D+121 to D+150	1.4
D+151 to D+180	1.4
D+181 and after	1.0

More Class IV consumption rate data are available from the proponents.

BASIC AND OPERATIONAL LOAD REQUIREMENTS

Major commands determine which units must maintain a basic load of Class IV items for war. Up to 15 days of expendable Class IV operational load items listed in CTA 50-970 may also be stocked. If transportation is available, operational load items may be moved into combat. The commander is responsible for any durable items. Responsibility for durable items is assigned on hand receipts. Records of responsibility are not maintained on expendable items. Since the basic load must be on hand or on order at all times, replenish Class IV basic load items as they are used. Class IV basic load items are not maintained on property books. Records of demands, however, must be kept on basic load items. A copy of the initial basic load list for Class IV items must be sent to the SSA. Changes found during the first and every other periodic review must also be sent to the SSA. A new list should be prepared for the using unit commander's approval and sent to the SSA after the second and every other review.

INVENTORY REQUIREMENTS

AR 710-2, Chapter 2, prescribes Class IV inventory requirements. Basic loads of Class IV supplies must be inventoried during the regularly scheduled review period. Durable items in operational loads must be inventoried annually or upon change of responsibility, whichever occurs first. Inventories are not required for expendable items in operational loads. In war, using units may inventory unit property to assess status and on-hand quantity. However, units do not need to document the inventory. SSAs may conduct a cyclic inventory if the situation allows. SSA inventory discrepancies must be recorded. However, they do not need to be reported.

Section V
DISTRIBUTION OF CLASS II AND IV SUPPLIES

DISTRIBUTION OF CLASS II ITEMS

Maintenance-related Class II items are distributed by ALOC. See Chapter 1. All other Class II items are sent by sea or surface transportation. Their distribution depends on the type of item.

Clothing and Individual Equipment

DS or GS supply units replenish Class II stocks in the corps and COMMZ.

Maps

There are two separate distribution channels for maps. These distribution channels have been discussed previously in this chapter.

Other Class II Items

SSSCs provide expendable Class II items. DSUs and GSUs provide nonexpendable TOE items.

DISTRIBUTION OF CLASS IV ITEMS

Class IV distribution is supported by the DSS concept of direct delivery from one of three CONUS wholesale depots to a DS or GS unit. Class IV items are distributed by surface means. They are shipped to the theater and then transported by rail or vehicle to a theater army GSU for replenishment issue.

Controlled Items

CTA 50-970 durable items must be controlled. Class IV regulated items are controlled through command channels. Users send requests through intermediate commands to the approving commander. The MMC tells the approving commander if the item is available. After command approval, the MMC issues an MRO for the storage unit to transport the item to the user.

Noncontrolled Items

Requests for noncontrolled Class IV items are sent to the CMMC. If the items are on hand, the MMC sends an MRO to the supplying unit to issue the item. When the items are not on hand, a requisition is sent to the TAMMC.

THEATER SOURCES OF CLASS II AND IV ITEMS

The major GS supplier for Class II and IV is the QM general supply company. It also maintains a portion of the reserve stocks. In the heavy or infantry divisions, the S&S company, MSB, provides Class II and IV supplies to supported units in the DSA. The supply company, FSB, provides these supplies in the BSA. In the light divisions, the headquarters and supply company, MSB, provides supplies in the DSA. The headquarters and supply company, FSB, provides supplies in the BSA. The S&T company supports separate brigades. The S&T troop supports the ACR. The QM supply company, DS, supports nondivisional troops in the corps rear and division areas. For more details, including the amount of support in each class, see FM 10-27-2, Chapter 2.

SUPPLY POINTS

Forward units are supported by forward supply points. The DMMC determines the types and quantities of items to be stored. Forward supply points generally maintain fast-moving items only. Other items are held in the DSA. As a rule, the DMMC sends an MRO to the supply point directing it to issue an item. However, if authorized, main supply points may fill high-priority requests, then notify the DMMC of the issue. The number and location of supply points may vary. However, a division is usually organized with three forward points and one main point.

Forward Supply Points

There is a forward supply point in each BSA. These points are operated by elements of the DISCOM, normally by the supply company, FSB. Separate brigades submit requisitions to the brigade MMC. Divisions send requisitions to the DMMC. Local policy may require that requests be sent through the FSB.

Main Supply Point

Supply companies set up a main supply point in the DSA. This supply point supports divisional units in the DSA. It also replenishes stocks in forward supply points in the BSA. Divisional units in the DSA send requests to the main supply point which, in turn, sends the requests to the DMMC. DS supply companies, corps support battalions, set up a Class II, III packaged, IV, and VII point in the division area and throughout the corps rear area in support of nondivisional forces. Nondivisional units send requests to their supporting supply point. The supply point forwards requisitions to the CMMC.

Storage Methods

Depending on the tactical situation and transportation assets, supply points may store supplies using one or more methods. In the unit pile method, supplies are grouped in piles according to the unit making the request. Unit trucks stop at the proper pile. The customer loads and signs for the supplies. In the item pile method, supplies of one type are stored in one location. Trucks can then move through the supply point for the unit soldiers to pick up each type of item requested. In the truck-to-truck

method, supplies are passed directly from the truck delivering to the main supply point to the truck that will deliver supplies to forward supply points or supported units. This method keeps supplies under cover, allows for complete mobility, and saves time and handling. However, it may tie up transportation.

Distribution Methods

Supplies may be distributed by supply point distribution or unit distribution. Though the unit distribution method is preferred, a combination of supply point distribution and unit distribution may be used to distribute supplies.

Supply point distribution. The receiving unit is issued supplies at a supply point. The receiving unit moves the supplies in its organic vehicles.

Unit distribution. The receiving unit is issued supplies in its own area. Transportation is provided by the issuing agency.

CLOTHING EXCHANGE SOURCES

Clothing may be exchanged at clothing exchange points, CEB points, or unit supply sections. FM 10-27-2, Chapter 1, lists the sources of clothing exchange in a theater of operations. If exchange facilities are not available, clothing may be exchanged directly with a DSU. Clothing exchange facilities obtain initial exchange stocks and replacements for unserviceable items through standard Class II channels. Details on CEB operations are in FM 10-280.

SALVAGE COLLECTION POINTS

Salvage is property that has some value beyond that of its basic material content, is not economically reparable, and can no longer be used for its intended purpose. Salvage items include items that are discarded, captured, uneconomically reparable, condemned, abandoned, and scrapped. Salvage collection points are an alternate source of items which can be placed back into the supply system for reissue. As a rule, the Class II, III packaged, IV, and VII sections operate the division or brigade collection point. It is often located near the maintenance collection point. It receives all salvage materiel for which maintenance units do not have maintenance responsibility. It receives nonmechanical and nonelectrical items such as clothing, tentage, and individual equipment. A large part of this type of salvage is generated by recovering unneeded clothing and individual equipment from casualties. Medical clearing stations should return these items to supply channels for processing and reissue. A salvage collection point does not receive toxic agents, radioactive materials, aircraft, ammunition and explosives, COMSEC equipment, and medical supplies. Units should bring salvage materiel to the salvage collection point.

Receipt

When receiving materiel, soldiers at the collection point should check the item and its condition against the information shown on the turn-in document.

Storage

Identify, classify, and segregate the items. Salvage collection points in the BSA depend on points in the DSA for final identification and classification of items. If you are in the DSA, identify the item using technical publications. Determine if the item is serviceable or unserviceable. Protect serviceable items by using tents, dunnage, and tarpaulins. Secure the items by providing continuous surveillance. Segregate items in the holding area by serviceable and unserviceable scrap and waste.

Disposal

Dispose of items based on guidance from the DMMC. In forward areas, use trucks that bring supplies to the forward supply point to send material back to the DSA supply point. Send reparable items to the maintenance shop. Send serviceable clothing and canvas to the laundry and renovation platoon. The division intelligence officer should provide you with disposition instructions for foreign or captured materials. Evacuate unreparable and scrap items through salvage channels to a property disposal unit. Send a copy of the turn-in document and a copy of DD Form 1348-1 to the DMMC. Use AR 725-50.

THEATER REQUISITION AND DISTRIBUTION FLOW

Figures 3-1, page 3-11, and 3-2, page 3-12, show the flow of requisitions for Class II, III packaged, and IV supplies not delivered by ALOC during the transition-to-war phase and during sustained war. During the transition phase, control of theater army pre-positioned war reserve stocks in corps rear areas shifts to the corps. High-priority requests for Class IV supplies and NMCS requisitions for Class IV supplies may be filled from in-theater war reserves maintained in corps and TAACOM GSUs. During sustained war, CONUS war reserves and CONUS depots are used to replenish the 30-day sustaining stocks stored in TAACOM GSUs. Maintenance-related Class II items other than heavy tonnage items are provided by the ALOC. Certain Class IV items are selected as controlled items. Requests for controlled items require command approval before items can be issued. All other Class II and IV items are shipped by ship, rail, or truck.

Brigade Support Area

Users submit DA Forms 2765 directly to the forward supply point. If the supplies are on hand, the requests are filled. Once the supplies are issued, the supply point forwards all requests to the DMMC (or separate brigade or regiment MMC) of the issue transaction. To maintain mobility, forward supply points maintain minimal stocks on hand. If an item is not available at a main supply point in the DSA, the DMMC prepares and sends a requisition to the CMMC.

Division Support Area

Divisional units in the DSA send their requests to the Class II, III packaged, IV, and VII supply point run by the headquarters and supply company or S&S company. Nondivisional units send their requests to the QM supply company, DS. If possible, the supply point fills the request and annotates the request to notify the DMMC of the issue. It forwards all requests to the DMMC. The DMMC forwards requests for controlled items to the next-higher MMC. For noncontrolled items, the MMC performs a search of its magnetic tapes or disks. If the item is on hand, the MMC cuts an MRO. It sends the MRO to the supply point in the DSA and a copy to the requester. Depending on organic transportation assets, the supply point transports supplies to the requester or to a forward supply point. Users in the division rear usually go to the DSA supply point to pickup supplies. If the item is not on hand in the DSA, the DMMC prepares a requisition and sends it to the CMMC. It also prepares receipt cards for each request. It sends one copy to the requesting unit and one to the supply point. Corps transportation assets usually deliver Class II and IV supplies to the division supply point. If the situation permits, supplies are delivered to the forward supply point in the BSA or to the requesting unit. Oversize Class IV loads maybe delivered directly to the construction site.

Corps Rear Area

Nondivisional units in the corps rear area send their requests to the QM supply company, DS, which, in turn, forwards the requests to the CMMC. The CMMC, in turn, forwards requests for controlled Class IV items to the TAMMC. The CMMC prepares and transmits daily replenishment requisitions to the TAMMC. The quantity ordered must be sufficient to fill the RO plus back orders. If the item is on hand in the corps rear area, the CMMC will normally cut an MRO directing a QM supply company, DS, to issue the item to the requesting unit. If the item is not on hand in the supporting DSU, the MMC may cut an MRO directing a lateral issue or an issue from the QM supply company, GS. The CMMC coordinates movement requirements with the CMCC. After the item is issued, the DSU or GSU sends an activity summary back to the CMMC. If the item is not on hand in the corps, the CMMC prepares a requisition and sends it to the TAMMC.

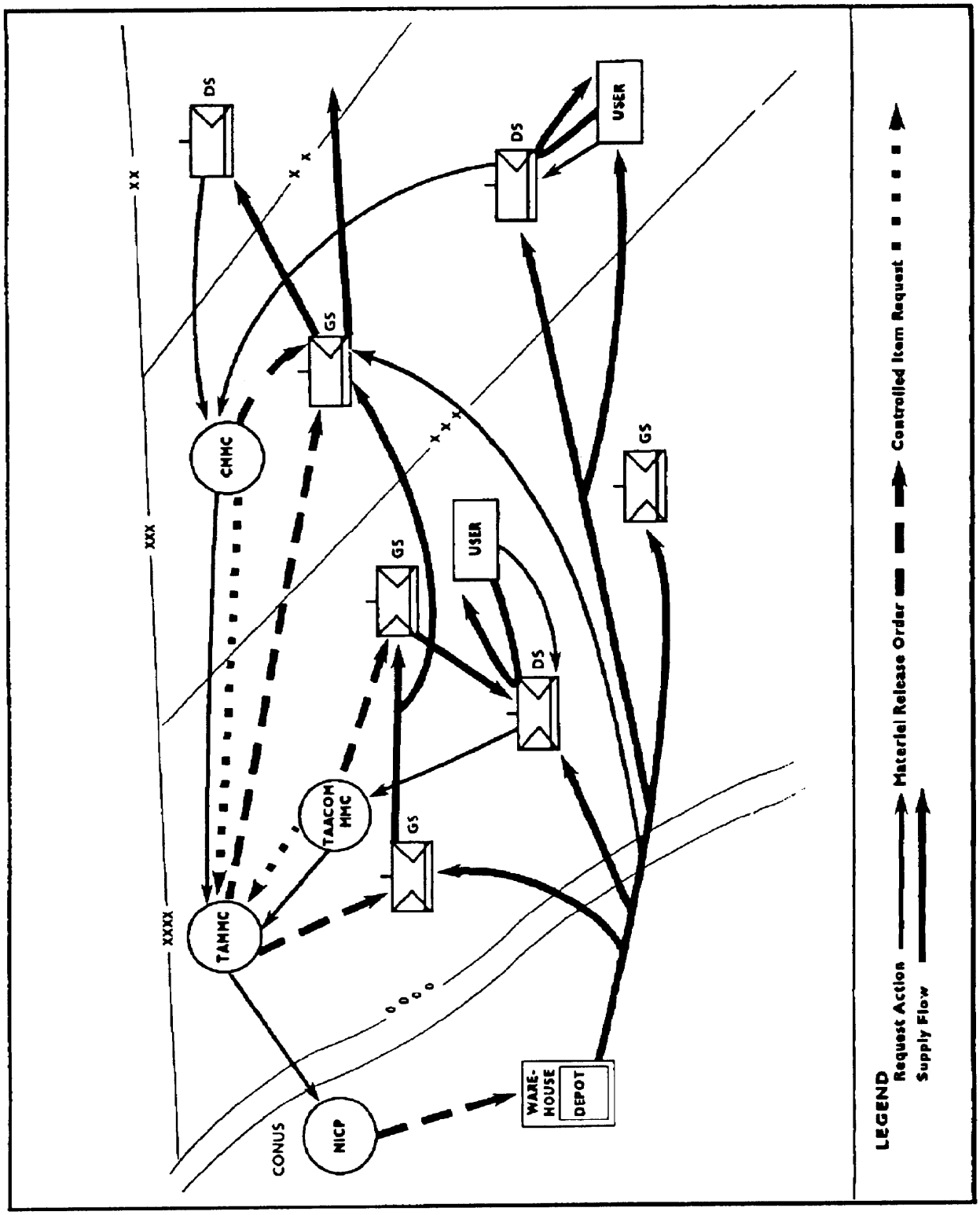


Figure 3-1. Request and delivery of Class II, III packaged, and IV supplies from CONUS to COMMZ

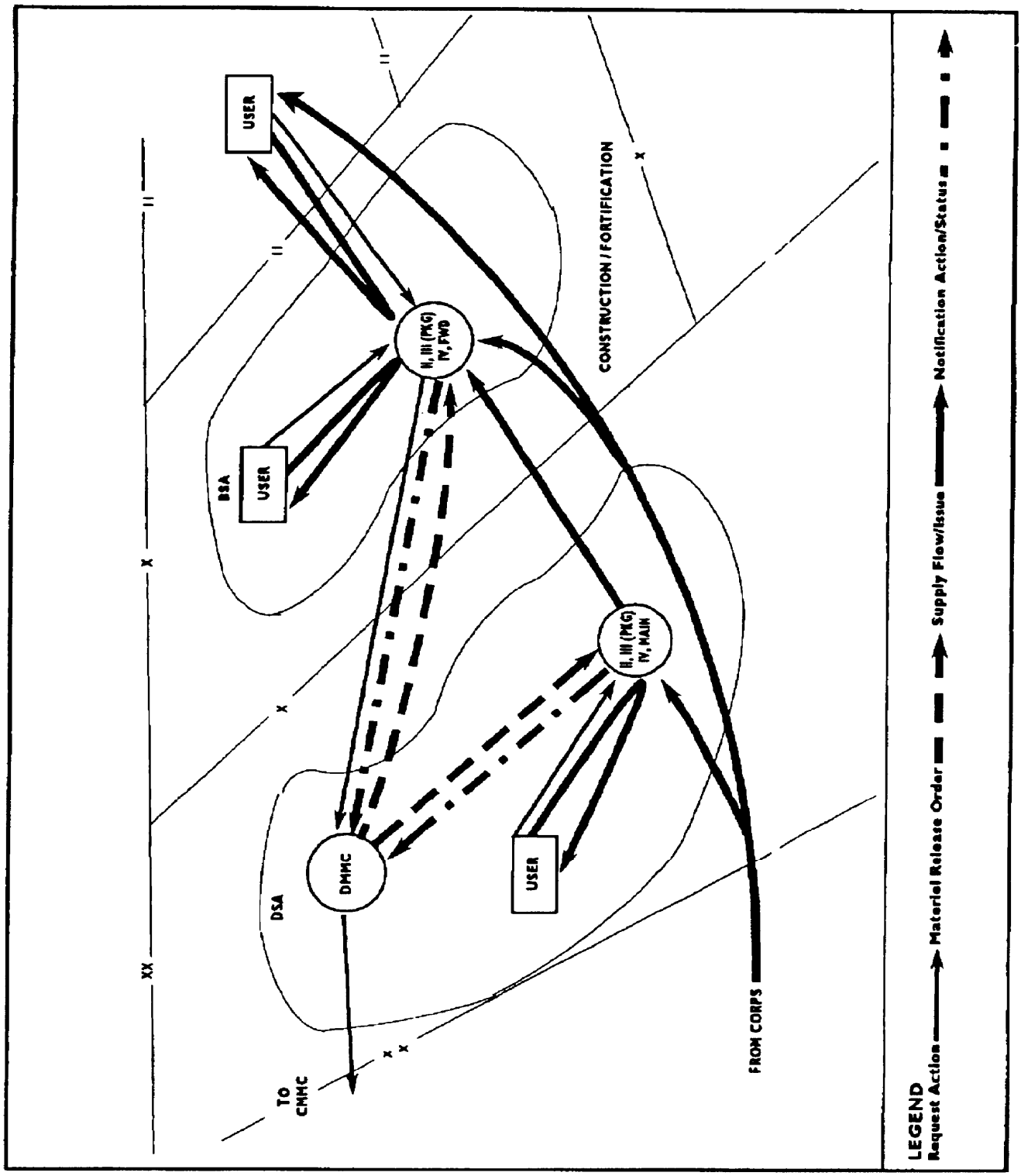


Figure 3-2. Request and delivery of Class II, III packaged, and IV supplies from division to user

Communications Zone

QM supply companies, DS, support nondivisional units in the COMMZ as well as units passing through the COMMZ. Units send requests through their supporting QM supply company, DS, to the TAACOM MMC. That MMC submits daily replenishment requisitions to the TAMMC. The TAACOM MMC also transmits requests for controlled Class IV items to the TAMMC. The TAMMC searches its files to determine if the controlled item is on hand in a TAACOM DSU or GSU. If the item is on hand, the TAACOM MMC cuts an MRO directing the supporting QM supply company, DS, to issue the item to the requesting unit. If the company does not have the item, the TAACOM MMC may cut an MRO directing a lateral issue from another DSU or issue from a QM supply company, GS. If the item is not on hand in a TAACOM unit, the TAMMC prepares and transmits a requisition to the appropriate NICP. The NICP sends requisitions for controlled items to the TAMMC. That MMC maintains records on 30 days of Class II and IV items stored in QM supply companies, GS, throughout the COMMZ. Depending on the situation, the TAMMC may cut an MRO directing a QM supply company, GS, to issue the item to a QM supply company, DS, in the COMMZ or to a QM supply company, GS, in the corps. The TAMMC may also prepare and transmit a requisition to the appropriate CONUS NICP.

Distribution Flow from CONUS

The NICP cuts an MRO directing a CONUS depot to release the item. Normally, the item is then shipped to a QM supply company, GS, in the COMMZ. Depending on the tactical situation and available transportation assets, the item may be sent on truck or rail as far forward into the theater as possible. However, surface throughput to DSUs or GSUs is expected only 20 percent of the time.

AUTOMATIC RETURN ITEMS

The automatic return items program expedites the retrograde of selected secondary items in critical stock positions that are considered as being recoverable. An automatic return items list is distributed quarterly with the AMDF. CDA Pamphlet 18-1-5 describes codes on that list. Disposition instructions from commodity managers are not needed for automatic return items. Due to their critical asset positions, automatic return items will be returned to CONUS depots or repair facilities without prior receipt of disposition instructions. Items coded “E” for “expedite” must be returned on premium transportation. Credit is given for the return of Army stock find items. For more details, see AR 725-50 and AR710-1, Chapter 3.

Section VI

STORAGE AND DISTRIBUTION OF CLASS III PACKAGED SUPPLIES

THEATER SOURCES

The major wholesale supplier of Class III packaged is the QM supply company, DS. As a rule, Class III packaged is received, stored, and issued with Class II, IV, and VII in a Class II, III packaged, IV, and VII section. See page 3-8 for information on theater sources of Class II and IV items.

NOTE: Both the petroleum supply company and the petroleum pipeline and terminal operating company are authorized FARE. FARE may be used to fill 5-gallon cans, 55-gallon drums, and 500-gallon collapsible drums from supplies of bulk fuel. In this sense, these companies provide Class III packaged supplies. However, since they do not provide lubricants and oils, they do not have a true Class III packaged supply mission. For details on the amount of support in the sections in each of these companies, see FM 10-27-2, Chapter 2.

THEATER REQUISITION AND DISTRIBUTION FLOW

If lubricants are required in large quantities, support battalions may periodically forecast needs

and forward stock status reports from supply points to the DMMC. The DMMC then uses these status reports to compute overall requirements for the division. When Class III packaged products are used in small quantities, they are requested or requisitioned like Class II and IV items. FM 10-1, Chapter 5, details the requisition and materiel flow for Class III packaged supplies in a theater.

RECEIPT PROCEDURES

Use advance copies of DD Form 1348-1 to plan for the receipt of Class III packaged items. After these items are received, check containers for leaks, illegible or improper markings, or incorrect packaging. Receiving tests are unnecessary if containers have no leaks and markings properly identify the products. However, upon receipt of pre-positioned war reserve stocks of packaged petroleum products, reserve storage activities must take samples and prepare DD Forms 1222 and 1225. Damaged containers should be issued immediately and not returned to the supplier. Containers of positively identified products should be remarked. If the contents cannot be identified, a sample should be sent to the petroleum laboratory.

STORAGE PROCEDURES

Procedures and instructions for storing Class III packaged products are described in MIL-HDBK 201 and in FM 10-69, Chapter 16. Improper storage can lead to contamination of the product because of deterioration or corrosion of the container and can result in a possible fire hazard. Table 3-2, page 3-15, lists storage concerns for packaged products. If a gasoline can is leaking or looks as though it might leak, transfer the product to another container. Store only one product in each storage section, and store the product so that the oldest is issued first. DOD 4145.19-R-1, Chapter 2, discusses covered storage and the use of bins, shelves, metal pallets (for storage of small lot items), and racks.

Stacking of Cans and Drums

Provide stacking areas for each product and type of package. This aids inventory control and correct labeling of products. The layout and size of the stacking area are determined by local conditions, safety requirements, and container size. Separate stacks of a single product so that the entire stock of one product is not lost during attack or fire. See FM 10-69 for more details on stacking.

Storage of Packaged Lubricants and Grease

Packaged lubricating oil and grease should generally be stored indoors. When storage buildings are unavailable, packaged lubricants and grease may be stored outdoors if they are protected by tarpaulins. DOD 4145. 19-R-1, Chapter 5, provides details for storing lubricating oil, grease, and paint.

Inspections

Place special emphasis on inspection of petroleum stocks and storage areas. Inspect containers for war reserve stocks semiannually using statistical sampling methods. Inspect containers for other petroleum stocks. As a part of a quality surveillance program, petroleum personnel must periodically inspect the storage areas set up by supply sections. MIL-HDBK 200 prescribes inspection frequencies.

Field Markings

Mark packaged fuels and lubricants in line with instructions in MIL-STD-290 or according to provisions of the procurement contract. Mark containers transported by military aircraft according to TM 38-250. To make sure 500-gallon collapsible drums used for fuel are not used for water, mark them “FLAMMABLE.” Mark each container with a standard nomenclature or short identification of the product. The designations authorized for field use include MOGAS, AVGAS, JP, and DF.

Table 3-2. Storage concerns for Class III packaged products

- Were containers inspected before being placed in storage?
- Are drums stored on their sides?

NOTE: Drums should never be stored on end outdoors. Rainwater can collect on drum heads, rust container tops, seep through bungs, and contaminate the product.

- Do drums stored on dunnage have proper blocking and bracing?
- When drums are stored in double rows, do the bungs and vents face outward? This makes it easier to detect leaks.
- Are containers smaller than 55-gallon drums stored under cover?

NOTE: In an emergency situation when these containers must be stored outside, they must be covered with tarpaulins and stored off the ground on pallets or dunnage.

- Are different products and grades stored separately?
- Were stocks rotated so that the oldest product is issued first?
- Are stocks with similar dates of filling stored together? Petroleum products should be stored in sections by product date and batch number.
- Are packaged products which were opened for spot-checking or storage control tests marked to show that they had been opened previously?
- Are opened containers issued or their contents used as soon as possible?
- Are stained cartons marked to indicate that leaking containers have been removed? This will prevent reinspection.

Loading Procedures

FM 10-69, Chapter 16, has details on loading procedures. Products transported by aircraft must be packaged and handled according to TM 38-250. Equip transport vehicles with a 10-B-C fire extinguisher or one of greater capacity. Tie and brace containers so that they will not shift or become damaged during transit. This means that supply point personnel may need to build braces and to fill slack space with planks or dunnage to ensure stacks are stable. Railcar doorways should be protected with wooden gates. Dunnage should be placed between tiers of 5-gallon cans and between tiers of drums.

Transportation

Methods for delivering packaged petroleum products to dispensing points vary with terrain, tactical situation, type and quantity of product, and transportation resources available. The products are delivered in vehicles and tank cars. Petroleum products that are stored in drums, cans, cylinders, and pails can be transported by standard military vehicles or railcars. Air transport should be used as an emergency measure.

Section VII
LIQUID AND COMPRESSED GASES

REQUIREMENTS

Class III packaged items include liquid and compressed gases. The major requirement is for cylinders of oxygen, acetylene, and nitrogen gases. Most requirements come from maintenance activities. Oxygen and acetylene gases are standard motor pool shop stock items. Repairers require these gases for welding and fabrication. Each wrecker truck carries a bottle of oxygen and acetylene required to cut through metal in support of recovery operations. Oxygen and nitrogen are required to maintain optical sight instruments on tanks.

SUPPLY SOURCE

In peacetime, obtain containers of compressed gases through local purchase. Contractors refill empty cylinders. However, local purchase and contractor refill may not be possible during wartime. Therefore, cylinders of compressed gases need to be shipped full to a theater. In wartime, the QM supply companies supply compressed gas containers. Submit requisitions through your supporting DSU to the appropriate MMC. As Class III packaged supplies, compressed gases are distributed through Class II and IV channels. Section V describes the distribution of Class II and IV supplies.

HAZARDS

Gases may be flammable or explosive. Handle with extreme care. They are compressed in containers under pressures exceeding 40 to 104 pounds per square inch. Contact with fire, sparks, or electrical circuits can cause the gas cylinder to explode. Such an explosion can be as destructive as a bomb explosion. Continuous exposure to large quantities of some gases can induce a drug-like sleep, irritate the surface tissue of the breathing passage, constrict the respiratory tract, and cause death. Large quantities of nitrogen can cause suffocation. Acetylene, in particular, is extremely flammable. Proper protective equipment must be worn when entering areas known to be contaminated with gases.

IDENTIFICATION MARKINGS

Gas cylinders must be identified by a color code according to MIL-STD-101. The color code for oxygen is green and for acetylene is yellow. Gases must be identified by their proper name, not merely as “gas.” Flammable gases must be identified as flammable. Filled cylinders must be tagged or labeled with the stock number of the gas and the stock number of the cylinder. Do not alter or deface stock numbers and markings stamped on

gas cylinders. Tags on empty cylinders must be overstamped "MT." Do not apply additional markings without proper approval.

STORAGE AND HANDLING PRECAUTIONS

Due to the hazardous nature of compressed gases, a number of precautions must be observed when storing and handling them. All cylinders must be considered full. Therefore, store and handle them with extreme care. Use precautions, particularly with regard to cylinder valves, storage separation requirements, and movement by MHE. DOD 4145.19-R-1, Chapter 5, has storage criteria for open-sided and enclosed sheds used to store gas cylinders.

CHAPTER 4
PROVIDING CLASS VII SUPPLIES
Section I
MANAGEMENT

MAJOR ITEMS MANAGEMENT

A major end item is a final combination of end products which is ready to use. Major items are 1 percent of the total line items but 80 percent of the total dollar value of the Army inventory. Because of their cost and importance to combat readiness, major items are often controlled through command channels. They include aircraft, tanks, trucks, and weapons systems. They represent the largest portion of the Army's dollar investment. The requisitioning, procurement, distribution, maintenance, and disposal of these items are intensely managed at each support level to ensure operational readiness. Worldwide requirements for major items are individually specified, computed, and programmed to meet the requirements of current or future force structures.

Major Item Criteria

To be classified and managed as a major item, an item must meet certain criteria or fall into a category exempt from these criteria. The criteria are as follows:

Activity Code. The item must have an appropriation and budget activity code of "A" through "Q" and be in supply Class VII.

Control Code. Equipment end items must have a reportable item control code of 1, 2, or 3.

Other Criteria. The line item must cost $1,000 or more, the total inventory or programmed acquisition amount must be greater than $900,000, or a DA-level budget line must be required for the item. The following items are designated as major items without having to meet the above criteria:

- All motorized, wheeled, and towed vehicles for use on highways or rough terrain.
- All weapon and missile end items.
- All aircraft end items.
- All boats or ships with inboard power or with a unit value of $1,000.
- All sets, assemblies, or end items which have one or more major items as components.

Requisitioning Procedures

Requisitioning procedures are outlined in ARs 700-120 and 725-50 and DA Pamphlet 710-2-2. There are no requirements to submit requisitions for aircraft, aircraft subsystems, and selected missile system major items. HQDA distributes these items directly.

Distribution of Major Items

Major items are controlled and distributed according to carefully developed distribution plans and directions in ARs 11-11, 11-12, and 700-120. Distribution priorities are listed on the DA Master Priority List in AR 11-12.

END ITEM USAGE PROFILES

TRADOC develops mission profiles which project daily usage of selected end items. Usage is based on the initial 15 days of combat. Usage is reported as miles driven, rounds fired, or hours flown. These profiles are used for many purposes, including development of Class IX requirements for combat.

CLASS VII LOSSES

A loss is any incident that stops a major end item, such as a radio, vehicle, or tank from performing its assigned combat mission. The loss may result from combat damage, crew failure, or maintenance failure. Loss rates may vary. The rate of loss depends on such factors as theater of operations, type of operation, force structure, and intensity of battle. Other factors that effect battle losses are the ratio of enemy to friendly forces, troop training, equipment failures, and terrain obstacles. To cover such losses, the GS supply base maintains a stock

of Class VII items equal to 10 percent of authorized end items in the corps or TAACOM.

WARTIME REPLACEMENT FACTORS

No two wars or engagements are ever fought under identical conditions. Environmental conditions vary throughout the world. The rate at which items are consumed varies according to the intensity and length of combat expected. Wartime replacement factors are used to compute combat consumption and to determine war reserve requirements for some allies. Replacement factors are based on the type of combat mission and the ways in which equipment might be lost in combat (enemy action, abandonment, or pilferage). They also include a combat-intensity factor tailored to the degree of consumption expected in each oversea area. Classified wartime replacement factors are available from the Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDL, Washington, DC 20310-0400.

WEAPONS SYSTEMS REPLACEMENT

Weapons systems have a high priority for evacuation, repair, and transportation assets. Critical Class VII items are moved to covering force units. Transportation used for backhaul may have to be allocated to move critical weapons systems to the rear. Weapons systems replacements may be issued from pre-positioned war reserve stocks in the corps. Items must be ready for issue within a few hours. Weapons systems may also be sent from CONUS to a QM heavy materiel supply company, GS. From there, they are normally shipped to the division and then by heavy equipment transporter to the battalion. Though it is not a desirable procedure, motorized weapons systems may be driven under their own power. The DSA is the primary linkup point for weapons systems and crew. At the linkup, the weapon system and the crew are joined and briefed. Weapons systems must arrive in the DSA in a ready-to-fight condition. If the tactical situation prevents linkup in the DSA, linkup may occur at QM heavy materiel supply companies in the corps. A WSM is normally assigned to each level of command. The extent of control depends on the level of command. Details are in FM 63-2.

Battalion

The battalion executive officer serves as the WSM. The S3 recommends allocations for replacement weapons systems. Allocation is based on tactical priorities set by the battalion commander, S1 strength reports on weapons crews, and S4 reports on available assets. The WSM matches available end items and personnel to maximize the number of available weapons systems within the battalion. Combat loss and asset data are provided in S4 logistics status reports. These are updated by spot battle-loss reports.

Brigade

Since the division provides weapons systems directly to the battalions, the brigade is not normally involved in allocating weapons systems. The brigade executive officer may act as the WSM for the brigade.

Division

The DISCOM commander designates a WSM for the division. He is usually the ADMMO. The DMMC property book Class VII section keeps the WSM advised of the status of weapons systems components. The WSM must also coordinate with the maintenance management officer regarding the status of items being repaired in DS maintenance units. Allocation priorities are set by the division commander.

Corps

The WSM is the COSCOM's weapons systems branch chief. Priorities are set by the corps commander who normally accepts the priorities set by the major unit commanders.

OPERATIONAL READINESS FLOAT

In the light infantry divisions only, the ORF is a pool of additional end items or components in DS maintenance units. ORF items are issued only when items cannot be repaired in established time limits to meet the supported unit's needs. Serviceable ORF items are exchanged for like unserviceable but reparable end items. The exchange is a property book transaction. The unserviceable item then becomes a float item that requires immediate repair. The item is issued only if the maintenance request has a PD of 01 through 06 and the repair time is expected to exceed maximum allowable repair time limits. The theater commander prescribes wartime repair limits. AR 750-1 prescribes ORF policy. Because of the temptation to misuse ORF assets, AR 710-2 sets

restrictions on when these items can be used. Essentially, ORF items cannot be used to replace a supply shortage.

Issue Controls

Issue of ORF items is rigidly controlled. Levels of control include the--

- Theater, corps, or DISCOM commander who establishes policies and procedures for control and use of ORF stocks.
- Separate brigade or division commander who establishes the stockage level within limitations outlined by higher headquarters.
- MMC which maintains the ORF lists.
- Nondivisional maintenance company shop officer and SSA accountable officer managing the ORF within the policies and guidelines of MACOM commanders.

Stockage Criteria

AR 750-1, Chapter 6, lists ORF stockage criteria. HQDA decides which items are eligible for stockage. An ORF item must be a principal item selected for war reserve stockage. It must have a line item number and be listed in SB 710-1-1. Commodity commands select end items for ORF support. Stockage policy for ORF items differs from that for other items. Formulas used to compute wartime requirements are in AR 750-1 and DA Pamphlet 710-2-2.

Section II
CLASS VII SUPPLY REQUIREMENTS

MAJOR END ITEMS

Class VII supplies include nearly 9,000 line items. These are authorized by TOEs or MTOEs and CTAs. About 20,000 NSNs for Class VII items are listed on the AMDF. All items are ready for their intended use.

Requirements

Class VII items are stocked and distributed in support of TOEs for existing forces. The demand for these items depends on the intensity of battle. Replacement is based on combat losses. The sustaining level for Class VII supplies is 10 percent of the authorized end items in the corps or TAACOM. Requests for additional or replacement Class VII items are generally based on TOE or other authorization documents. Requests may be processed through command channels.

Consumption Rates

Use consumption rates when estimating supply and storage requirements. These requirements may vary depending on force structure, mission, areas of operation, and intensity of combat. FM 101-10-1/1 sets the consumption rate for Class VII at 15 pounds per person per day. More current rates may be available from the Commander, US Army Combined Arms Support Command, ATTN: ATCL-OPF, Fort Lee, VA 23801-6000.

INVENTORY REQUIREMENTS

AR 710-2 sets policy for inventories at the user and retail levels. Components must be inventoried when the end item is inventoried. Additional inventory requirements are based on events or the type of item.

Event-Oriented Inventory Requirements

Items must be inventoried upon--

- Receipt, turn-in, or issue of the items.
- Change of responsible officer.
- Change of custody of arms storage facility.
- Direction of the commander.
- Annual responsible officer inventory.
- Annual property book inventory.

Weapons and Serial Number Inventory

Weapons must be inventoried monthly by serial number. Also, serial numbers must be compared quarterly with those recorded on the property book.

Sensitive and Pilferable Item Inventory

All sensitive items other than weapons and ammunition must be inventoried quarterly. Items to be inventoried

are identified with a physical security code of "1" through "6," "8," "9," "Q," "R," or "Y." The hand-receipt holder or subhand-receipt holder must inventory sensitive items listed on hand receipts or subhand receipts. The property book officer must inventory those items not listed on hand receipts.

Wartime Requirements

Inventories during wartime must be conducted as time allows. Any discrepancies found have to be recorded, but they do not have to be reported. SSAs should conduct only cyclic inventories. Using units may perform inventories to determine quantities on hand and property conditions.

Section III
DISTRIBUTION OF CLASS VII SUPPLIES

THEATER SOURCES

The QM heavy materiel supply company receives, stores, and issues GS-level Class VII supplies in the corps and COMMZ. DS supply companies employed in the division area, corps rear area, and COMMZ provide DS-level Class VII supply. In the heavy or infantry divisions, the S&S company, MSB, provides Class VII supplies to supported units in the DSA. The supply company, FSB, provides these supplies in the BSA. In the light divisions, the headquarters and supply company, MSB, provides supplies in the DSA. The headquarter and supply company, FSB, provides supplies in the BSA. The S&T company supports separate brigades and the S&T troop supports the ACR. For more details, including the amount of support, see FM 10-27-2.

THEATER REQUISITION AND DISTRIBUTION FLOW

Figures 4-1, page 4-5, and 4-2, page 4-6, show the requisition and distribution flow of Class VII items during transition-to-war and sustained-war phases. During the transition phase, combat losses are replaced from theater war reserves released to the corps. During the sustained-war phase, stocks from CONUS war reserves and CONUS depots are used to replenish the 30-day sustaining stocks in TAACOM GSUs. During the transition phase, MMCs base replenishment DSU and GSU requisitions on anticipated combat losses and combat-loss reports. During the sustained-war phase, MMCs compute replenishment requisitions based on accumulated demand history. Because of their importance, selected Class VII weapons systems are controlled by the TAMMC. All requirements for controlled items must go through the TAMMC. Requisitions for controlled items flow from the DMMC to the CMMC. CMMCs and TAACOM MMCs forward requisitions for controlled items to the TAMMC.

Division Support Area

The property book officer in the DMMC is the major item manager in the division. He redistributes assets in the division to minimize shortages and requisitions from higher sources of supply to fill only those requirements which cannot be satisfied internally.

Corps Rear Area

Nondivisional units in the corps submit requests for Class VII supplies to their supporting DS supply company. This company transmits the requests to the CMMC. The CMMC also receives Class VII requests from divisional MMCs and separate brigade and regiment MMCs. Requisitions for controlled items are transmitted to the TAMMC. Corps DSUs and GSUs do not submit replenishment requisitions. The CMMC maintains accountable records, keeps track of their reorder points, and transmits replenishment requisitions, as necessary, to the TAMMC. The CMMC submits a daily battle-loss report to the TAMMC for end items issued from the GS supply base to replace battle losses. It submits requisitions to the TAMMC to replace Class VII items turned in to echelons above corps for maintenance.

Item on hand. If the item is on hand in the QM heavy materiel supply company and is not a controlled item, the CMMC cuts an MRO directing the issue. Depending on transportation assets, the unit may send one of its own vehicles to the company to pick up the item. Arrange other transportation through the corps MCC.

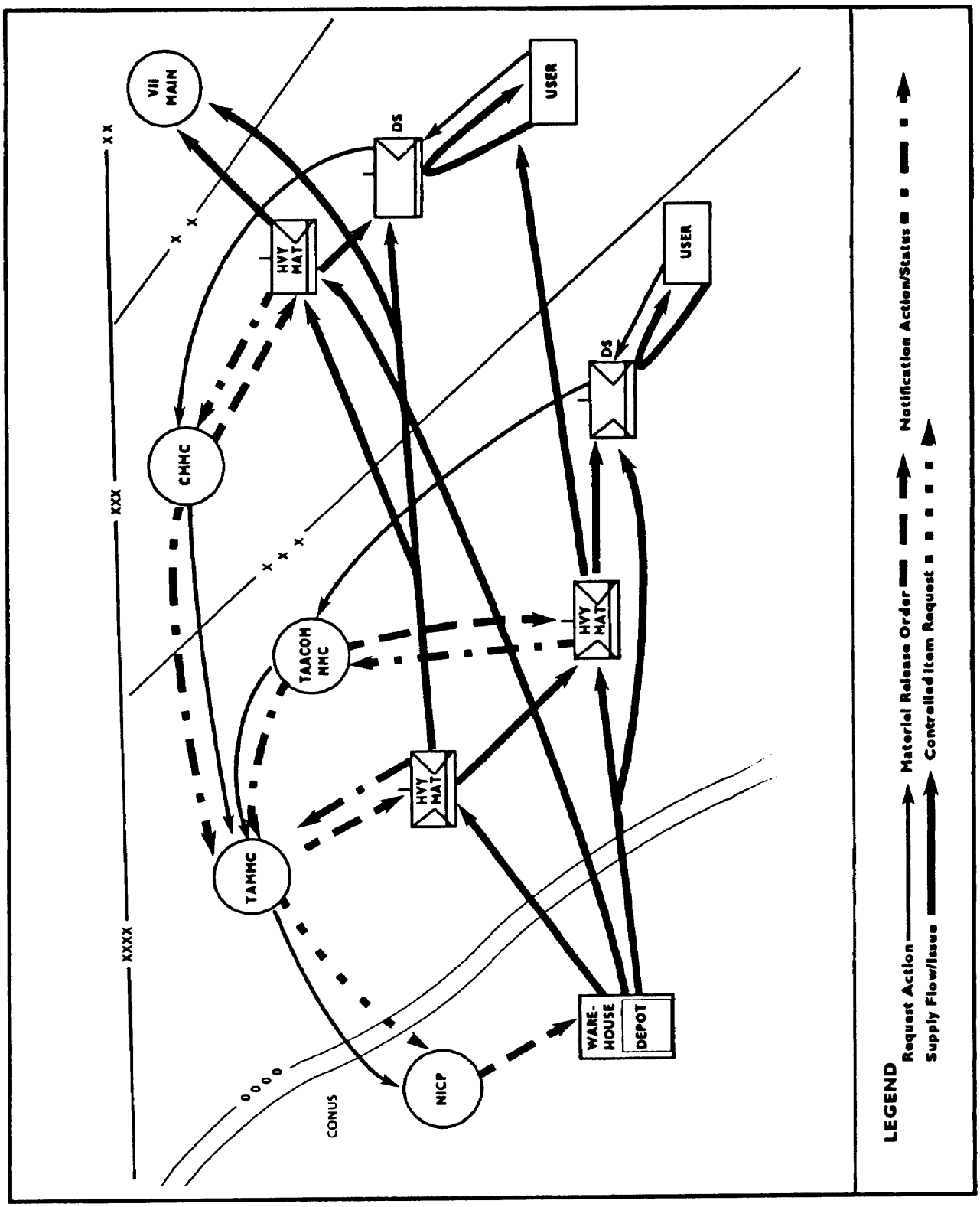


Figure 4-1. Request for and distribution of Class VII supplies at echelons above division

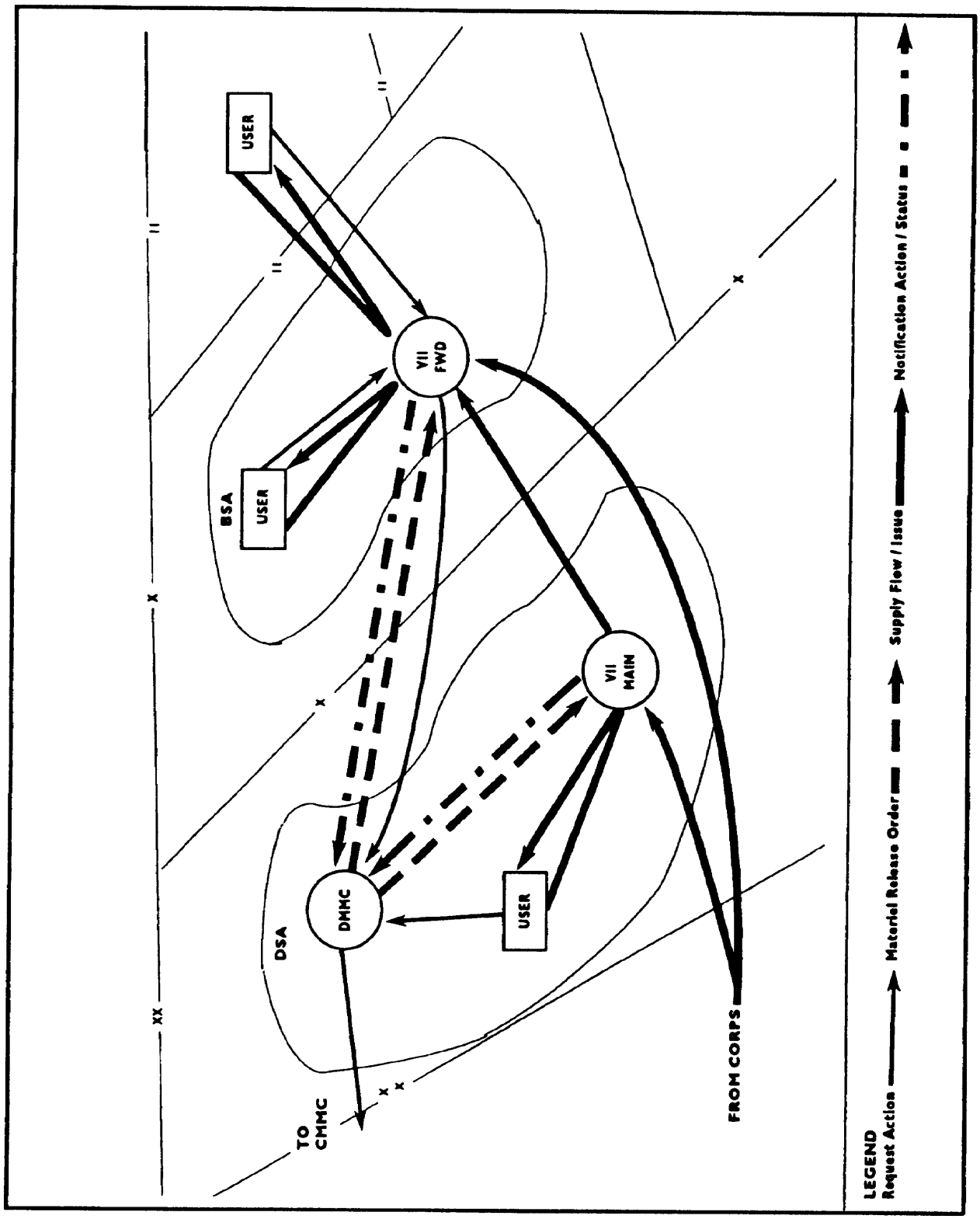


Figure 4-2. Request for and delivery of Class VII supplies from division to user

Item not on hand. When the item is not on hand in the supporting QM heavy materiel supply company, the CMMC passes the request to the TAMMC. The TAMMC either directs issue from a TA QM heavy materiel supply company to the corps QM heavy materiel supply company, or, if stocks are not on hand, it passes the requisition to the CONUS NICP. The NICP directs release from the appropriate depot, and the depot ships stocks to the CONUS A/SPOE. The A/SPOE passes stocks to the A/SPOD where they are reprocessed and moved by surface transport to TA GSUs for issue to corps GSUs, or they are throughput from the A/SPOD directly to the consignee.

Communications Zone

Units in, or passing through, the COMMZ submit requests for Class VII supplies to their supporting DS supply company. That company transmits requests to the TAACOM MMC. The TAACOM MMC prepares and transmits requisitions for controlled Class VII items to the TAMMC. The TAACOM MMC submits daily battle-loss reports to the TAMMC for end items issued from GS support bases to replace battle losses. The TAMMC distributes Class VII assets based on the direction of the theater army commander. Twenty percent of the assets in the COMMZ QM heavy materiel supply company are maintenance return items.

Item on hand. If the item is on hand in the supporting QM heavy materiel supply company and not a controlled item, the TAACOM MMC cuts an MRO directing the issue. The TAACOM MCC coordinates assets used to transport the item to the unit.

Item not on hand. If the item is not on hand, the TAACOM MMC prepares and transmits a requisition to the TAMMC. The TAMMC controls sustaining stocks stored in QM heavy materiel supply companies assigned to other TAACOMs. Depending on priority, the TAMMC may direct a different TAACOM's QM heavy materiel supply company to issue the item to a QM heavy materiel supply company in the COMMZ or corps. It may also elect to transmit the requisition to the appropriate CONUS NICP. That NICP directs the issue from a CONUS depot. The item would then be shipped to a QM heavy materiel supply company. About 20 percent of such issues from a CONUS depot would be sent by rail or truck to GSUs and DSUs.

CHAPTER 5
PROVIDING CLASS IX SUPPLIES
Section I
MANAGEMENT

IMPORTANCE OF REPAIR PARTS

Repair parts make up 92 percent of the total Army inventory. The number of Class IX items stocked in CONUS or pre-positioned in the theater affects supply elements and maintenance and aviation units. Maintenance units must be able to obtain supplies to support maintenance activities. Aviation units deliver supplies and aid in the movement of supply units. The number, type, and size of supply items to be moved determine the vehicles needed.

AUTOMATED SUPPORT

Class IX supply depends on ADP support. Each unit having a repair parts supply mission receives automated stock control support. In war, however, ADP systems are vulnerable to disruption, damage, and destruction. To ensure continued support, contingency or backup automated procedures have been developed for DS4, SARSS, and SAILS. If automated support is not available in DS4, item managers should follow manual backup procedures in TM 38-L32-13. Supply personnel should follow manual procedures in DA Pamphlets 710-2-1 and 710-2-2. Because an ADPE outage could result in a loss of records, the document control or stock control section should always maintain a backup of all transaction files and records.

ZERO BALANCE

Major weapons systems and end items of equipment can be classified as NMCS. Repair parts may not be available due to zero-balance conditions at a DSU or higher level of supply support.

Reasons for a Zero Balance

A zero balance may occur because of--

- Excessive OST.
- Document-processing time.
- Inadequate ASL depth.
- Inaccurate inventory.
- Canceled requisitions.
- Failure to review demand analysis trends in PLLs and ASLs.
- DSU's lack of reconciliation with customers and sources of supply.
- Delinquent contracts.

Standard Army Maintenance System Reports

Managers in divisional and nondivisional DS maintenance units which operate under SAMS have access to maintenance control reports. These reports enable shop managers, item managers in division and corps MMCs, and battalion commanders and their materiel staff officers to assess NMCS data and identify problem areas. The reports that help managers prevent zero balances are listed below.

Battalion critical repair parts listing. Managers may use this listing to monitor work requests which are waiting for a given repair part. It helps managers identify the critical repair parts which require special management emphasis.

Battalion work load status listing. Battalion staff officers or commodity managers may use this listing to follow the current status of a particular commodity or item in that commodity. Also, they may use it to determine abuse of the priority designator system and to identify items which are deadlined for parts.

Battalion critical deadline detail listing. This listing can help managers monitor repair parts requisitions which exceed time limits outside parameters.

Open work request reconciliation listing. This listing provides supported maintenance units with status and NMCS data. It can be used to check on work requests in each maintenance activity.

Management Controls

One of the most serious management concerns is the inability to obtain required repair parts immediately. To

help reduce delays and prevent a zero balance, personnel can--

- Check to be sure requests and work orders are filled out correctly.
- Follow up repair parts requests.
- Verify that the correct part has been ordered. If not, the unit should cancel the request and order the correct item.
- Verify that the request has been received at the SSA and, if necessary, passed on to the higher source of supply. If not, the unit should reorder.
- Check the AMDF for an interchangeable or a substitute NSN. If one exists, personnel should check the stock status of that item.
- Determine if the part can be obtained locally or can be made.
- Check on the possibility of using controlled exchange procedures.
- Consider a cannibalization point or the DRMO as a source of supply.
- Use up-to-date supply manuals and correct PDs and stock numbers to properly identify repair parts on requests.
- Check to see if supply specialists have entered any required advice code on issue and turn-in documents.
- Stress the need for follow-up and continual review.
- Check the SSA to see if a like major item is available in ORF.

Section II
AUTHORIZED STOCKAGE AND PRESCRIBED LOAD LISTS

THE AUTHORIZED STOCKAGE LIST

The ASL lists items that are stocked at an SSA. The ASL items stocked at the SSA should be fully uploaded in modular-equipment, deployment-storage containers or standard 8- by 8- by 20-foot containers. The numbers of items stocked at SSAs must be kept to a minimum so that they can be mobile. AR 710-2, Chapter 1, sets ASL mobility objectives for DSUs and their supporting elements. SSAs should review their own ASLs regularly to identify items which could be deleted. Two types of ASLs are described below.

Customer Direct Support ASL

DSUs maintain these ASLs to support the DS maintenance mission and the PLLs of supported units. These ASLs are based primarily on demand.

Customer General Support ASL

COSCOMs and TAACOMs maintain this ASL for urgent peacetime readiness requirements, for protection against wartime pipeline interruptions (items delivered by ALOC), and for resupply to customers of items not delivered by ALOC.

AUTHORIZED STOCKAGE LIST ITEM STOCKAGE CRITERIA

Every item on the ASL must be authorized for one of the reasons listed in AR 710-2, Chapter 3. AR 710-2, Chapter 3, describes stockage criteria used to add to, retain on, or delete items from the ASL and lays out policies used for computing depth of stockage. TM 38-L32-13 prescribes ASL addition and retention criteria for DSUs under DS4. TM 38-L03-19 describes SAILS stockage criteria.

AUTHORIZED STOCKAGE LIST CHANGES

The ASL update is a subprocess of demand analysis in DS4. It is used to determine whether items should be retained on deleted from, or added to the ASL. All changes are identified on an ASL change list. TM 38-L32-13 has more details on processing ASL changes.

STANDARDIZED COMBAT AUTHORIZED STOCKAGE LIST

Combat ASLs are available for DSUs. The combat ASL includes repair parts and components to support DS combat maintenance. The combat ASL will cover all MPLs and demand-supported items on supported unit PLLs.

STANDARDIZED COMBAT PRESCRIBED LOAD LIST

The combat PLL consists of a mandatory stockage of repair parts needed for essential battlefield maintenance for a prescribed number of days in combat. These loads must be able to be moved into combat in one lift with organic transportation. These loads are also used to support peacetime demands.

Prescribed Load List

The PLL is a list of the authorized quantities of supplies required by a unit to do its daily unit maintenance. Units that are authorized personnel, tools, and equipment to perform maintenance maintain a prescribed load of repair parts. Units that regularly support other units without maintenance capabilities include the supported units' equipment in their PLL computations. PLL items must always be on hand or on request. PLLs must be on file in the using units and in the supporting SSA.

Mandatory Parts Lists

MPLs, which are published as DA pamphlets, are used to standardize the combat PLLs. The MPL is the mandatory portion of the standardized combat PLL. Parts on the MPL must be on hand or on order at all times.

PRESCRIBED LOAD LIST STOCKAGE LEVELS

Demand-supported PLL stockage consists of 15 DOS based on recurring demands for qualifying items. DA Pamphlet 710-2-1, Tables 8-3 through 8-7, can be used to calculate stockage levels when the total quantity demanded during a specific time period is known. These charts are also in TM 38-L32-11. Initial stockage levels must be calculated for newly activated units, consolidating units, or units undergoing change. Unit personnel can usually determine these levels by examining demand data from similar units which maintain identical equipment. If data are not available, units may request help by writing to the Commander, US Army Materiel Readiness Support Activity, ATTN: AMXMD-S, Lexington, KY 40511-5101. For medical equipment PLL data, write to the Commander, US Army Medical Materiel Agency, ATTN: SGMMA-M, Frederick, MD 21701-5101.

RECORDS OF DEMANDS

Records are kept on demands and consumption of Class II, IV, VIII, and IX maintenance significant parts. Use AR 710-2.

Unit Demand Summary Listing

An automated unit demand summary list PCN AGL-C39, is prepared each month for units using DS4. It shows the number of demands and quantity of each item demanded during the preceding six months. The unit commander should review this listing for possible changes to the PLL.

Manual Procedure

A manual listing of PLL additions, deletions, and stockage levels can also be made on DA Form 2063-R. The PLL clerk records on DA Form 3318 the quantities of items demanded and requested by the unit. Instructions for the preparation and use of these forms are in DA Pamphlet 710-2-1. The PLL clerk should enter on each PLL record the on-hand quantities and storage locations for all items in the PLL.

PRESCRIBED LOAD LIST CHANGES

TM 38-L32-11, Chapter 11, shows unit commanders and PLL clerks how to add, change, or delete PLL items using DS4. DA Pamphlet 710-2-1, Chapter 8, specifies manual procedures. In the automated system, a catalog update is produced monthly. This list shows changes in stock number, unit of issue, and quantity. A PLL change list, PCN AGL-C35, is produced each quarter. It lists numbers of demands and quantities demanded. It also identifies changes in PLL quantities, stock numbers, and AMDF data. The commander should review this list for approval, disapproval, or proposed modifications for each stock number line entry.

Section III
SOURCES OF REPAIR PARTS

SHOP SUPPLY

Shop stocks are demand-supported repair parts and consumable supplies stocked in a DS or GS maintenance activity. Since these supplies are issued to the maintenance unit, they are not part of an ASL. Shop stock supplies are to be used only by maintenance shops. They are not to be issued to supported units. Shop supply allows maintenance units to keep frequently used repair parts and expendable maintenance supplies on hand. It helps maintenance units avoid repair delays and reduces the number of supply transactions. FM 43-20, Chapter 4, describes GS maintenance shop supply operations. The three types of shop stock supply are demand-supported, bench, and program stock. Different procedures apply to each type. Manual procedures for shop supply are described in DA Pamphlet 710-2-2. Automated procedures are covered in TM 38-L03-19 for SAILS and TM 38-L32-11 for DS4.

Demand-Supported Shop Stock Supply

Items are selected for demand-supported stockage when they are requested frequently (at least three requests in the initial 180 days and one demand every 180 days thereafter). Maintenance personnel request parts and supplies from the MMC or stock control activity.

Bench Stock Supply

Bench stock items are low-cost, consumable repair parts and supplies that are used by maintenance shop repair personnel at an unpredictable rate. The maintenance shop officer decides which items to stock based on how essential the items are to unit repair operations. AR 710-2 authorizes both DS and GS units to maintain a 15-and 30-day stockage level of bench stocks. The supply officer helps the shop officer compute stockage levels for each item by using stock records which show the demand history for the items.

Program Stock Supply

Program stocks are those repair parts and maintenance supplies stocked by the shop supply section for programmed repairs. Program stock is used primarily by GS maintenance units to support scheduled overhaul programs. Use it to support maintenance of components or assemblies such as engines and transmissions. Stockage levels should be based on anticipated work loads and demand history from similar overhaul programs. As a rule, stocks are requested six months before the start of the program. Retain items only as long as they are needed for the program. Turn in those not needed to the SSA as soon as possible.

QUICK SUPPLY STORE

The use of the QSS provides a quick method for supplying certain low-cost, expendable items. The purpose of the QSS is to simplify accounting, eliminate paperwork and reduce work loads of supply personnel.

Selection and Retention Criteria

Once an item is selected for QSS stockage, it is no longer available to customers from any other source. Items may be selected for or deleted from QSS stockage based on certain criteria. To qualify for stockage in a QSS, an ASL item must meet all of the mandatory QSS stockage criteria described in AR 710-2 and DA Pamphlet 710-2-2. Criteria listed in TM 38-L32-13 are only for DSUs supported by DS4. Demand-supported ASL items must be reviewed every six months to determine if items can qualify for QSS stockage. Under DS4, items which can be converted to QSS are identified quarterly. To remain in QSS, items must continue to meet all stockage criteria. Items must be continually screened for compliance. Items should be requested at least three times during a 12-month period to qualify for retention. Under DS4, items which no longer qualify for QSS are identified for return to detailed accounting.

Catalog and Listing

The QSS catalog is produced for units using the manual system. It lists QSS items in NIIN sequence. The catalog gives an NSN and the nomenclature for each item. This catalog should be published semiannually and provided to each of the SSA customer units. Under DS4, the QSS catalog is updated every six months by the stock control section or MMC. QSS catalogs are provided to DSUs for

delivery to supported customer units. Additional and replacement copies are available for pickup at the QSS. The QSS listing provides the same information as the catalog but also gives the location of each item. The listing helps DSU personnel store and locate items for issue.

Records and Procedures

TM 38-L32-13 explains QSS transactions under DS4. DA Pamphlet 710-2-2, Chapter 12, shows how to prepare forms under the manual system.

CANNIBALIZATION

Cannibalization is the authorized removal of parts and assemblies from unserviceable, uneconomically reparable, or disposable items or components. The purpose of cannibalization is to recover serviceable repair parts from scrap materiel for return to the supply system. Cannibalization is an important source of supply, particularly when the need for the item is critical and the required delivery date cannot be met through routine supply channels. Cannibalization supplements repair parts supply and ensures that critical equipment will remain operational.

Cannibalization Points

Support maintenance units cannibalize at a cannibalization point. This point is a location where items to be disposed of are held until serviceable repair parts and assemblies can be removed and returned through the supply system. Cannibalization points are usually set up at maintenance collecting points operated by collection, reclamation, and exchange units or at the GS maintenance level. Points are set up throughout the theater. AR 710-2, Chapter 3, covers the setup of cannibalization points.

Collection, Classification, and Distribution

The MMC controls cannibalization from the time an item is recovered until the issue of parts to maintenance or using units and the disposal of scrap materiel. Recovered items are classified according to instructions in TMs, TBs, and directives from MMCs. Classification indicates whether items are reparable or nonreparable, where repairs can be made, and the extent of needed repairs.

Transportation

When the situation permits and transportation assets are available, the appropriate MMC may direct units to remove unserviceable, economically reparable components. The units move the parts to a maintenance collecting point or a supporting DS maintenance unit in the DSA or forward area of the corps. Vehicles in DS maintenance units may be used to help recover and evacuate the items. The MMC coordinates with the MCC which arranges for transportation.

Aircraft

AR 750-1 contains basic policies on cannibalization of aircraft and aircraft components. Aircraft must not be cannibalized until disposition instructions have been received. Authority to exchange aircraft repair parts is granted only when certain criteria are met.

List of Available Items

A list of items available at a cannibalization point must be published at least quarterly. Cannibalization points maintain stock accounting records. AR 710-2, Chapter 3, and DA Pamphlet 710-2-2, Chapter 18, describe cannibalization point procedures and discuss the records associated with each procedure.

CONTROLLED EXCHANGE

Controlled exchange is the removal of serviceable parts from damaged or disabled unserviceable, but economically reparable, equipment for immediate reuse in returning a like item to combat. AR 750-1, Chapter 4, authorizes controlled exchange by using organizations or support maintenance units. Guidelines for controlled exchange are established at higher headquarters. One guideline is that serviceable parts removed in emergencies to repair critically needed items must be replaced by unserviceable like parts before evacuation to GS maintenance units. Unserviceable parts must accompany, but need not be installed on, the assembly or end item from which serviceable parts were removed. The unserviceable parts should be marked or coded to save inspection time at other levels. Controlled exchange reduces the time involved in parts procurement. It supports materiel readiness by supplementing repair parts requirements already on requisition throughout the normal supply system.

Using Units

Using units can perform controlled exchange only when certain conditions are met. They are outlined below.

- The using organization owns or controls all of the unserviceable, reparable end items involved in the exchange.
- The maintenance effort required to restore all of the unserviceable, reparable end items to a serviceable condition is within the maintenance authority, capacity, and capability of the unit.
- Serviceable parts, components, or assemblies could not be obtained on time through maintenance efforts or supply channels.
- The unserviceable, economically reparable end item was classified as NMCS.
- The exchange will immediately restore one or more unserviceable, reparable end items to a serviceable condition.
- Removal of serviceable parts will not degrade to an uneconomically condition any of the end items involved.
- Controlled exchange is the only reasonable way to eliminate an adverse effect on the operational readiness of the unit.
- Prompt action is taken by the organization to restore the unserviceable end item to a serviceable condition.

Support Maintenance Units

Support maintenance units can perform controlled exchange only when certain conditions are met. They are outlined below.

- Controlled exchange is the only way a serviceable item can be provided to a support unit within the time frame designated on DA Form 2407.
- It is approved by the supply officer or maintenance shop officer responsible for restoring unserviceable, economically reparable items to a serviceable condition. It must also be approved by the operations officer or commander of the unit which owns the end items involved.
- The maintenance effort required to restore all end items to a serviceable condition is within the maintenance authority, capacity, and capability of the units performing the exchange.
- Required serviceable parts, components, and assemblies cannot be obtained on time through normal supply channels.

NOTE: Controlled exchange on maintenance float items is not authorized.

SUPPLY REQUESTS

Repair parts can be obtained from several sources. Accordingly, request procedures vary. The references and procedures used in requesting supplies depend on the type, federal supply classification, and catalog status of the item and on the unit situation.

References

The preparation and processing of requests depend on whether the requesting element is a supported unit or an SSA and whether it is divisional or nondivisional. It also depends on whether the supply system is automated or manual. In divisional units and nondivisional DSUs (DS4 automated system), personnel should use TMs in the 38-L32 series. In GSUs and COSCOM or TAACOM MMCs (SAILS automated system), personnel should follow procedures in the TM 38-L03 series. In the manual system, personnel should follow procedures in DA Pamphlet 710-2-1. Procedures for SSAs in the manual system are in DA Pamphlet 710-2-2.

Procedures

For the repair parts supply system to work effectively--

- Proper procedures must be followed when requesting, issuing, and storing repair parts.
- Follow-up procedures on repair parts requisitions must be setup and followed.
- All requests for repair parts and turn-ins of excess and unserviceable, reparable repair parts must be processed without delay.
- The authorized quantity of repair parts listed on the PLL must be on hand or on request at all times.
- The recorded location and the actual location of repair parts should match.

Section IV
REQUISITIONS AND DISTRIBUTION

DIVISIONS

Divisions in the theater receive supplies from many sources. In contingency operations, division elements deploy with prescribed amounts of supplies. Combat PLL stocks are sent with the company when it is detached from the battalion. During the initial phases of deployment, these stocks are the only source of resupply. Division units have only a limited capability to carry reserve supplies. They stock repair parts based on their demand history, MPLs, and essential repair parts stockage lists. To prevent overstockage in the BSA, the DMMC specifies the items and quantities of Class IX to be located there. Determinations are based on the combat PLLs of forward units and on the mobility requirements of forward support maintenance units. Maintenance units in the DSA carry remaining stocks of the division Class IX ASL.

Logistics Support

The DISCOM provides division-level Class IX supply support and ADP support for division logistics. It provides movement control in support of division logistics and coordinates surface transport of supplies. When airlift capabilities are not organic to the division or airlift requirements exceed division capabilities, the DISCOM depends on corps medium or heavy helicopter units to support emergency logistical requirements. To enable forward deployed divisions to remain mobile, personnel should load and issue PLL and ASL stocks from repair parts vans, MILVANs, or stake and platform trailers. See AR 710-2, Chapter 1, for ASL mobility standards. To increase readiness to deploy for combat, personnel should load combat-essential stocks on vehicles during the alert stage. PLL and ASL stocks should be uploaded in stake and platform trailers and modular-equipment, deployment-storage containers or flat racks. For more details on supply operations in the division, see FM 63-2.

Supply Management

The DMMC manages the division Class IX repair parts supply system. It develops, approves, and maintains the division PLLs and ASLs and requisitions supplies. The DMMC also determines requirements for deployment. It directs the distribution of supplies. It also specifies the types and quantities of Class IX to be located in the forward areas of the division. ADP support is provided by the logistics automation systems support office. The DMMC parts branch provides PLL customer support. Each customer PLL is managed separately. For more details on DMMC operations, see FM 63-2.

Common Repair Parts

Common repair parts supply requirements depend on the types of divisions and their support organization, the tactical situation, the type of war, and the type of terrain on which the war is being fought. Figure 5-1, page 5-8, shows the flow of repair parts in a division. Maintenance companies supply common repair parts in the division.

Missile Repair Parts

Critical missile parts remain in the brigade trains area to support repair and maintenance activities. Since missile parts are limited, assets must be tightly controlled. The technical supply officer sets priorities and allocates items to each brigade area. Missile support companies provide missile repair parts in the division.

Aircraft Repair Parts

Aircraft should be ready to support combat forces at all times. Repair parts must be readily available for aircraft, avionics equipment, and aircraft armament systems. Aircraft maintenance companies provide DS maintenance support to division units, including repair parts supply.

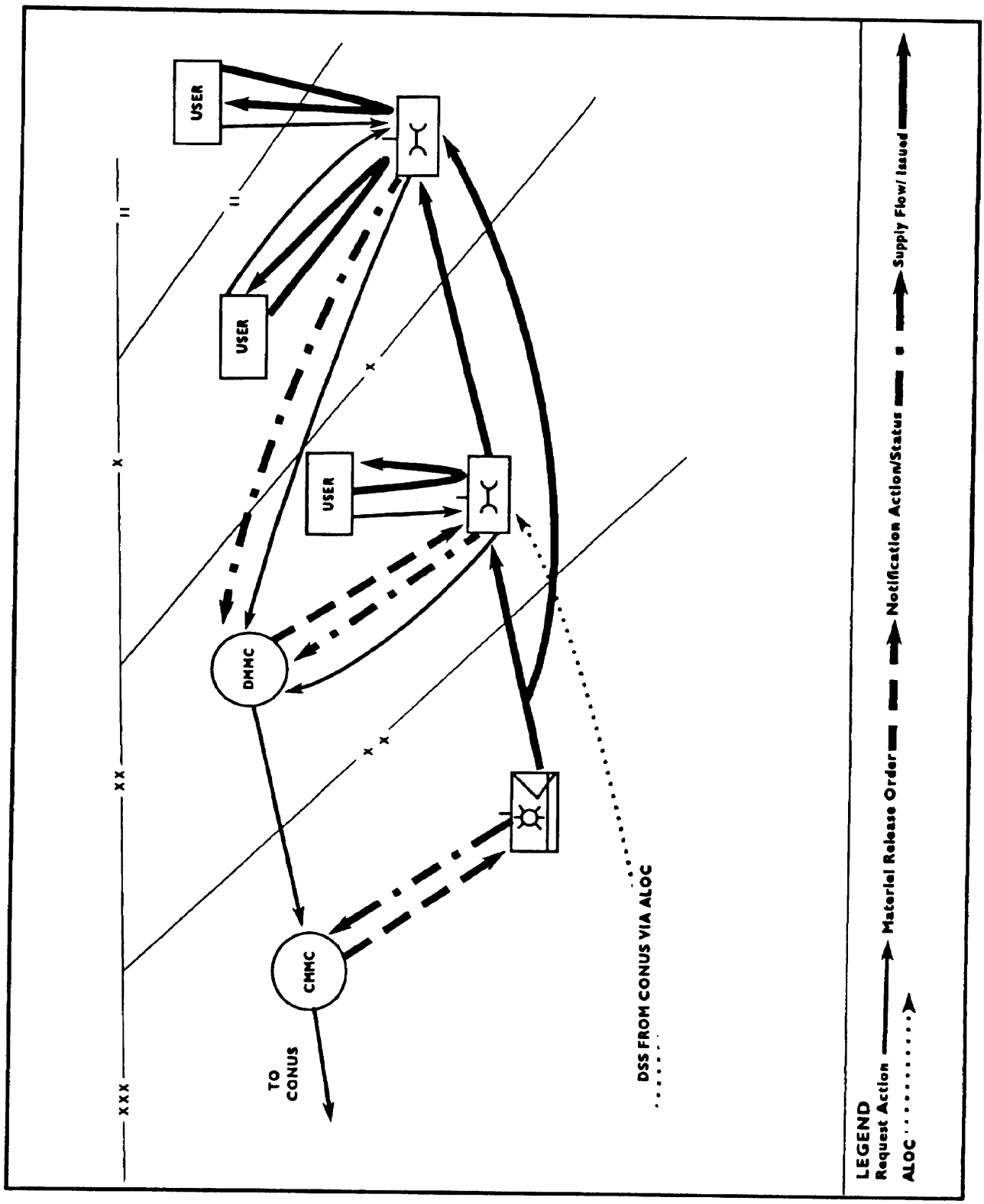


Figure 5-1. Request and delivery of noncontrolled Class IX supplies (less aircraft) in a division

CE and COMSEC Repair Parts

Repair parts, subassemblies, and other items required to operate or support COMSEC equipment are obtained through conventional supply channels. Use MILSTRIP for this. See ARs 710-2 and 725-50. The CE branch of the DMMC accounts for COMSEC materiel. It processes all transactions in the divisions. Supply support units maintain an ASL, including repair parts for CE and COMSEC materiel. Maintenance battalions supply COMSEC Class IX items. Forward supply companies of the maintenance battalions supply CEWI repair parts. The service support company of the CEWI battalion maintains the battalion ASL.

CORPS, SEPARATE BRIGADES, AND REGIMENTS

The COSCOM ACofS, Support Operations, establishes supply levels based on directives from higher headquarters. He consolidates supply requirements for the corps. Separate brigades maintain only those supply levels needed to sustain operations until additional supplies can be delivered. Each unit in the separate brigade is responsible for maintaining its own combat PLL and MPL of repair parts. The support battalion's maintenance company provides backup stocks of MPL items for brigade units and other DS-level Class IX supply support. At the DS level, repair parts are provided through maintenance channels. At the GS level, the QM repair parts supply company, GS, provides repair parts in response to MROs from the CMMC.

Contingency Corps Support

CSS is austere in contingency operations. However, it is necessary to deploy sufficient supplies to support and maintain weapons systems and equipment,

Class IX ALOC supply. ALOC cargo arrives daily at aerial ports of debarkation. All cargo is then moved to the designated SSA regardless of priority designator. Break-bulk points are set up to break out individual shipments for delivery directly to each requesting SSA.

Class IX non-ALOC supply. Non-ALOC replenishment cargo is normally transported by rail and truck from seaports to corps stockage locations. High-priority non-ALOC cargo maybe airlifted into the corps operational area. As a rule, it bypasses the GSU and moves directly from the aerial port to the requesting supply activity.

Other sources of repair parts. Use controlled exchange to return essential items immediately to a mission-capable condition. Obtain repair parts from cannibalization of nonreparable major end items and assemblies.

Supply Management

The following elements provide supply management for corps, separate brigade, and regiment units.

CMMC. The CMMC provides integrated supply and maintenance management. The COSCOM AC of S, Support Operations, reviews and analyzes demands and computes corps requirements for supply and maintenance support. The CMMC then evaluates work loads and the capabilities of supported supply and maintenance units and allocates resources. It coordinates throughput distribution policies with the CMMC. FM 54-23 covers the CMMC.

Support squadrons. Support squadrons provide supply materiel management for separate brigades and ACRs. Their headquarters and headquarters companies determine requirements for brigade supplies. They procure as well as direct the receipt, temporary storage, and issue or distribution of supplies.

Headquarters and headquarters troop. The headquarters and headquarters troop provides supply and maintenance materiel management for ACRs. It determines requirements and supervises the regiment's ASL and combat PLLs. It also determines ASL mobility requirements.

Common Repair Parts

Maintenance companies in the CSB perform intermediate maintenance and provide ASL repair parts to support units in the corps rear area. Most of these companies also exchange selected items. Repair parts supply companies, GS, are the main supply sources in the corps. Separate AIM brigades, light infantry brigades, airborne brigades, air cavalry combat brigades, and the ACR provide additional supply and maintenance support. With the exception of theater army-controlled items, the corps depends on CONUS for replenishment through the DSS or ALOC. If this is not possible, the COMMZ

can use its safety level to restore corps operating levels on short notice. Figures 5-2, page 5-11, and 5-3, page 5-12, show the flow of common Class IX items in the theater. When possible, Class IX ALOC items are sent directly to the requisitioner in the corps. When this is not possible, supplies are delivered to a repair parts supply company in the corps or COMMZ for surface shipment to the requesting DS or GS maintenance unit. Heavy tonnage items are sent by sea and surface transport.

Missile Repair Parts

Repair parts supply is critical for missile systems. Due to the high cost of parts, supply procedures generally differ from those used in the routine supply system. There is greater reliance on shipment direct from CONUS. Several elements supply missile repair parts support. Missile maintenance companies provide repair parts of missiles. They have support maintenance shops. Maintenance support teams receive, store, and issue line items for missile systems.

Aircraft Repair Parts

Divisional AVIM units transmit requisitions for aircraft peculiar repair parts through the DMMC to the CMMC. Requisitions from nondivisional AVIM units are sent directly to the CMMC. If the part is available in the corps, the CMMC sends an MRO to the repair parts supply company, GS, which sends the part to the AVIM unit. Aviation maintenance companies provide DS repair parts. QM repair parts supply companies provide GS repair parts.

Airdrop Equipment Repair Parts

The QM airdrop supply company and the QM light airdrop equipment repair and supply company supply DS airdrop repair parts in the corps. For more details, see FM 10-400.

CE and COMSEC Repair Parts

The COMSEC Materiel Control System controls COMSEC. The Army Communications Command area maintenance and supply facilities support fixed station communications equipment. COMSEC materiel management sections compute requirements, prepare requisitions, and process receipts and requisitions. They control materiel release and distribution and inventory and account for all COMSEC materiel within the corps rear area. The CE office at corps headquarters establishes priorities for issue of COMSEC materiel. COMSEC repair parts are provided by the COMSEC logistics support company which maintains the theater ASL for COMSEC. Signal battalions maintain shop stock and exchange items for unit elements. The airborne special forces group maintains shop stock for signal equipment belonging to the special forces group. CE maintenance companies provide repair parts to DS maintenance units. Maintenance battalions and aircraft maintenance companies maintain shop stock and appropriate exchange items. CEWI groups maintain shop stock to support organic DS maintenance operations.

COMMUNICATIONS ZONE

The TAACOM supports all units located in or passing through a given area in the COMMZ. The ACofS, Materiel, develops policies, plans, and procedures for establishing and maintaining supply levels and stockage lists. The TAACOM MMC approves additions to or deletions from stockage lists. It also approves adjustments to requisitioning objectives for ASL lines. The wartime sustaining level for the COMMZ is 30 DOS for ALOC items and 7 DOS plus OST for non-ALOC items. ALOC items are usually flown directly from CONUS to DS and GS users. The COMMZ maintains a 30-day safety level of supplies. Delays in shipments from CONUS can be absorbed in this time period.

Supply Management

TAACOM units store and maintain pre-positioned war reserves, other theater reserves, and theater-controlled stocks. The TAMMC manages and controls the allocation of these critical and high-priority stocks.

TAACOM. The TAACOM provides DS CSS and intermediate GS maintenance and supply to units passing through or located in the COMMZ. It provides GS supply and intermediate GS maintenance to the combat zone. The TAACOM may negotiate directly with governmental agencies or private individuals in host countries for required supplies by coordinating with the theater army G5.

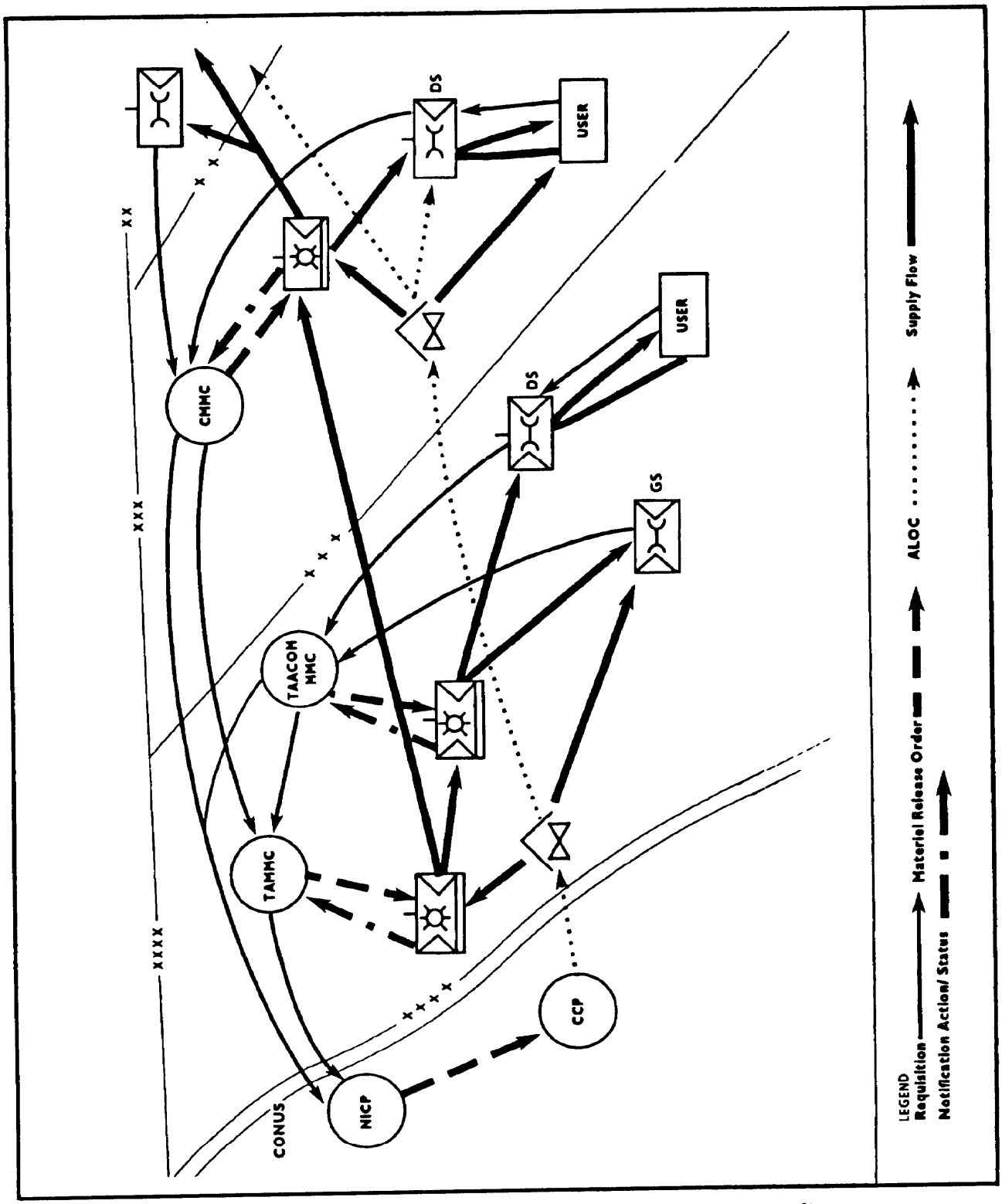


Figure 5-2. Request and delivery for noncontrolled Class IX supplies (less aircraft) at echelons above division

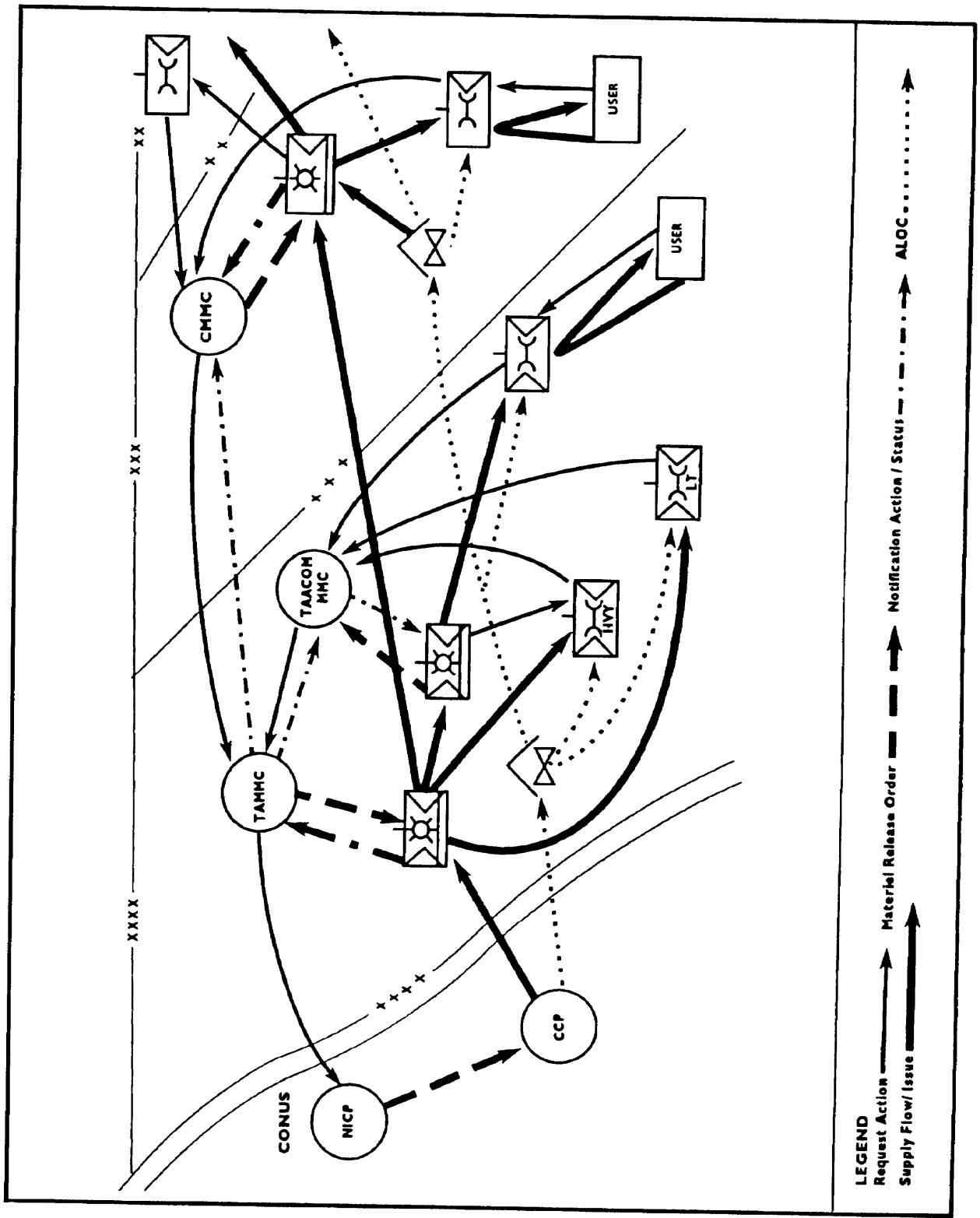


Figure 5-3. Request and delivery of theater army-controlled Class IX supplies (less aircraft)

TAACOM MMC. The TAACOM MMC provides integrated supply and maintenance management. It collects, sorts, analyzes, and acts on supply and maintenance requests. It receives and analyzes demands for Class IX and computes requirements for supplies and maintenance support. It develops and publishes guidance on exchange operations. After evaluating work loads and the capabilities of supported supply and maintenance units, it allocates resources.

COMMZ Supply Support Organization

Organization of the supply and maintenance support operations depends on the size and composition of forces within the COMMZ and the availability of assured HNS. It also depends on the amount of backup support required by forces in the combat zone, the nature of planned operations, and the geographic and political features of the area. FM 100-16 describes COMMZ supply support operations.

Requisition and Materiel Flow

With the exception of theater army-controlled items, the COMMZ depends on CONUS for replenishment. Though it is not the prime source of supply support to the corps, the COMMZ can replenish the corps when the supply pipeline is disrupted or unanticipated changes occur in theater consumption patterns.

Requisition flow. With the exception of theater army-controlled items, the TAACOM MMC receives and processes requisitions for Class IX items. In war, as in peace, the TAACOM MMC sends requisitions to CONUS NICPs. Requisitions for ALOC items bypass the telecommunications center serving the MMC. Requisitions for theater army-controlled items are sent to the TAMMC. The TAMMC also controls war reserve stocks (non-ALOC Class IX included).

Materiel flow. Materiel is shipped directly from CONUS to the corps whenever possible. Otherwise, Class IX ALOC items are sent to the intermediate levels in the COMMZ. When possible, DSS surface shipments of container loads are delivered to the documented requisitioner. When this is not possible, supplies are delivered to DS or GS units.

Common Repair Parts

GS supply support is available through QM repair parts supply companies, GS, TAACOM. DS supply support is available through DS maintenance companies.

Missile Repair Parts

QM repair parts supply companies provide GS repair parts. Maintenance and supply companies and maintenance batteries provide DS repair parts.

Aircraft Repair Parts

Army aircraft require a great deal of maintenance. Inadequate maintenance increases the need for supplies in the COMMZ. QM repair parts supply companies keep the aviation maintenance company in aircraft repair parts.

Airdrop Equipment Repair Parts

The QM airdrop equipment repair and supply company and the QM heavy airdrop supply company specialize in airdrop equipment, DS, repair parts supply support. For more details on airdrop supply, see FM 10-400.

CE and COMSEC Repair Parts

The Theater Communications Command (Army) coordinates logistical support for assigned and attached signal units. The TAACOM MMC provides COMSEC materiel management for the theater army area. It manages the maintenance companies assigned to the support groups. The Theater Communications Command (Army) signal units maintain a shop stock of repair parts with which to perform DS maintenance on organic CE and COMSEC equipment. DS maintenance units also maintain a shop stock of CE and COMSEC repair parts. The COMSEC logistics support team maintains the theater ASL for communications items. It processes requisitions and receives, stores, and distributes all COMSEC materiel, except that shipped directly to supported units.

Marine-Peculiar Repair Parts

Due to the low-density and unique characteristics of marine-peculiar parts and avionics, they are excepted from demand-stockage criteria. Most user units are authorized to keep enough parts on the craft to sustain

themselves for 15 days in combat. Marine intermediate maintenance units provide backup supply and maintenance support on shore or by means of floating maintenance support teams. Marine-peculiar repair parts are not supplied by a repair parts supply company, GS.

Rail Equipment Repair Parts

HNS is the primary means of providing rail equipment and rail maintenance in a theater of operations. If HNS is not available, GS maintenance rail-operating units can be deployed to the theater. The transportation railway car repair company and the diesel-electric locomotive repair company supply rail equipment repair parts.

CHAPTER 6
PROVIDING CLASS VI AND X SUPPLIES
Section I
MANAGEMENT

CLASS VI SUPPORT CONCERNS

In peacetime, AAFES manages Class VI items. Upon outbreak of hostilities, AAFES cargo shipments may be canceled or diverted elsewhere to free transporters to carry more critical items. In the early stages of a war, stocks in PXs in the COMMZ and corps rear area may be turned over to the theater supply system.

Items Authorized

During heavy levels of commitment, the health and comfort items listed in AR 30-7 might be the only personal-demand items available in the theater. In moderate and light levels of commitment, these items might be used from D-Day to D+60. After D+60, AAFES contingency procedures may be put into effect, upon direction of the AAFES commander, to supplement items authorized by AR 30-7.

Manning and Responsibility

Existing PXs in the COMMZ may remain in service after conversion to military manning. Military personnel may operate exchange retail activities forward of the COMMZ. Following conversion to military manning, responsibility for exchange operations belongs to the G1.

Transportation

Class VI items must compete with critical assets sent to oversea theaters. Transportation assets may not be available prior to D+90. That is when theater stabilization efforts may be expected to occur in the corps and COMMZ. Until then, sundries packs would have to provide minimally essential Class VI items.

Automation Support

The DS4 automated supply system does not provide Class VI supply support. However, such support is provided by SAILS.

SUPPORT OF CIVIL AFFAIRS

FM 41-10 describes civil affairs operations. Basic policies and procedures for support of civilian populations are contained in theater or higher-level plans. These plans include estimates of initial requirements and availability of resources. Commanders who have been delegated civil affairs authority should recommend changes in requirements for support of the civilian population. The tactical operation commander is responsible for estimating civilian supply requirements, for making allocations, and for setting priorities. The G5 has primary staff responsibility for coordinating matters involving civil-military operations. However, primary responsibility for the logistics of civil-military operations remains with the G4. The supplying of items by the military for relief of civilian distress is primarily a concern of the logistics staff. Distribution of these supplies to civilians is a function of civil affairs units. Table 6-1, page 6-2, lists specific civilian supply tasks. The tasks are grouped according to the intensity of conflict. Some logistics areas require coordination between the G5 and the G4. These areas include:

- Consolidated requirements for civilian supplies to be furnished from military stocks or requisitioned from US stocks.
- Plans for the distribution of supplies to civilians.
- Requirements for insecticides, repellents, and rodenticides to protect the health of the civilians.
- Disposition of captured enemy supplies which are adaptable to civilian use.
- Availability of salvaged clothing and other supplies for civilian use.
- Requirements for military transportation for civilian supplies.

PROCUREMENT

Class VI and X items are purchased with different finds. Each supply class has restrictions on procurement.

Table 6-1. Civilian supply duties of civil affairs units

ALL SITUATIONS	STABILITY OPERATIONS	LIMITED AND GENERAL WAR	
		OCCUPIED FRIENDLY	OCCUPIED HOSTILE
Plan for relief supplies for immediate needs of populace. Determine availability of military supplies for civilian use. Acquire and distribute civilian supplies according to policy and applicable laws. Establish and maintain civilian supply records. Assure coordination of civilian and military transportation facilities for distribution of civilian supplies. Assure safeguarding of essential civilian supplies. Ensure that civilian supplies reach intended destination and are not diverted into black market channels. Determine caloric requirements of population categories such as children and nursing mothers. Advise commander concerning all aspects of civilian supply. Conduct surveys of: • Normal standards of living, including health and dietary factors. • Agricultural and industrial patterns and effects of military operations on civilian supplies. • Collection and distribution facilities handling essential supplies.	Establish working relationship with host nation, USAID, and personnel of volunteer agencies who control civilian supplies. Coordinate movement of supplies from USAID and volunteer agencies, using military transportation if necessary. Take measures to salvage captured supplies and turn them over to civilian authorities for use. Assist in providing security for movement of civilian supplies.	Prepare procedures and programs for the transition from military to civilian operations in the area. Plan and supervise food rationing or controlled distribution, as required. Assist in moving essential civilian supplies, particularly food, medical, and fuel, from surplus to deficit areas, as required. Requisition through normal supply channels for emergency civilian supplies not locally available. Recommend supplies to be made available from existing military stocks.	Same as "Occupied Friendly," plus: Secure control of all governmental and commercial supply facilities and personnel until they can be screened for acceptability.

Class VI Items

Class VI items are procured with nonappropriated funds. They are procured, stored, and distributed by the Defense Personnel Support Center of the Defense Logistics Agency. Because of shelf life and rotational requirements, sundries packs containing health and comfort items are normally not prestocked. Instead, items for these packs are purchased and assembled as needed. The Defense Personnel Support Center requires a 120-day lead time to acquire and distribute ration supplement sundries packs.

Class X Items

Most Class X items are stock fund secondary items. Only a few are appropriation-financed principal items. Many Class X items are nonstandard items (windmill parts, kits, and plows, for example). Some items (lawnmowers, grass seed, livestock salt, and hay, for example) managed by the GSA are covered by a contract which allows using activities to place an order directly with the vendor. A few Class X items may be purchased locally. Civil affairs personnel help purchasing and contracting officers with local procurement of supplies for civilian relief or economic aid. Some Class X items (animal traps, horse and mule saddles, and harrow disks, for example) are not stocked. Thus, they have long lead times. These items are procured only after receipt of a requisition.

Section II
CLASS VI SUPPLY

PERSONAL DEMAND ITEMS

There are almost 250,000 Class VI personal demand or nonmilitary items for sale to soldiers and other authorized individuals in PXs throughout the world. Examples are shampoo, pens, razors, tobacco, stationery, and chewing gum. Class VI supply is often expanded to include catalog sales, comfort items, civilian clothing, and luxury items. Class VI items are not listed on the AMDF. A few health and comfort items may be issued when enlisted members report to a reception station. Issue is generally limited to items that do not require fitting, such as towels and handkerchiefs.

Requirements

In early stages of highly mobile and intensive conflicts, there is little leisure time. Therefore, there is little need for Class VI items. Before full theater development, Class VI items may be restricted to the sundries pack items required for the safety, sanitation, and minimum health and comfort of soldiers. Where a PX cannot be operated, the theater army commander can request that ration supplement sundries packs be supplied. The authorization document is AR 700-23. In areas where exchange activities do not already exist, AAFES will not be required to provide exchange services earlier than 60 days after initial deployment (D+60). Where there is no AAFES exchange in an area, teams BP and BQ may be authorized. Once exchanges are established, AAFES determines requirements. It then procures, stores, and distributes supplies and operates the resale facilities.

Consumption Rates

Class VI requirements according to FM 10 1-10-1/2 are 3.2 pounds per person per day. After D+60, AR 700-23 authorizes .56 pound of Class VI supplies per man per day and 1.06 pounds of Class VI supplies per woman per day. The AAFES contingency plan for D+60 currently authorizes 7.29 pounds per soldier per day during moderate and light levels of commitment. No authorization is made for a heavy level of commitment. More information on Class VI consumption rates may be obtained from HQ, AAFES, ATTN: AAFES-PL-P, Dallas, TX 75222-6049.

RATION SUPPLEMENT SUNDRIES PACKS

Issue of sundries packs affects requirements for Class VI health and comfort items. The ration supplement sundries pack (NSN 8940-00-268-9934) is a Class I item which contains health and comfort items issued without cost to soldiers during combat operations.

Items include writing paper, ballpoint pens, disposable razors, and other personal care items. Female soldiers are authorized additional health and comfort items. These include cleansing cream and tissues, sanitary napkins and tampons, hand and body lotion, and toilet paper. For more details on sundry packs and their contents, see AR 30-7.

Requirements

MACOM commanders determine when ration supplement sundries packs are required. They request that HQDA start acquisition and distribution actions. The Deputy Chief of Staff for Logistics approves the use of sundries packs in theaters of operations. MACOM commanders then submit requisitions for initial and follow-on requirements. Initial requirements are filled with bulk Class VI supplies. MACOM commanders coordinate with AAFES representatives to ensure an interim supply of Class VI items until ration supplement sundries packs become available. Follow-on requirements are filled with sundries packs. Sundries packs are requested on DA Form 2058-R in the same manner as Class I items. Sundries packs are issued on DA Form 3294-R. Following development of the theater, or as the situation permits, the Defense Logistics Agency assumes responsibility for meeting Class VI needs in the theater.

Issue Controls

AR 700-23 controls the issue of health and comfort items. Sundries packs must be requested by the MACOM commander and approved by HQDA before issue can be made. Sundries packs are issued only to support units or individuals who have been in combat for more than 48 hours without exchange support, contingency emergency plans, and combat operations.

Ration Accompaniment

Usually the sundries pack is issued with rations until AAFES can provide Class VI support. Only the MRE contains candy and toilet paper. No other comfort items are in operational rations.

SALES TEAMS

When personal items are not issued free or made available through an AAFES exchange, sales teams BP and BQ may be authorized. Sales teams may be assigned to the division, corps, or theater army. Sales team BQ provides sales management and control personnel needed to supervise BP mobile sales teams. Sales team BQ personnel requisition, receive, and store Class VI items for issue to the mobile sales team. That team provides a mobile outlet for once-a-week retail sale of merchandise and personal items, on a nonprofit basis, for up to 10,950 authorized personnel. Security of a soldier's personal funds may be a consideration in this type of direct sales operation. The mobile sales team may also wholesale personal items and merchandise to a unit PX. Supplemental transportation needed to distribute supplies must be provided by theater transportation units. Additional personnel are required to load and unload supplies.

STORAGE CONCERNS

Class VI items are highly pilferable. Make sure storage containers at terminal warehouses and major oversea storage points are locked and guarded. A number of Class VI items have limited shelf life. Check these items for dates. The storage and issue principle of first in, first out applies.

Section III
CLASS X SUPPLY

NONMILITARY PROGRAM ITEMS

Class X items support nonmilitary programs such as agricultural and economic development. If civilian resources in the theater are inadequate, military sources may provide Class X items to the civilian population. There are nearly 500 Class X items listed on the AMDF. The item manager is the US Army General Materiel and Petroleum Activity. Nonmilitary support items are handled separately from normal military

requirements. However, they compete with military items for distribution resources. If critical military operations are not impaired, supply of Class X items may be important enough to take precedence over some of the less-essential Army items.

Requirements

Civil affairs staff sections determine requirements for supplies required for relief of civilians in distress. Following an NBC attack, large quantities of rodenticides and insecticides should be needed. Seed, fertilizer, and domestic animals may be required, also.

Consumption Rate

Military consumption rates are based on military strength and do not apply to Class X supplies. Instead, requirements are based on population size, geographic location, and technological capabilities of the country involved.

SOURCES OF SUPPLY

The principal sources of civilian support are supplies from the local economy, captured enemy stocks, contributions from national and international welfare and charitable organizations, and supplies from allied or US military stocks. In addition to food, clothing, and medical supplies, the types of supplies approved for issue from US military stocks include tents, fuel and lubricants, and engineer, communication, and transportation equipment. Most Class X items appear with a G_0 or S9C source of supply code on the AMDF. Sources include GSA warehouses, the Defense Construction Supply Center, and the Defense Industrial Supply Center.

REQUISITION AND ISSUE PROCEDURES

Supply and distribution plans show responsibilities for receiving, storing, and issuing supplies for civilian support. QM supply companies provide Class X supplies only as directed by higher headquarters. Administrative orders and other instruct ions prescribe requisition and issue procedures.

Requisition

Requisitions for military supplies for civilian support are processed in the same manner as those for all other military supplies. Units tasked to issue supplies to authorized civilian agencies or groups place the requisitions.

Issue

During military operations, supplies for support of civilian affairs operations may be provided on an automatic basis. Class X issues are regulated. Depending on the situation, supplies intended for civilian support may require command approval prior to issue. Make sure that supplies are not diverted into black market channels. As the military situation becomes more stabilized, issue of fertilizers, seeds, tools, and lumber may help speed up local production of needed food and shelter. In sustained war, this would have the long-term benefit of freeing shipping space for other kinds of supplies.

DISTRIBUTION PROCEDURES

Procedures for distribution of Class X supplies are based on agreements between the supported foreign countries and the US State Department. Supplies for international defense and development operations are distributed through military channels. Civil affairs units distribute supplies to civilian users or agencies to relieve distress of civilians in countries in which US forces are present. Class X supplies are usually distributed to the foreign government directly from a terminal. Otherwise, delivery follows the same channels as that for Army general supplies. Supplies may also be delivered to specified points for issue to local governmental authorities. Public transportation as well as civilian and military vehicles may be used to move such supplies. Civilian vehicles required to transport these supplies should be organized into a civilian transportation pool under the supervision of civil affairs units in the theater area. Minimum amounts of fuel, lubricants, tires, and spare parts may be made available to maintain the civilian transportation pool.

ACCOUNTABILITY

Military stocks used for civilian support are accounted for until issued to civilian agencies. These records provide a basis for anticipating future requirements. They also ensure that supplies are not issued in excess. Civilian agencies are normally required to account for supplies provided from military sources and for contributions made by allied governments and nonmilitary agencies.

Appendix A
THE THREAT

REGIONAL THREATS

Recent events in the former Soviet Union have virtually eliminated the probability of a Soviet-led attack against Western Europe. Four of the republics forming the new Commonwealth of Independent States--Russia, Ukraine, Belorussia, and Kazakhstan--retain the capability to strike the US with strategic nuclear weapons. Indications are that their conventional forces will be considerably downsized, modernized, and reoriented toward territorial defense. Although the threat of strategic attack remains a concern, the export of tactical nuclear weapons, nuclear weapons technology, and scientific expertise from the former Soviet Union to the Third World is of even greater concern. The potential for US forces being drawn into Third World conflicts to protect national interests has thus significantly increased. Third World forces can be expected to be armed with modern weapons. This includes weapons of mass destruction supplied by the former Soviet Union, China, North Korea, and some Western nations. States which have, may be developing, or desire such a capability include North Korea, Iraq, Iran, Pakistan, China, and India. However, they may not be as proficient in modern military war as the former Warsaw Pact nations.

Southwest Asia

One of the most unstable regions of the world is Southwest Asia. This area stretches from the Indian Ocean, across the Persian Gulf and the Middle East, to the Mediterranean Sea. Ideological and religious conflicts, nationalism, great wealth and desperate poverty, expanding populations and rising expectations, and more modern military forces make the region unstable. Countries in this region are acquiring advanced conventional weapons. They also want unconventional weapons, particularly nuclear weapons. Threat forces in the region may be the most modern in the Third World. These countries have deployed tanks, jet fighter aircraft, SCUD missiles, helicopter, and multiple rocket launchers. All are armed with a variety of conventional and unconventional munitions. High cost keeps these acquisitions to a minimum. The international arms market may make nuclear weapons production technology available to the highest bidder. The US may become opposed by Western technology in this strategically significant region.

Central and South America

Social trends will determine economic, demographic, and political and military events in the Caribbean, Central America, and South America. Governments in these regions will struggle to contain domestic tensions and maintain the cohesion of their respective societies. Military operations in Grenada and Panama, counternarcotics operations, and military advisory missions indicate continued Army involvement throughout the region. LIC is the dominant military activity in the region. Threats to US forces include terrorist and guerrilla groups armed with crew-served weapons, small arms, and shoulder-fired antitank and antiaircraft weapons systems.

Europe

Stability depends on the ability of the CIS to survive economically and politically. Economic collapse and war between the republics are possible. Ethnic strife also threatens Eastern Europe stability as it did in the former Soviet Union. NATO nations may have to intervene with peacekeeping forces. Opposing forces may be as formidable as those of the former Soviet Union.

Pacific

Major changes in the Asian security environment continue to occur. These include the shifting military balance on the Korean Peninsula; the relationship between the US, Japan, and Russia; the growing power of China and India; serious instability in and withdrawal of US troops from the Philippines; the nuclear arms buildup; and vigorous arms exports to the Third World. Regional conflicts adverse to US interests may erupt as US forces are downsized or withdrawn. Regional powers traditionally hostile to US interests include Russia, North Korea, and China.

TERRORISM

The most insidious threat to US security in peace and war is terrorism. Generally, terrorism has evolved from ideological, political, religious, and ethnic discontent and the narcotics trade. Terrorist threats to US interests continue in Western Europe, the Middle East, and Latin America. In Europe, leftist groups continue to attack "Western Imperialism" including the NATO Alliance and the US military presence. In the Near East, the US and Israel are seen as common enemies in the eyes of various subnational and religious groups. In South America, economics and ideology are the two principal motivations for terrorist acts. Narcotics traffickers are driven by perceived threats to their economic interests. They oppose governments allied to the US. Individuals, groups, and states which view the US presence and influence as a threat to their existence and political beliefs will most likely endorse terrorist attacks. The Pacific trade war could dramatically heighten the potential for terrorist activities.

THREATS TO COMBAT SERVICE SUPPORT OPERATIONS

Threats to future CSS operations will consist primarily of Level I and modernized Level II forces equipped with long-range indirect fire weapons. These weapons will include tube artillery and surface-to-surface missiles armed with both conventional and unconventional munitions. Level III operations will occur only if the opposing forces are capable of conducting deep armored penetrations or large airborne or air assault operations in the rear area.

Level I

Level I threats predominate in LIC. They include insurgents, drug cartels, and terrorists armed with various weapons. Drug cartels have many resources to organize, arm, and equip private armies and establish intelligence networks. Soviet weapons, such as the AK-47 assault rifle and RPG-7 antitank rocket, predominate. Homemade mines and booby traps may also be employed. Level I threats are also found on the mid-to high-intensity battlefield. These threats range from individual sleeper agents and terrorists to squad-size special operations elements. Specific CSS targets include logistics command and control, convoys, and storage areas. The enemy may interdict CSS operations throughout the battlefield, especially in the corps support area, due to the density of troops forward. Sleeper agents will function as intelligence collectors as well as saboteurs and provocateurs. Fanatical paramilitary forces may also be encountered operating independently of conventional forces.

Level II

Mid- to high-intensity threats involve countries that use intensive missile and artillery fire strikes to disrupt the enemy's logistics system. Other threats include tank and mechanized infantry forces; airborne, air assault, and heliborne forces; radio-electronic combat; and NBC warfare. Attacks by naval infantry forces are also possible within coastal areas.

POTENTIAL THREAT WEAPON SYSTEMS

Forces opposing the US Army will generally be equipped with Soviet tanks, infantry fighting vehicles, or comparable weapons of Chinese or Western manufacture. These are inferior to comparable US systems. Without more modern Western technology or a mechanized penetration in the classic Soviet style, they pose only a moderate threat to CSS operations.

Tube Artillery Systems

The primary threats to CSS operations are towed and self-propelled 122- and 152-millimeter systems. These provide a range capability equal to or superior to our current systems. Despite efforts to control their export, systems meeting these requirements are available on the international arms market from Argentina, China, France, Italy, and South Africa.

Multiple Rocket Launcher Systems

Multiple rocket launchers deliver a variety of munitions. This includes chemical and biological agents, fuel-air explosives, cluster bombs, and antipersonnel mines. The Soviet BM-21 is used in most modernized Third World countries. Better systems are available from China, Iran, Iraq, North Korea, South Africa, Russia, and the United States. These systems generally outrange

our best counterbattery systems and are thus a significant threat to the CSS operations.

Ballistic Missile Systems

The number of short- and medium-range ballistic missiles has increased in recent years. These weapons will be armed with conventional munitions. Chemical and nuclear munitions may also be available to certain countries. France, Taiwan, China, North Korea, and Russia produce these weapons. They pose a significant threat to CSS operations.

Precision-Guided Munitions

Precision-guided air- and sea-launched cruise missiles have proved their worth in the Gulf War. They have top acquisition priority by those countries that can obtain them. Reports indicate that Iraq recently acquired a defective US Tomahawk missile, will attempt to copy it for production, and will most likely share the technology with other arms-producing Third World countries. Similar weapons systems may soon be available on the international arms market from France, Germany, and Russia.

SUMMARY

The threat to CSS operations is no longer primarily the former Soviet Union. The conflict with Iraq demonstrated that Third World countries with the political will and the military power will challenge their neighbors for regional dominance. Forces opposing US military operations vary in size, equipment, and proficiency. They have Soviet weapons such as T-62 and T-72 tanks. Artillery systems, the primary CSS threat, are more mobile and outrange our systems. They consist of older Soviet equipment, such as the 2S1 122-millimeter SP howitzer, 2S3 152-millimeter SP howitzer, and BM-21 medium-range launcher. Stringent controls and high cost limit the acquisition of Western technology by Third World countries. As it becomes available, this technology will inevitably reach the Third World, especially in the oil-rich Middle East. Finally, although international sanctions will prohibit the production of NBC weapons, the most radical Third World countries will continue to obtain them.

APPENDIX B
GENERAL SUPPLY CLASSES

Class I - Subsistence and gratuitous health and welfare items.

Class II - Clothing, individual equipment, tentage, tool sets and tool kits, hand tools, and administrative and housekeeping supplies and equipment. Includes items of equipment, other than principal items, prescribed in authorization and allowance tables. Subclasses are A, B, C, D, E, F, G, H, K, L, M, O, P, Q, T, U, W, Y, and Z.

Class III - Petroleum, oils, and lubricants: petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products, and coal. Subclasses are 2, 3, 5, and 6.

Class IV - Construction: Construction materials to include installed equipment and all fortification and barrier materials. No subclasses assigned.

Class VI - Personal demand items (nonmilitary sales items). No subclasses assigned.

Class VII - Major end items: A final combination of end products which is ready for its intended use and principal items (for example, launchers, tanks, mobile machine shops, and vehicles). Subclasses are A, B, D, G, K, L, M N, O, P, Q, U, W, Y, and Z.

Class IX - Repair parts: Subclasses are A, B, C, G, H, K, L, M, N, O, P, Q, U, and W.

Class X - Materiel to support nonmilitary programs (for example, agriculture and economic development) not included in Class I through IX. No subclasses assigned.

SUBCLASSES

A - Air (aviation, aircraft, and airdrop equipment): Class II - Items of supply and equipment in support of aviation and aircraft. Class III - Petroleum and chemical products used in support of aircraft. Class VII - Major end items of aviation equipment.

B - Troop support materiel: Consists of such items as water purification sets; shower, bath, laundry, dry cleaning, and bakery equipment; sets, kits, and outfits (includes tool and equipment sets and shop and equipment sets for performing unit, DS, GS, and depot-level maintenance); sensors and interior intrusion devices; topographic equipment and related topographic products as outlined in AR 115-11.

C - Commercial vehicles: Includes wheeled vehicles authorized for use in administrative or tactical operations.

E - General supply items: Includes administrative expendable supplies such as typewriter ribbons, paper, cleaning materials, and other supplies normally referred to as office supplies. Also includes publications distributed through AG channels.

F - Clothing and textiles: Includes individual and organizational items of clothing and equipment authorized in allowance tables and tentage and tarpaulins authorized in TOE or other media.

G - Communications-electronics: Includes signal items such as radio, telephone, teletype, satellite, avionics, marine communications and navigational equipment; tactical and nontactical ADP equipment; radar; photographic, audiovisual, and television equipment; infrared; laser and maser; electronic sensors; and so forth.

H - Test, measurement, and diagnostic equipment: Includes items of equipment used to determine the operating efficiency of or diagnose incipient problems in systems, components, assemblies, and subassemblies of materiel.

K - Tactical vehicles: Includes trucks, truck tractors, trailers, semitrailers, personnel carriers, and so forth.

L - Missiles: Class II and VII include guided missile and rocket systems.

M - Weapons: Includes small arms, artillery, fire control systems, rocket launchers, machine guns, air defense weapons, aircraft weapon subsystems, and so forth.

N - Special weapons: Class VII includes weapons systems which deliver nuclear munitions.

O - Combat vehicles: Includes main battle tanks, recovery vehicles, self-propelled artillery, armored cars, tracked and half-tracked vehicles, and so forth.

P - SIGINT, EW, and intelligence materiel: Includes materiel peculiar to those mission areas assigned to federal supply classification 5811 for which the AMC commander has responsibility. This subclass is identified separately from subclass G because of specialized supply and maintenance functions performed by a dedicated EW or SIGINT logistics system.

Q - Marine equipment: Includes marine items of supply and equipment such as amphibious vehicles, landing craft, barges, tugs, floating cranes and dredges.

U - COMSEC material: This subclass is identified separately from subclass G because of specialized supply and maintenance functions performed through a dedicated COMSEC logistics system.

W - Ground: Class III includes petroleum and chemical products and solid fuels used in support of ground and marine equipment. Class II and VII consist of construction, road building, and MHE.

Y - Railway equipment: Includes rail items of supply and equipment such as locomotives, railcars, rails, and rail-joining and shifting equipment.

Z - Chemical: Classes II and VII include chemical items such as gas masks, decontaminating apparatuses, and smoke generators.

Class III packaged supplies include the following subclasses:

2 - Air, packaged bulk fuels: Includes fuels in subclass 1 which, because of operational necessity, are generally packaged and supplied in containers of 5- to 55-gallon capacity, except fuels in military collapsible containers of 500 gallons or less which are considered as packaged fuels.

3 - Air, packaged petroleum products: Includes aircraft unique petroleum and chemical products consisting generally of lubricating oils, greases, and specialty items normally packaged by the manufacturer and procured, stored, transported, and issued in containers or packages of 55-gallon capacity or less.

5 - Ground, packaged bulk fuels: Includes ground bulk fuels which, because of operational necessity, are generally packaged and supplied in containers of 5- to 55-gallon capacity, except fuels in military collapsible containers of 500 gallons or less which are considered as packaged fuels.

6 - Ground, packaged petroleum: Includes petroleum and chemical products, lubricating oils, greases, and specialty items normally packaged by the manuacturer and procured, stored, transported, and issued in containers of 55-gallon capacity or less.

Note: So far as possible, alphabetical subclass designations are the same as commodity manager codes contained in such publications as SB 700-20. Moreover, since the AMDF is the prime item data source for Army-used items of supply and equipment, each item is currently being coded using supply categories of materiel codes as prescribed in AR 708-1 and transmitted to the field through the AMDF Retrieval Microform System.

GLOSSARY

AAFES Army and Air Force Exchange Service
ABF availability balance file
ACofS Assistant Chief of Staff
ACR armored cavalry regiment
ADMMO assistant division materiel management officer
ADP automatic data processing
ADPE automatic data processing equipment
AFM Air Force manual
AG Adjutant General
AIM armored-infantry-mechanized
air lines of communication A system that provides air shipment, regardless of priorities, for all eligible Class IX repair parts and maintenance-related Class II items to designated oversea units
ALOC air lines of communication
AMC United States Army Materiel Command
AMDF Army Master Data File
AR Army regulation
ARC accounting requirements code
ARIL automated return item list
ARMS Army Master Data File Retrieval Microform System
ARSOA Army special operations aviation
ARSOC Army Special Operations Component
ASL authorized stockage list
A/SPOD air or seaport of debarkation
A/SPOE air or seaport of embarkation
attn attention
AVGAS aviation gasoline
aviation intermediate maintenance AVIM activities provide mobile maintenance support to aviation units. Maintenance repair tasks performed by AVIM activities are DS and GS functions.
aviation unit maintenance AVUM units are company size or smaller. They are staffed and equipped to perform high-frequency, on-aircraft maintenance required to retain or return assigned aircraft to a serviceable condition. Primarily, these tasks include preventive maintenance, inspection, servicing, component replacement, and limited maintenance repair functions.
AVIM aviation intermediate maintenance
AVUM aviation unit maintenance
back order That portion of requested stock which was not immediately available for issue and which will be shipped at a later date. The record of the obligation to fill the order is also known as a back order or due-out.
basic loads For other than ammunition, basic loads are supplies kept by using units for use in combat. The quantity of each item of supply in a basic load is related to the number of days in combat that the unit can be sustained without resupply. Consumption of basic load supplies in peacetime may be authorized, depending on the class of supply.
BDU battle dress uniform
BP mobile sales team
BQ sales team
BSA brigade support area
C confidential
CA civil affairs
cc card column
CCP consolidation and containerization point
CDA United States Army Materiel Command Catalog Data Activity
CE Communications-Electronics
CEB clothing exchange and bath
CECOM Army Communications-Electronics Command
Central Issue Facility A MACOM-approved facility at installation level used to stock, issue, recover, and account for OCIE. A parent unit must stock OCIE when a CIF has not been established. Personnel positions for CIFs are prescribed in advance by MTOE or TDA. CIFs are authorized only in the peacetime environment.
CEWI combat electronic warfare intelligence
CIF Central Issue Facility
CIS Commonwealth of Independent States
CMCC corps movement control center
CMMC corps materiel management center
COMMZ communications zone

components There are two types of components. Components of end items are items identified in technical publications (such as TMs) as part of an end item. Troop-installed items, special tools, and test equipment are not components of end items. Components of assemblages are items identified in a supply catalog component listing as part of a set, kit, outfit, or other assemblage.
COMSEC communications security
CONUS continental United States
COOP Continuity of Operations Plan
COSCOM corps support command
CP command post
CS combat support
CSB corps support battalion
CSG corps support group
CSS combat service support
CTA common table of allowances
DA Department of the Army
DAAS Defense Automatic Addressing System
DC District of Columbia
DD/DOD Department of Defense
D-day debarkation day
demand-supported shop stock See shop stock.
DF diesel fuel
DIDS Defense Integrated Data Systems
Direct Support System DSS is the standard Army supply distribution system for supply Class II, III packaged, IV, V (missile components only), VII, and IX. During war, this is limited to Class IX only.
DISCOM division support command
discretionary allowances Items of clothing and equipment authorized on a discretionary basis as organizational clothing and equipment. They are essential to the health, comfort, and efficient functioning of personnel that might be subject to changes in climate or duty assignment. They include items authorized by movement orders and needed for health and comfort during a journey.
DLOGS Division Logistics System
DMA Defense Mapping Agency
DMMC division materiel management center
docu document
DOS days of supply
DRMO Defense Reutilization and Marketing Office
DS direct support
DSA division support area
DS4 direct support unit standard supply system
DSN defense switching network
DSS Direct Support System
DSU direct support unit
DTO division transportation officer
due out See back order.
durable items Items that are not consumed in use but that retain their original identity. These items have an ARC of "D" in the ARMS monthly AMDF. They include no consumable components of sets, kits, outfits, and assemblies; all tools (federal supply classes 5110, 5120, 5130, 5133, 5136, 5140, 5180, 5210, 5220, and 5280); and any other nonconsumable items with a unit price greater than $50 not coded nonexpendable. Personal clothing listed in CTA 50-900, Chapter 2, Section 1, is considered durable. Commercial and fabricated items similar to items coded "D" are also considered durable (AR 710-2).
end item A final combination of assemblies, parts, and materiel used to perform a function and ready for use in combat, CS, or CSS
EPW enemy prisoner of war
EW electronic warfare
expendable items Items with ARC "X" in the AMDF. Items, regardless of type classification or unit price, that are consumed in use, including all Class IX repair parts. Items with a unit price of $50 or less that are not consumed in use and are not coded with ARC "N" or "D" in the AMDF.
F Fahrenheit
FARE forward area refueling equipment
FLOT forward line of own troops
FM field manual
FORSCOM United States Army Forces Command
FSB forward support battalion
fwd forward
G1 Assistant Chief of Staff, G1 (Personnel)
G2 Assistant Chief of Staff, G2 (Intelligence)
G3 Assistant Chief of Staff, G3 (Operations and Plans)
G4 Assistant Chief of Staff, G4 (Logistics)
G5 Assistant Chief of Staff, G5 (Civil Affairs)
GS general support
GSA General Services Administration
GSU general support unit

HNS host-nation support
HQ headquarters
HQDA Headquarters, Department of Army
HTF how to fight
hvy heavy
hvy mat heavy materiel
integrated materiel manager The materiel manager responsible for performing assigned materiel management functions for selected items or selected federal supply classes
intermediate DS maintenance This maintenance is performed by maintenance units supporting divisional elements and nondivisional units. These units provide area support to nondivisional units and reinforcing maintenance to divisional maintenance units. They are highly mobile, usually perform in the forward area, and often handle repairs by replacement of components.
intermediate GS maintenance This maintenance is performed by heavy and light equipment maintenance companies in the rear area. It involves repair of components and assemblies.
JP jet propulsion
JTA joint table of allowances
KY Kentucky
LCA Logistic Control Activity
LIC low-intensity conflict
LIF logistics intelligence file
LIN line item number
LOC lines of communication (logistic routes)
lt light
m meter
MACOM major Army command
maintenance team Personnel from a maintenance activity, organization, or unit who provide unit maintenance support to a designated unit or operation for specific tasks. DSUs and GSUs provide maintenance support teams.
management level An acceptable range of performance usually expressed in upper and lower control limits or occasionally as a single figure. Performance consistent with a management level will be cause for closer management of the operation (AR 710-2).
mandatory parts list A listing of repair parts developed by AMC and approved by HQDA. The repair parts listed are essential for proper operation of combat equipment.
mat material
MAT CAT materiel category
materiel management center An activity that has formal accountability for property, except medical and commissary supplies, in a division, corps, TAACOM, or theater army
MCA movement control agency
MCC movement control center
MCO movement control officer
MCT movement control team
MD Maryland
METT-T mission, enemy, terrain, troops, and time available
MHE materials-handling equipment
MIL-HDBK military handbook
MIL-STD military standard
MILSTRIP Military Standard Requisitioning and Issue Procedures
MILVAN military-owned demountable container
MIRAC Management Information Research Assistance Center
MMC Materiel Management Center
MOGAS motor gasoline
MOPP mission-oriented protection posture
MOS military occupational specialty
MOUT military operations on urbanized terrain
MP military police
MPL mandatory parts list
MRE meal, ready to eat
MRO materiel release order
MSB main support battalion
MSR main supply route
MT empty
MTOE modification table of organization and equipment
NA not applicable
NATO North Atlantic Treaty Organization
NBC nuclear, biological, chemical
NCO noncommissioned officer
NICP national inventory control point
NIIN national item identification number
NMCM not mission capable maintenance
NMCS not mission capable supply
no number

nonexpendable items Items that are not consumed in use but that retain their original identity and require accountability throughout the life of the item. This includes all nonconsumable end items authorized by DA-recognized authorization documents. These items have an ARC of "N" in the AMDF. Commercial and fabricated items similar to items with ARC "N" are also considered nonexpendable.

not mission capable maintenance Equipment is NMCM when it cannot perform its combat mission because of maintenance work being done or to be done (DA Pamphlet 738-750).

not mission capable supply NMCS equipment cannot perform its combat mission because of a shortage of repair parts (DA Pamphlet 738-750).

NSL nonstockage list

NSN national stock number

OCIE organizational clothing and individual equipment

OCR optical character reader

OMA Operation and Maintenance, Army

operating level The quantity of stock intended to sustain normal operations during the interval between receipt of a replenishment shipment and submission of a subsequent replenishment requisition. It does not include either the safety level or the OST quantity.

operational load A quantity of supplies (in a given supply class) kept by using units for use in peacetime operations and based on various authorizations

OPLAN operation plan

OPSEC operations security

ORF operational readiness float

OST order ship time

PA Pennsylvania

PBO property book officer

PD priority designator

pkg packaged

PLL prescribed load list

POL petroleum, oils, and lubricants

POMCUS pre-positioning of materiel configured to unit sets

pre-positioning of materiel configured to unit sets POMCUS items are maintained in a theater to reequip specific units upon initial deployment to the theater.

priority designator A two-digit number (01 through 15) which indicates the priority of a requisition or shipment. PDs are based on the force/activity designator of the requesting unit and the urgency of need for the item.

program stock The repair parts and supplies stocked by the shop supply section for scheduled production line repair programs

PSYOP psychological operations

PX Army exchange

QM quartermaster

QSS quick supply store

RAOC rear area operations center

reorder point Sum of the OST level and the safety level. When the net asset position reaches the ROP, it is time to submit a replenishment position.

requisitioning objective Sum of the reorder point and the operating level. The maximum quantity of materiel authorized to be on hand and on order at any time.

RO requisitioning objective

ROP reorder point

ROTC Reserve Officers' Training Corps

RTAIS Remote Terminal Access Inquiry System

S1 Adjutant (US Army)

S2 Intelligence Officer (US Army)

S3 Operations and Training Officer (US Army)

S4 Supply Officer (US Army)

SAILS Standard Army Intermediate Level Supply Subsystem

SAMS Standard Army Maintenance System

S&S supply and service

S&T supply and transport

SARSS Standard Army Retail Supply System

SB supply bulletin

SEALOC sea lines of communication

SF Special Forces

shop stock Repair parts and consumable supplies stocked in a support-level maintenance activity for internal use. The two types of shop stocks are demand-supported stock and bench stock.

SIGINT signals intelligence

SO special operations

SOC special operations command

SOP standing operating procedure

SOTF Special Operations Task Force

SPBS-R Standard Property Book System - Redesigned
SSA supply support activity
SSSC self-service supply center
stockage level The quantity of supplies authorized or directed to be kept on hand and on order to support future demands
stockage objective The sum of the operating level and the safety level
summary accounting This type of accounting allows more than one transaction to be recorded as a single entry without unique identification of each transaction.
Supplemental clothing allowances. Items and quantities of personal clothing authorized for issue to enlisted members to supplement initial allowances. Supplemental allowances are given to persons whose assigned duty requires more quantities of items than are included in initial issue or special item or personal clothing not normally issued to the majority of enlisted members. Authorized supplemental allowances are in CTA 50-900.
TA theater army
TAA theater army area
TAACOM Theater Army Area Command
TAMCA Theater Army Management Control Agency
TAMMC theater army materiel management center
TAMMS The Army Maintenance Management System
TASOSC Theater Army Special Operations Support Command
TB technical bulletin
TDA tables of distribution and allowances
TM technical manual
TOE table(s) of organization and equipment
TRADOC United States Army Training and Doctrine Command
TX Texas
u unclassified
unit maintenance This maintenance is performed by operator, crew, and battalion maintenance personnel. It is characterized by quick turnaround. It usually involves repair by replacement, minor repairs, and scheduled services.
US United States (of America)
USAID United States Agency for International Development
USAMC United States Army Materiel Command
VA Virginia
vol volume
WATS Wide-Area Telecommunications Service
WSM weapons systems manager

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INDEX

AAFES 6-1
air assault operations 1-12
airborne operations 1-13
air delivery 1-6
AirLand battle 1-9
air lines of communication 2-2
amphibious operations 1-23
automated backup 2-7
automatic return items 3-13

backup procedures 2-7
basic load 3-3, 3-7

civil affairs 6-1, 6-2, 6-5
Class II
    basic and operational loads 3-3
    clothing allowances 3-2
    construction and barrier materials 3-6
    consumption rates 2-4, 3-3
    direct support system 1-4
    distribution 3-7
    DS4 2-5
    inventory requirements 3-3
    issue controls 3-1
    map supply 3-4
    NBC operations 1-17
    OCIE 3-3
    request and delivery 3-11, 3-12
    requirements 1-17, 1-19, 1-20, 1-21, 1-22, 1-24, 3-3, 3-4
    requisition and distribution flow 3-10
    requisition procedures 3-5
    SAILS 2-6
    SARSS 2-7
    supply points 3-8
    supply support 1-10, 1-11
    theater reserve stocks 3-4
    theater sources 3-8
    war reserve requirements 2-4
    wartime inventories 3-4
    wartime supply stockage levels 1-4
Class III packaged
    consumption rates 2-4
    direct support system 1-4
    DS4 2-5
    gases 3-16
    NBC operations 1-17
    receipt procedures 3-14
    request and delivery 3-11, 3-12
    requirements 1-17, 1-19, 1-20, 1-22, 1-24, 1-25
    requisition and distribution flow 3-10, 3-13
    SAILS 2-6
    SARSS 2-7
    storage procedures 3-14, 3-15
    supply support 1-10, 1-11, 1-13, 1-15
    theater sources 3-13
    war reserve requirements 2-4
Class IV
    basic and operational loads 3-7
    construction and barrier materials 3-6
    consumption rates 2-4, 3-7
    direct support system 1-4
    distribution 1-5, 3-8, 3-10
    DS4 2-5
    inventory requirements 3-3
    issue controls 3-1
    NBC operations 1-17
    request and delivery 3-11, 3-12
    requirements 1-17, 1-19, 1-20, 1-22, 1-23, 1-24, 1-25
    requisition and distribution plan 3-10
    SAILS 2-6
    SARSS 2-7
    supply points 3-8
    supply support 1-10, 1-11
    theater sources 3-8
    war reserve requirements 2-4
Class VI
    civil affairs 6-1, 6-2
    consumption rates 6-3
    NBC operations 1-18
    personal demand items 6-3
    procurement 6-3
    ration supplement sundries packs 6-3
    requirements 1-17, 1-18, 1-19, 1-20, 1-22, 1-23, 1-24, 1-25, 6-3

SAILS 2-6
sales teams 6-4
storage concerns 6-4
supply 6-3
support concerns 6-1
Class VII
consumption rates 2-4
direct support system 1-4
distribution 1-5, 1-6, 4-4
DS4 2-5
inventory requirements 4-3
losses 4-1
major items 4-3
NBC operations 1-18
operational readiness float 4-2
requirements 1-18, 1-19, 1-21, 1-22, 1-23, 1-24, 1-25
requisition and distribution plan 4-4, 4-5, 4-6
SAILS 2-6
SARSS 2-7
supply requirements 4-3
supply support 1-10, 1-11
theater sources 4-4
usage profiles 4-1
war reserve requirements 2-4
wartime replacement factors 4-2
wartime requirements 4-4
weapons systems replacement 4-2
Class IX
authorized stockage list 5-2
automated support 5-1
cannibalization 5-5
combat stockage list 5-2
COMMZ 5-10
controlled exchange 5-5
corps, separate brigades, and regiments 5-9
distribution 5-7
divisions 5-7
DS4 2-5
management controls 5-1
PLL 5-3
changes 5-3
demands 5-3
stockage levels 5-3
quick supply store 5-4
repair parts 5-1
request and delivery 5-8, 5-11, 5-12
requisitions 5-7
SAILS 2-6
SARSS 2-7
shop supply 5-4
sources 5-4
stockage criteria 5-2
stockage levels 5-3
stockage list changes 5-2
supply requests 5-6
supply support 1-10, 1-15
war reserve requirements 2-4
wartime supply stockage levels 1-4
zero balance 5-1
Class X
accountability 6-5
clothing allowances 3-2
distribution procedures 6-5
nonmilitary program items 6-4
procurement 6-3
requirements 1-20
requisition and issue procedures 6-5
sources of supply 6-5
supply 6-4
close battle area operations 1-10
clothing and textile repair constraints 3-1
clothing exchange sources 2-8
cold weather and mountain operations 1-24,1-25
consumption rates 2-4, 3-3, 3-7
contingency contracting 1-2
contingency force operations 1-11
CONUS war reserves 1-1
counterguerrilla operations 1-21
covering force operations 1-9

deep operations 1-15
desert operations 1-20
direct support system 1-4, 2-2
distribution
automated control and support 1-6
containerization 1-5
container surface 1-6
methods 3-9
seaport 1-5
supply 1-6

DS4 2-2, 2-5

FARE 3-13

gases 3-16
general supply
    classes and subclasses B-1, B-2
    item managers 2-1

heavy-light and light-heavy operations 1-16
host-nation support 1-2

inland waterways 1-16
inventory requirements 3-3, 3-7, 4-3
issue controls 3-1
item managers 2-1, 2-3

jungle operations 1-22

liquid and compressed gases 3-16
    hazards 3-16
    identification markings 3-16
    requirements 3-16
    storage and handling precautions 3-17
    supply source 3-16
logistics intelligence file 2-9
low-intensity conflict 1-14

manual supply support 2-8
Management Information Research Assistance Center 2-9
map supply 3-4
    initial issue 3-4
    requirements 3-4
    requisition and distribution 3-6
    requisition procedures 3-5
    theater reserve stocks 3-4
mobility constraints 3-1
movement control team 1-8

NBC operations 1-16
night operations 1-18

operational load 3-3
operational readiness float 4-2
oversea war reserves 1-1

pre-positioned materiel configured to unit sets 1-2
pre-positioned war reserve stocks 1-1
procurement 3-1, 6-3

rail networks 1-6
rear operations 1-10
Remote Terminal Access Inquiry System 2-10
reorder point 2-4
repair constraints 3-1
repair parts 5-1
retrograde operations 1-15

SAILS 2-6
salvage collection points 3-9
SARSS 2-7
sealift 1-5
secondary items 2-1, 2-4
selective stockage 3-1
sling-load operations 1-7
smoke operations 1-18
SPBS-R 2-7
special operations 1-11
Standard Army Maintenance System 5-1
Standard Property Book System-Redesigned 2-7
storage methods 3-8
storage requirements 2-5
supplies
    air delivery 1-6
    clothing, individual equipment, tentage, and administrative and housekeeping supplies 3-2
    ground movement 1-7
supply and storage requirements 2-5
supply assistance
    Management Information Research Assistance Center 2-9
    Remote Terminal Access Inquiry System 2-10
    request 2-9
    supply performance objectives 2-1
supply points 3-8
supply stockage objectives 2-1

terrorism A-2
theater requisition and distribution flow 1-3, 3-10, 3-13, 4-4

theater sources
Class II and IV 3-7
Class III 3-13
Class VII 4-4
threat A-1
transition to war 1-3

urban operations 1-19

war reserve requirements 2-4
war reserve stockage list 2-4
war reserve stocks 1-1
wartime property accountability 2-9
wartime supply stockage levels 1-4
weapons systems replacement 4-2

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