

CHAPTER 7

Fixing the Corps Force

The COSCOM's maintenance system is a corps combat multiplier. It ensures that the corps force remains operationally ready by repairing and returning weapon systems and equipment to battle as soon as possible. Maintenance restores operational forces to a state of materiel readiness. It enables them to support the tempo of operations.

COSCOM DS maintenance units repair and return damaged or disabled equipment to using units. Whenever possible, they send MSTs forward into the division sector to perform on-site repair of damaged or inoperable equipment.

The maintenance system is supplemented by a Class VII system which provides replacement items to offset battle loss of critical equipment. When weapon systems or other major end items are

destroyed, the COSCOM's heavy materiel supply unit provides a battle loss replacement.

CONTENTS	
	Page
PLANNING MAINTENANCE SUPPORT	7-1
COSCOM MAINTENANCE AND REPLACEMENT ORGANIZATIONS	7-4
ASSESSMENT, RECOVERY, AND EVACUATION SUPPORT	7-13
REPAIR PARTS AND REPLACEMENT ITEMS DISTRIBUTION SYSTEMS	7-14
MANAGING MAINTENANCE AND REPLACEMENT OPERATIONS	7-18

PLANNING MAINTENANCE SUPPORT

COSCOM maintenance operations return the maximum number of weapon systems and critical items to the battlefield. Maintenance ensures the combat readiness of supported units.

COSCOM maintenance support branch personnel project maintenance work loads for future operations. They organize, coordinate, and control COSCOM maintenance resources to ensure timely support.

COSCOM CSS PLANS BRANCH

CSS plans branch personnel assigned to the COSCOM's support operations section prepare support operations estimates and external mission support portions of corps service support orders and COSCOM OPLANs/OPORDs. Using LPB products, they plan how COSCOM maintenance units support corps forces in accordance with the corps commander's intent and priorities. Based on coordination with corps G3 staff, they plan how to best synchronize maintenance support with tactical requirements. They update plans based on estimates and recommendations from COSCOM maintenance and weapon systems support branch staff. As required, they plan how to adjust maintenance work loads and allocate maintenance resources to support regeneration.

COSCOM MAINTENANCE SUPPORT BRANCH

The COSCOM support operation salon's maintenance

support branch establishes maintenance support policies, plans, and procedures for the external maintenance support provided by subordinate maintenance units. This includes development of plans and procedures to meet Class IX repair parts requirements.

Maintenance Support Branch Chief

The maintenance support branch chief serves as the maintenance staff advisor to the COSCOM support operations officer. He exercises staff supervision over COSCOM maintenance support operations. The maintenance support branch chief -

- Establishes maintenance support policies, plans, and procedures for external maintenance support.
- Provides recommendations on maintenance unit allocations and priorities to the weapon systems support branch chief/COSCOM support operations officer.
- Provides policy and procedural guidance to CMMC maintenance related commodity divisions.
- Provides advice to COSCOM ACofS, G3 force design staff on maintenance unit troop listings.
- Establishes maintenance data collection and staff analysis procedures.

Maintenance Support Branch Staff

To support the corps force, maintenance support branch personnel need to know maintenance requirements, the type of equipment requiring repair, and the current capability of COSCOM maintenance units. They recommend how to tailor the COSCOM's maintenance organization to offset deficiencies. They use CSSCS maintenance reports to monitor projected maintenance of critical equipment.

Maintenance support branch personnel perform the deployment planning tasks listed on Table 7-1. Other staff areas of responsibility include -

- Developing maintenance portions of service support plans and orders.
- Recommending maintenance priorities.
- Establishing repair time guidelines.
- Developing the evacuation policy.

Table 7-1. Maintenance support branch personnel deployment planning.

PREDEPLOYMENT
<ul style="list-style-type: none"> ● Provide input to the maintenance portions of corps service support plans and orders to reflect the COSCOM's maintenance support mission. ● Recommend serviceability standards for repairs. ● Compile force equipment density data, including substitute items using supported unit MTOEs. ● Determine the organizational requirements for maintenance units, based upon the variety and density of materiel with which the force is equipped. ● Monitor the equipment readiness status of subordinate units selected to deploy. ● Monitor the availability of replacement items in subordinate maintenance units. ● Assess the maintenance work load requirements of units to be supported. ● Develop priorities for maintenance repairs. ● Establish maintenance support priorities. ● Determine special equipment required for maintenance, to include calibration. ● Coordinate the transfer of support of subordinate COSCOM maintenance units not included in the initial deployment.
DEPLOYMENT
<ul style="list-style-type: none"> ● Provide technical advice and assistance to subordinate deploying maintenance units. ● Establish a deployment activity address directory for all deploying maintenance units. ● Bring all deploying maintenance units up to full authorization of equipment and supplies. ● Coordinate with CSS plans branch staff and supporting engineer units on real estate and facility requirements for COSCOM maintenance units.
STAGING
<ul style="list-style-type: none"> ● Coordinate the processing of incoming COSCOM maintenance units. ● Monitor receipt of maintenance unit ASL.

- Assessing repair parts stockage requirements (ASL range and depth).
- Establishing maintenance procedures.
- Developing the COSCOM's policy on cannibalization and controlled exchange.
- Developing a salvage policy.

Branch personnel continually coordinate with COSCOM weapon systems support branch personnel on the maintenance status of weapon systems and mission critical items. They also coordinate with COSCOM transportation support branch personnel on the recovery and evacuation of unserviceable items to maintenance collection points. Branch personnel continually coordinate with their staff counterparts in the CMMC relative to maintenance work loads, repair time limits, and repair priorities.

COSCOM WEAPON SYSTEMS SUPPORT BRANCH

Weapon systems support branch personnel assigned to the support operations section coordinate with maintenance support branch personnel relative to maintenance priorities. They ensure that mission critical items are maintained to meet future as well as current operational requirements. They develop procedures to interface requirements with NICPs for replacement weapon systems. The weapon systems support branch chief monitors the readiness status of command controlled items. He recommends allocations and criteria for controlled items.

LOGISTICS PREPARATION OF THE BATTLEFIELD

COSCOM maintenance support branch personnel ensure that COSCOM ACofS, G2 and G3 staff officers are aware of maintenance priority intelligence requirements. They coordinate with ACofS, G2 and G3 staff relative to IPB products which impact on planning, execution, and protection of maintenance support operations.

Maintenance support branch personnel can obtain data on the following areas from IPB products described in FM 34-130:

- Industrial capacity and resources in the corps rear area.
- Locations of warehouses and industrial parks.
- Sources of electrical power.
- Concealment or cover noted on ground observation overlays.
- Data on building heights in urban areas.
- Built-up areas and congestion area overlay.

Maintenance support branch personnel use IPB battlefield area evaluation products which describe the AO and friendly forces to assess maintenance work loads and recommend the number and placement of DS maintenance units on time phased deployment lists. They use IPB threat evaluation and doctrine products and threat integration products to help plan how to employ and protect maintenance organizations.

COMMAND DETERMINATION

Before or early in the conflict the corps commander determines the priority and level of repair. Only equipment that can become combat serviceable with minimum manpower expenditure should be repaired. Items that cannot be repaired under the established corps criteria are reported for later recovery or destroyed, if necessary. The COSCOM commander/COSCOM support operations officer grants wide discretionary authority to DS maintenance units to repair, evacuate, cannibalize, or destroy unserviceable equipment.

NBC PLANNING CONSIDERATIONS

Anticipated losses during the early phase of a nuclear conflict tax maintenance elements. Maintenance requirements appear so rapidly and in such quantity that a backlog develops. Fallout and neutron-induced gamma activity further impede maintenance support.

The most significant implications for equipment recovery, evacuation, and repair result from the large number of items that incur moderate and severe damage. NBC operations directly impact inspection, classification, recovery, evacuation, repair, and replacement operations. Indirect impact occurs in areas such as repair parts supply, cannibalization, and site relocation.

Impact on Initial Inspection and Retrieval

The initial inspection and retrieval of damaged equipment present special problems. COSCOM maintenance management officers modify classification criteria, procedures, and responsibilities for inspection and classification of nuclear damage.

If supported units cannot survey and report the location of damaged equipment, initial classification data may be limited to air reconnaissance reports or estimates on yield and probable radius of damage.

Impact on Recovery and Evacuation

Nuclear warfare can cause high personnel losses in units, but leave equipment relatively intact. A significant quantity of combat-essential equipment with only light damage might be recovered. When the threat employs enhanced radiation weapons, combat-essential equipment can become highly radioactive due to neutron activity. Unit personnel perform radioactive surveys on equipment to ensure personnel safety during recovery operations.

The unit commander is responsible for the recovery of equipment. Combat units may be able to recover only the most critical and most accessible items. They may need to leave noncritical or low-priority items, inaccessible lightly damaged items, or moderately and severely damaged items for other elements to recover.

Ground combat operations might permit major recovery tasks to commence soon after an attack. To avoid interference with tactical operations, the CMCC coordinates all evacuation operations with the corps rear CP and sector RAOs. To preclude their capture, some unrecovered critical items may need to be destroyed.

Impact on DS Repair

The tactical nuclear environment causes DS maintenance units to reduce normal maintenance support. Personnel losses may be so severe in some units that expedited repair of the items in those units are unnecessary.

To avoid major backlogs of moderately damaged equipment at DS maintenance units, the COSCOM support operations officer/maintenance support branch chief establishes special maintenance controls. Controls include deferral of routine maintenance support. COSCOM repair priorities can help reduce the work load. The support operations officer grants nondivision DS maintenance units wide discretionary authority to respond to the requirements of supported units.

COSCOM MAINTENANCE AND REPLACEMENT ORGANIZATIONS

The COSCOM tailors its DS maintenance organization to perform rapid repair and return to the user. The primary focus is on repairing and returning weapon systems to the battlefield as quickly as possible. The COSCOM uses its Class VII supply system to provide battle loss replacements to those units that can most influence the corps battle.

Impact on Repair Parts Supply

The range and quantity of repair parts in combat PLLs and ASLs cannot satisfy the requirements of large numbers of reparable equipment suddenly entering the maintenance system. Repair parts stockage at DS level maintenance units are rapidly depleted.

The COSCOM support operations officer arranges for immediate shipment of repair parts support packages to DS maintenance units. These packages support specified makes and models of equipment so that units moving from one area to another can draw the proper packages.

DS maintenance units need to order necessary repair parts support packages in advance of their needs. For example, they should anticipate extensive damage to optics and antennas. Use of repair parts support packages computed in anticipation of extensive damage enables DS maintenance units to keep up with repair of critically needed items.

Cannibalization

Severely damaged items become candidates for cannibalization. However, the COSCOM cannot establish centralized control over cannibalization, recovery, or evacuation of severely damaged equipment until the tactical situation stabilizes. Personnel at maintenance collection points provide control measures.

Aviation Maintenance

To avoid presenting a lucrative target, aircraft awaiting repairs need to be dispersed. Only a minimum number of damaged aircraft should remain at AVIM unit sites.

Missile Maintenance

Missile systems' component losses are primarily a supply replacement concern, not a missile maintenance concern. Missile maintenance units focus on routine maintenance, particularly the calibration of equipment.

GROUND MAINTENANCE SUPPORT ORGANIZATION

Figure 7-1 depicts the COSCOM's ground maintenance organization and responsible staff elements. It consists of -

- Nondivision DS maintenance units.

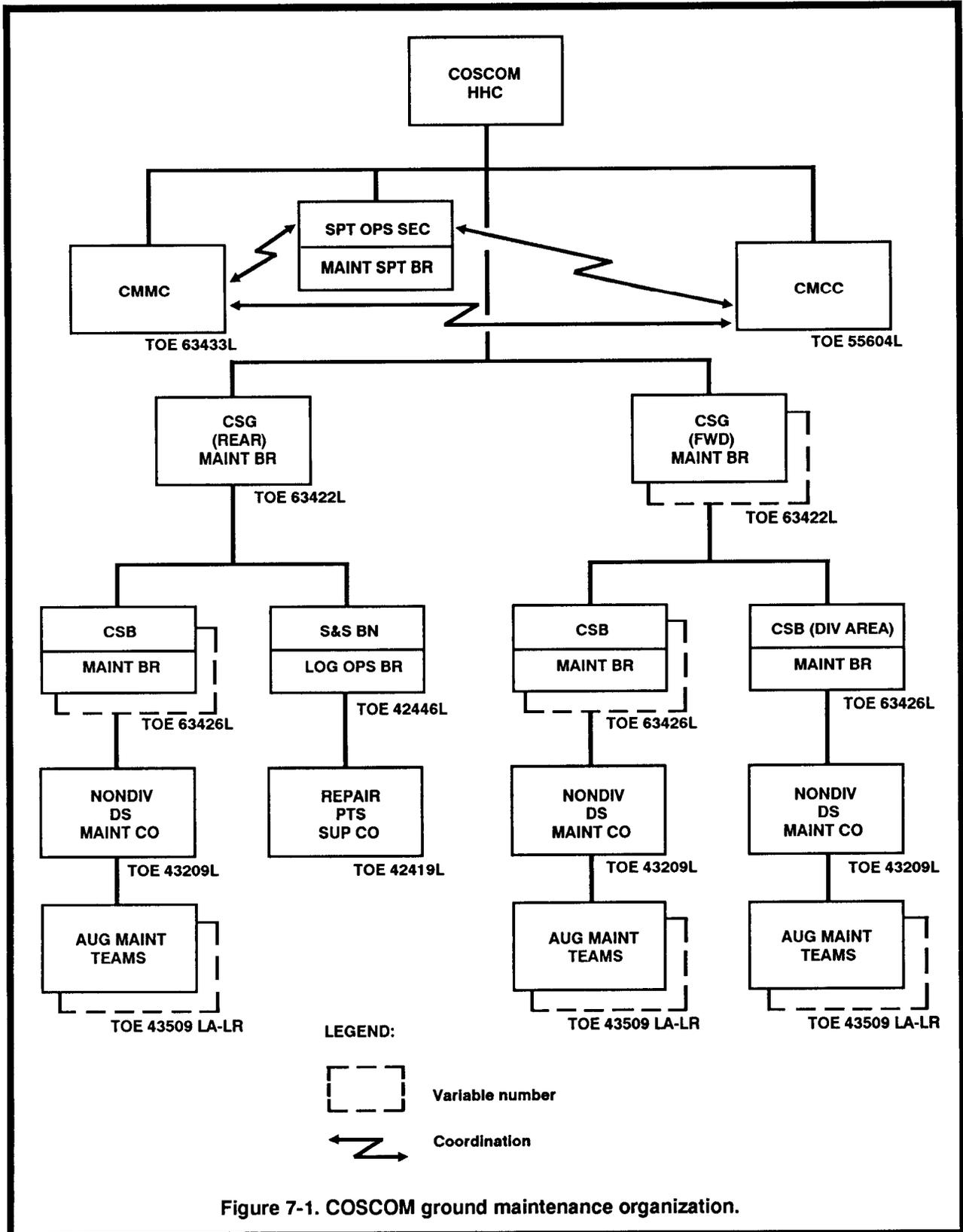


Figure 7-1. COSCOM ground maintenance organization.

- Mobile maintenance teams.
- Repair teams (MSTs).
- TMDE support teams.
- LID maintenance support team, if applicable.
- Repair parts supply company.

Nondivision DS Maintenance Units

Nondivision DS maintenance units (TOE 43209L000) support on an area basis. They provide DS maintenance and repair parts to nondivision units employed in or passing through their assigned area of support. FM 43-11 describes nondivision DS maintenance unit operations.

The COSCOM OPLAN/OPORD designates select DS maintenance units to perform reinforcing maintenance in support of division maintenance units. Reinforcing support from the DS maintenance unit(s) attached to the CSB in the division area enables FSBs/MSB to provide support to corps forces employing in the brigade or division area.

Mobile Maintenance Teams

Each nondivision DS maintenance unit can provide four organic mobile maintenance teams. The teams perform on-site malfunction diagnosis, limited maintenance, and battle damage assessment.

Repair Teams (MSTs)

Repair teams (TOE 43509LA-LR) provide specialized maintenance on low-density equipment. The COSCOM/CSG attaches MSTs to DS maintenance units based on type of equipment to be repaired. They attach MSTs to a CSB regenerating attrited units in the corps rear area. When the COSCOM designates a DS maintenance unit to provide pass back maintenance to a division, it augments that unit with the appropriate MSTs to perform the additional maintenance work load. MSTs accompany a corps force when it moves to a new corps area or is assigned to support an ally or sister Service.

TMDE Support Teams

DS maintenance units and AVIM units perform unit maintenance on organic TMDE. They also provide TMDE support for special purpose TMDE of supported units.

The area calibration repair center provides general purpose TMDE and special purpose TMDE repair support for the corps area. That center may attach an area TMDE support team to CSGs to provide support to units within or passing through the CSG's AO. It might attach

an area TMDE support team to a division task force to support nondivision units employed in the division sector. The center issues repair parts to DS maintenance units in response to MROs provided by the CMMC.

LID Maintenance Support Team

The corps attaches a LID Maintenance Support Team (TOE 43509LP00) to a nondivision DS maintenance company to provide a LID with additional DS maintenance capability. This team provides a capability to perform an estimated 20 percent of the LID ground maintenance work load.

Repair Parts Supply Company

The repair parts supply company (TOE 42419L000) provides general support repair parts supply to nondivision maintenance units and division maintenance units. It does not provide repair parts for aircraft, missile, and airdrop items; for medical and Class V supplies; or for cryptographic and topographic materiel.

GROUND MAINTENANCE EMPLOYMENT

Figure 7-2 depicts a sample employment of ground and automotive maintenance elements on a battlefield. In this example, the COSCOM's maintenance management officers estimated a maintenance work load requirement for three nondivision DS maintenance companies per division sector. The forward CSG attached a DS maintenance unit and MSTs to its CSB in the division area to support nondivision forces in the division sector. Selected DS maintenance units provide reinforcing maintenance support to the MSB's light and heavy maintenance companies and the FSB's maintenance company. The remaining DS maintenance units with MSTs provide DS maintenance on an area support basis to nondivision units in the corps rear area.

All DS maintenance companies provide repair parts to customer units to perform unit level repair. The GS repair parts supply company provides repair parts to the DS maintenance companies.

Corps trucks move Class IX and maintenance related Class II ALOC items from the airfield to ALOC designated units. They move Class VII replacement items from the heavy materiel supply unit to DS supply units or regeneration sites.

AVIATION INTERMEDIATE MAINTENANCE ORGANIZATION

COSCOM AVIM ensures maximum availability of mission-capable aircraft. The COSCOM AVIM

organization and responsible staff elements are shown on Figure 7-3. It includes –

- Aircraft maintenance battalion (AVIM).
- Aviation intermediate maintenance companies.
- AVIM augmentation elements.
- LID AVIM support team, inapplicable.
- Aircraft repair parts supply platoon.

Aircraft Maintenance Battalion (AVIM)

An AVIM battalion is attached to the rear CSG to provide command and control of attached AVIM units and aviation-related repair activities. Battalion staff plans for and ensures the timely execution of AVIM mission aspects of the COSCOM logistics support plan.

Aviation Intermediate Maintenance Companies

AVIM companies (TOEs 01947L100-800) provide AVIM, backup AVUM, and aviation repair parts to corps aviation units. They provide reinforcing AVIM support and reparable exchange items for division AVIM units. They also assist corps and divisional AVUM units in preparing damaged and unserviceable aircraft for evacuation. FM 1-500 prescribes AVIM operations.

AVIM Augmentation Elements

The COSCOM/rear CSG attaches AVIM augmentation elements (TOEs 01547LA00 and 01547LB00) to AVIM units. These elements augment intermediate maintenance for corps fixed wing aircraft and the aircraft of the aerial exploitation battalion.

LID Aviation Intermediate Maintenance Support Team

This team (TOE 01577LA00) is attached to the LID AMCO if the LID deploys without a supporting corps AVIM. It may also be attached to a COSCOM AVIM company deployed in support of the LID. It offsets an estimated 46 percent AVIM work load passed back to the corps. C2 of the team is provided by the unit to which it is attached.

Aircraft Repair Parts Supply Platoon

The COSCOM/rear CSG may attach an aircraft repair parts supply platoon (TOE 42519LA00) to the repair parts supply company. The platoon provides GS level supply of aircraft repair parts in support of a corps. It can receive, rewarehouse, and ship 22 STONs per day, for a total handling capability of 66 STONs. It maintains

a 15-day stock of Class IX aircraft repair parts, totaling 11,000 ASL line items.

AVUM/AVIM EMPLOYMENT

Figure 7-4 depicts possible employment of AVUM and AVIM elements on a battlefield. Most AVUM units operate in the forward portion of the DSA. METT-T dependent, elements of AVUM units employ in the DSA, BSA, or the battalion rear area. AVUM units tailor contact teams which go forward to make on-site repairs.

A divisional aircraft maintenance company is assigned to a division and attached to the DISCOM. It provides AVIM and reinforcing AVUM support to aircraft from its base location in the division rear area. It uses three forward support helicopter repair/recovery teams to provide forward support at AVUM sites.

The AVIM battalion HHD sets up in the corps rear area, normally near the aviation brigade HHC. Four corps AVIM companies are normally assigned to the AVIM battalion. AVIM units normally locate adjacent to an instrumented landing facility. They provide AVIM and reinforcing AVUM support to corps aircraft. They also support a percentage of work load passed back from division AVIM units. When the pass back percentage exceeds supportable work loads, AVIM units may be augmented to provide the additional support required.

MISSILE SYSTEM SUPPORT ORGANIZATION

The elements which the COSCOM assigns to a CSG vary due to the type and density of missile systems to be supported. The COSCOM's DS missile maintenance organization and technical staff elements are shown on Figure 7-5. The actual support structure depends upon the system-unique missile systems and test equipment requiring support. The missile maintenance organization consists of a –

- Missile system support company.
- Missile maintenance augmentation teams.
- Ordnance company (DS) Hawk.
- Maintenance company (DS) Patriot.
- LID missile support team, if applicable.

Missile System Support Company

The missile system support company (TOE 09428L000) provides DS missile maintenance and repair parts for air defense and land combat support systems, except

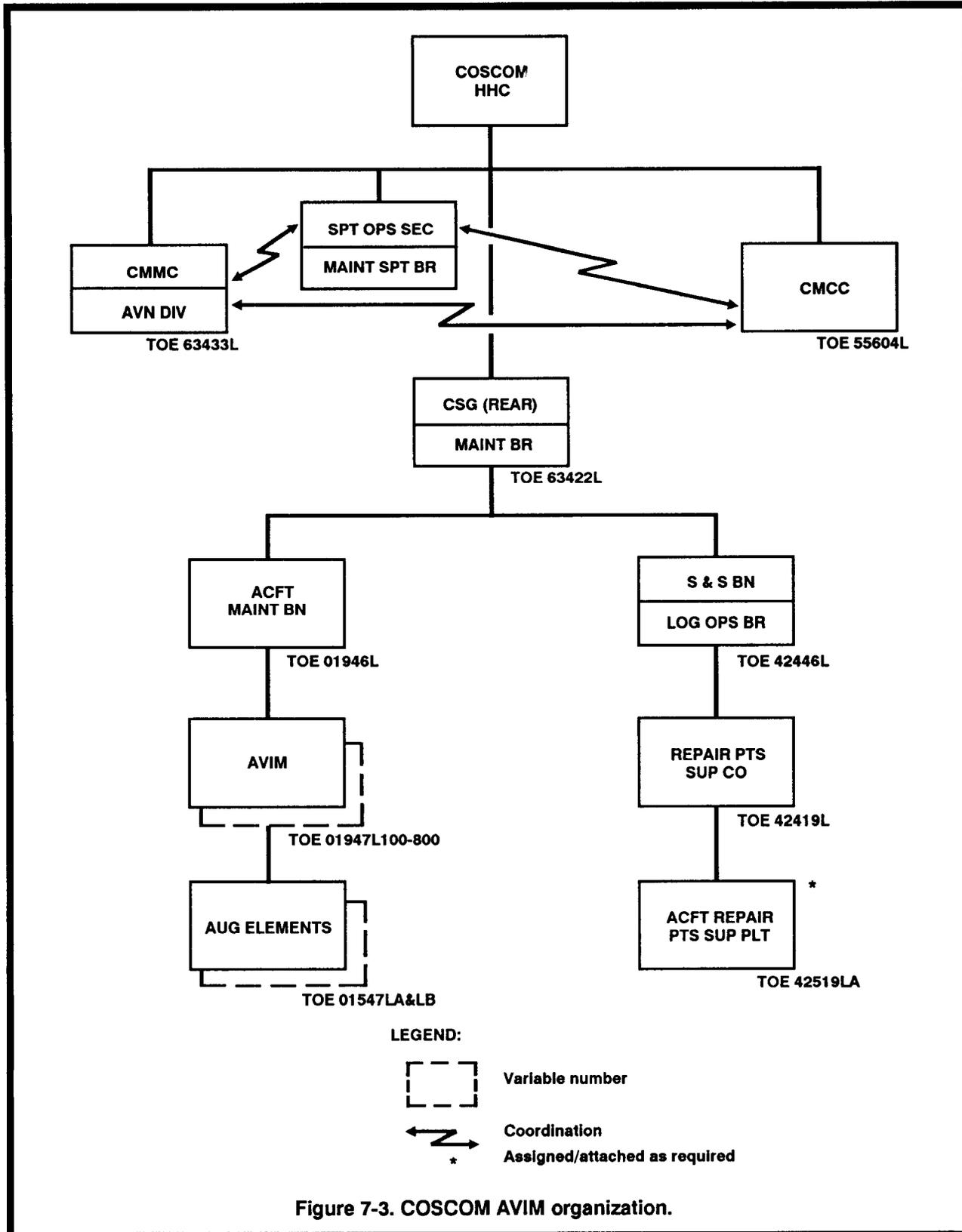


Figure 7-3. COSCOM AVIM organization.

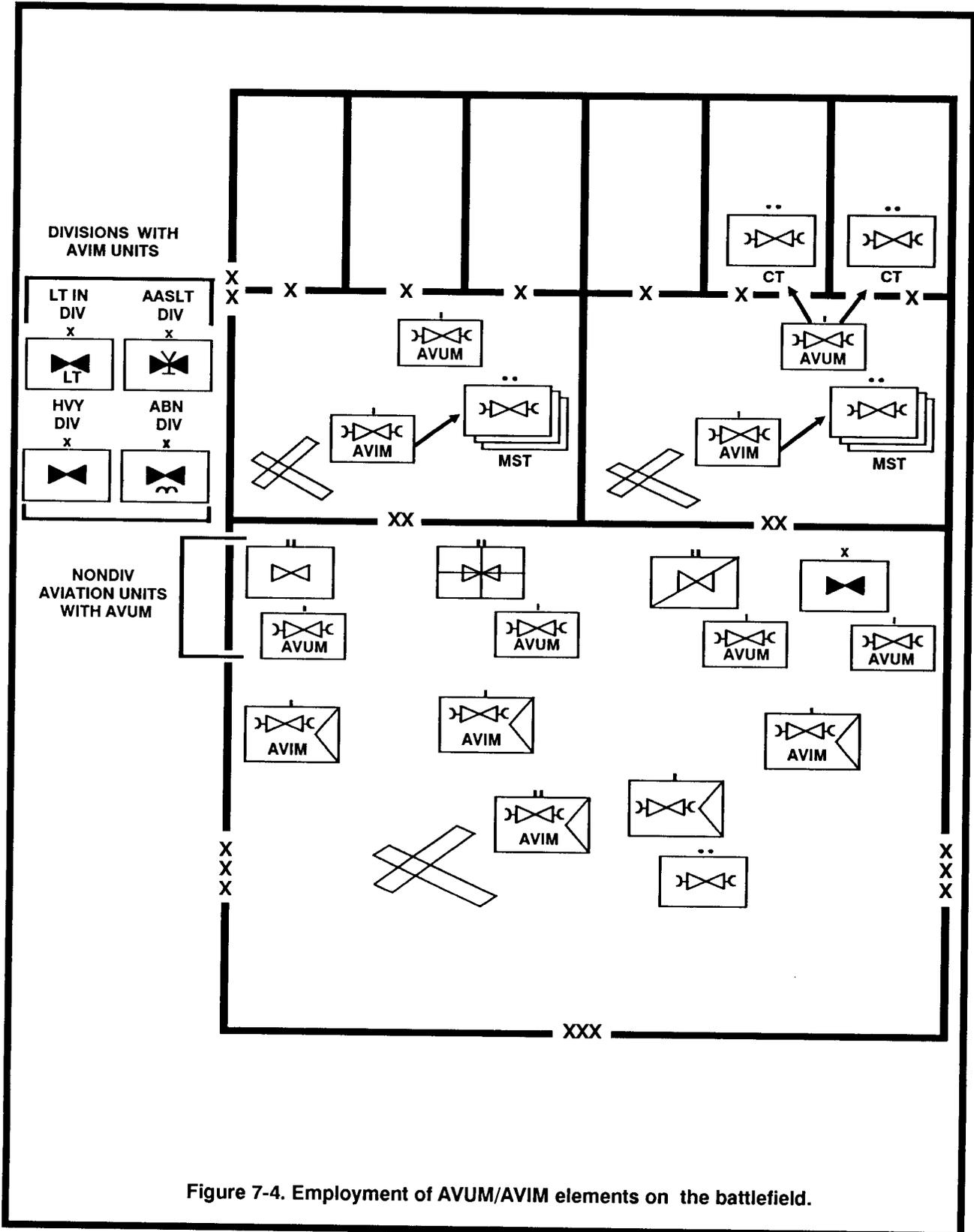
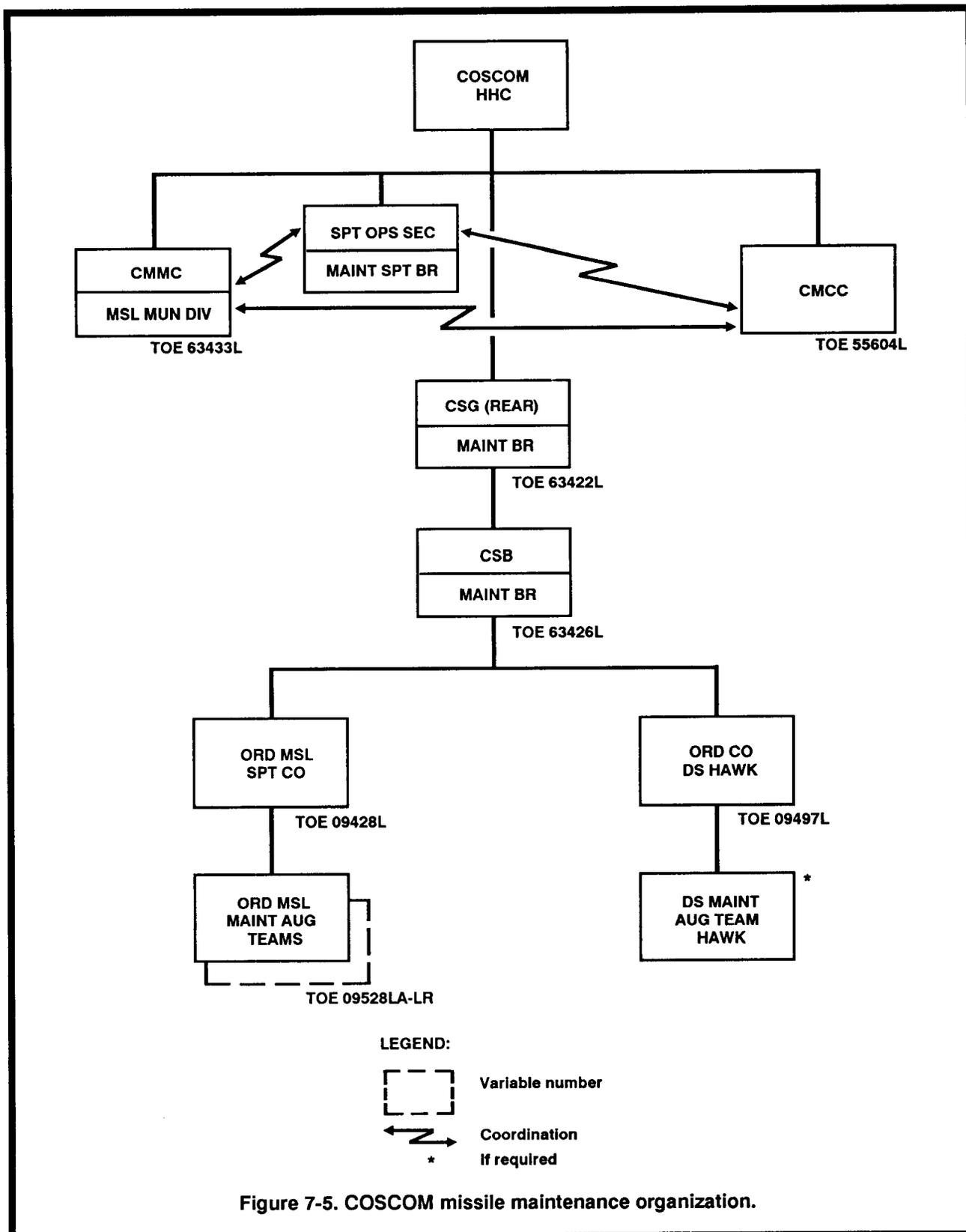


Figure 7-4. Employment of AVUM/AVIM elements on the battlefield.



Hawk and Patriot missile systems. It also provides base shop support for light divisions, ACRs, and separate brigades. Base shop elements perform test and diagnostic procedures and remove and replace components, modules, and line replaceable units. Items which cannot be repaired are evacuated for GS or depot level repair.

Supply personnel provide Class IX missile repair parts and limited Class VII items to supported units. They exchange reparable items for selected high demand components or modules.

Missile Maintenance Augmentation Teams

Based on the type of supported battalions and densities of missile systems supported, the missile system support company may be augmented with missile maintenance augmentation teams (TOE 09528LB-LV and 09510LA). The teams are weapon system or unit specific. They provide additional base shop and MST personnel and equipment. FM 9-59 lists their missions.

Ordnance Company (DS) Hawk

The Hawk maintenance company, organized under TOE 09497L000, provides DS base shop maintenance and on-site MSTs for Hawk missile system peculiar equipment, associated identification friend or foe equipment, and power generation/air conditioning equipment. It also provides Class IX and limited Class VII maintenance float items to the Hawk ADA battalion,

This company may be augmented with a Hawk GS maintenance augmentation team (TOE 09529LU). The team provides additional personnel and equipment to perform GS maintenance support for the Hawk missile system in the Hawk ADA battalion,

Maintenance Company (DS) Patriot

The Patriot maintenance company (TOE 43607L) provides DS maintenance and Class IX repair parts supply to a Patriot ADA battalion.

A Patriot missile system (DS/GS) augmentation team (TOE 09529LX) from the missile system support company can provide two MSTs and limited base shop maintenance support for Patriot missile-peculiar equipment. It also provides limited Class IX base shop or MST support.

LID Missile Support Team

This team (TOE 09550H3EY) may be attached to a nondivision maintenance company to augment the LID's missile support element.

MISSILE MAINTENANCE EMPLOYMENT

In the brigade area, the missile support section of the FSB's forward support company provides limited DS maintenance on TOW and Dragon missile systems. Section personnel work from the maintenance unit base shop, a MCP, or on-site locations.

In the DSA, the MSB's missile support company operates a base shop. It provides DS maintenance support and Class IX supply for land combat missile systems (TOW, Dragon, and MLRS) in heavy divisions. It also provides maintenance support for man-portable common thermal night sights and Stinger training sets. For airborne/air assault divisions, the headquarters and light maintenance company provides missile maintenance support. The headquarters and maintenance support company provides missile maintenance support for light infantry divisions. MSTs provide limited on-site DS maintenance on malfunctioning equipment. Augmentation teams support corps assets when a corps or EAC missile support company is not deployed.

As a result of the division based maintenance concept, the MSB's missile support company is replaced by an electronic maintenance company. That company will provide DS electronics test and diagnostic maintenance to division elements. It provides DS base maintenance and MSTs for land combat missile systems, division air defense systems, target acquisition and surveillance radar. It also provides Class IX technical supply for supported units.

The nondivision missile system support company operates in the corps rear area. The Hawk maintenance company normally collocates with the supported Hawk ADA battalion. The Patriot maintenance company collocates with the Patriot ADA battalion. MSTs perform on-site repair. MSTs may accompany corps MLRs units which deploy forward in support of the division. BDAR teams make on-site decisions concerning the evacuation of missile systems. Based on BDAR team assessment corps missile support companies provide backup for division companies.

EQUIPMENT REPLACEMENT ORGANIZATION

The heavy materiel supply company (TOE 42427L100) provides Class VII battle loss replacement items. Unit personnel can receive, store, and issue 1,400 STONs of GS level Class VII items per day. They maintain storage sites for COSCOM war reserve Class VII stocks. Upon receipt of end items from a TAACOM storage site, company personnel deprocess the items. As necessary, they prepare weapon systems for issue and linkup with replacement crews at regeneration sites.

ASSESSMENT, RECOVERY, AND EVACUATION SUPPORT

When opposing forces possess parity in the number and destructive capability of weapon systems, the side which can assess, recover, evacuate, repair, and return disabled weapon systems to battle the fastest gains a decided edge. The COSCOM's ability to perform these maintenance functions could become a decisive combat multiplier.

BATTLEFIELD DAMAGE ASSESSMENT AND REPAIR

BDAR includes any expedient action that returns a damaged item or assembly to a mission capable or limited mission capable condition. Repairs are often temporary. They may not restore full system capability.

The objective is to return disabled combat equipment for support of a specific combat mission or to enable self-recovery. COSCOM maintenance support branch personnel assess whether repairing the disabled item significantly impacts on the outcome of a combat mission.

Operator, crew, BDAR teams, MSTs, and DS maintenance personnel perform BDAR by –

- Using shortcuts in parts removal or installation.
- Fabricating parts.
- Installing components from other vehicles.
- Bypassing noncritical components.
- Cannibalizing equipment.
- Using substitute fuels, fluids, or lubricants.

BDAR manuals have been developed for major weapon systems. They are issued with the TM set for the weapon system.

RECOVERY AND EVACUATION

Recovery

Owning units recover unserviceable equipment to the MCP established by their supporting DS maintenance unit. Recovery operations are often centrally managed at the battalion level. Based on METT-T corps DS maintenance units provide recovery assistance on an area basis to units without a recovery capability.

Aerial recovery involves attaching the aircraft to airlift recovery equipment, connecting it to the lifting helicopter, and flying it to an MCP. Aircraft which cannot be repaired and flown out under their own

power may need to be disassembled or modified for surface recovery. Aviation units use the organic lift capability of their AVUM element. They request recovery assistance from the AVIM unit providing support in their area. The aviation brigade TOC has overall control of aircraft recovery.

Evacuation

Evacuation begins at the MCP. The CMMC provides disposition instructions. Evacuation needs to be coordinated among maintenance, supply, and transportation elements. Using automatic disposition instructions for certain items prevents delays in evacuating critical equipment. As appropriate, the DISCOM support operations branch and MCO/DTO or CMMC and MCT/CMCC coordinate transportation required to support evacuation operations.

The COSCOM evacuates items not repairable at its DS maintenance unit to GS maintenance units in the COMMZ. FM 1-500 provides guidance on evacuation of aviation items.

CAPTURED AND FOUND MATERIEL

Captured and found materiel can relieve the burden on the COSCOM's supply system. Finding units report and recover captured and found materiel to MCPs or supply unit salvage collection points. Units report captured or found medical materiel through medical channels. They report captured or found enemy materiel through intelligence S2/G2 channels.

Corps trucks evacuate materiel which cannot be put back into the supply system or used locally. Enemy materiel which cannot be used locally is evacuated rearward until a decision is made regarding its repair, disassembly, and cannibalization. The CMMC provides disposition instructions.

CLASSIFICATION

Maintenance personnel classify items turned in at MCPs. The maintenance repair code, listed in the AMDF, designates whether an item is repairable. It also specifies the maintenance level authorized to perform complete repair. The CMMC maintains stock record accounting for repairable items. It initiates supply issue for requested replacement items.

The recoverability code designates the level which decides the final disposition of uneconomically repairable, condemned repairable. The CMMC provides

disposition instructions to evacuate equipment classified as uneconomically repairable or condemned to the designated disposal activity.

SALVAGE

In contrast to scrap items, salvage items retain some value in excess of their basic materiel content. Repairing the item to its intended purpose is impractical. However, AR 725-50 allows repair for other use,

provided the repair does not exceed 65 percent of the item's standard price.

CSG supply units setup salvage points near MCPs. MCPs turn serviceable items over to salvage points for return through supply channels. Salvage points turn over mechanical items to MCPs for classification, repair, and disposition.

REPAIR PARTS AND REPLACEMENT ITEMS DISTRIBUTION SYSTEMS

Repair parts and replacement items are essential to returning weapon systems and damaged or inoperable major items to battle. To reduce the inventory of lines of repair parts, a large percent of Class IX and maintenance-related Class II items are flown from CONUS to ALOC designated units. Army aviation assets routinely move high-cost, low-density critical repair parts as a part of the intratheater distribution system.

PREPOSITIONED WAR RESERVE MATERIEL STOCK

If stored in theater, PWRMS Class IX and VII items serve as the initial source of supply until sufficient quantities can be shipped from CONUS. Though stored in COSCOM storage sites, the TAMMC controls PWRMS items until their release to the corps upon outbreak of war.

COMMON REPAIR PARTS

Figure 7-6 depicts the request, requisition, and distribution flow of surface and air-delivered repair parts.

Request

Supported units submit requests and pick up repair parts at their supporting DS maintenance company. The ASLs of DS maintenance units need to cover the combat PLLs of supported units in their area. ASLs also include parts which DS maintenance companies need to perform authorized DS level maintenance tasks. When possible, DS maintenance units fill dead-lined and emergency requests immediately on receipt.

Exchange of Repairable Items

Selected high-usage components are designated for on-the-spot exchange of a serviceable item for a like unserviceable item. After the exchange, the unserviceable item is sent to maintenance for repair and return to stock for the next exchange.

Requisition

As shown on Figure 7-6, when DS maintenance companies cannot fill requests from their ASL, they transmit requisitions via SARSS-1 to the CMMC. The CMMC also receives requisitions from DMMCs, BMMCs, and RMMCs.

The parts supply branch of applicable CMMC commodity divisions process requisitions. The CMMC immediately transmits requisitions for air-delivered items to the appropriate NICP. It transmits requisitions for selected items, to include requisitions for TA controlled items, to the TAMMC. After a lateral search, when common repair parts are not found within the corps area, CMMC parts supply branches transmit requisitions to the TAMMC or appropriate CONUS NICP.

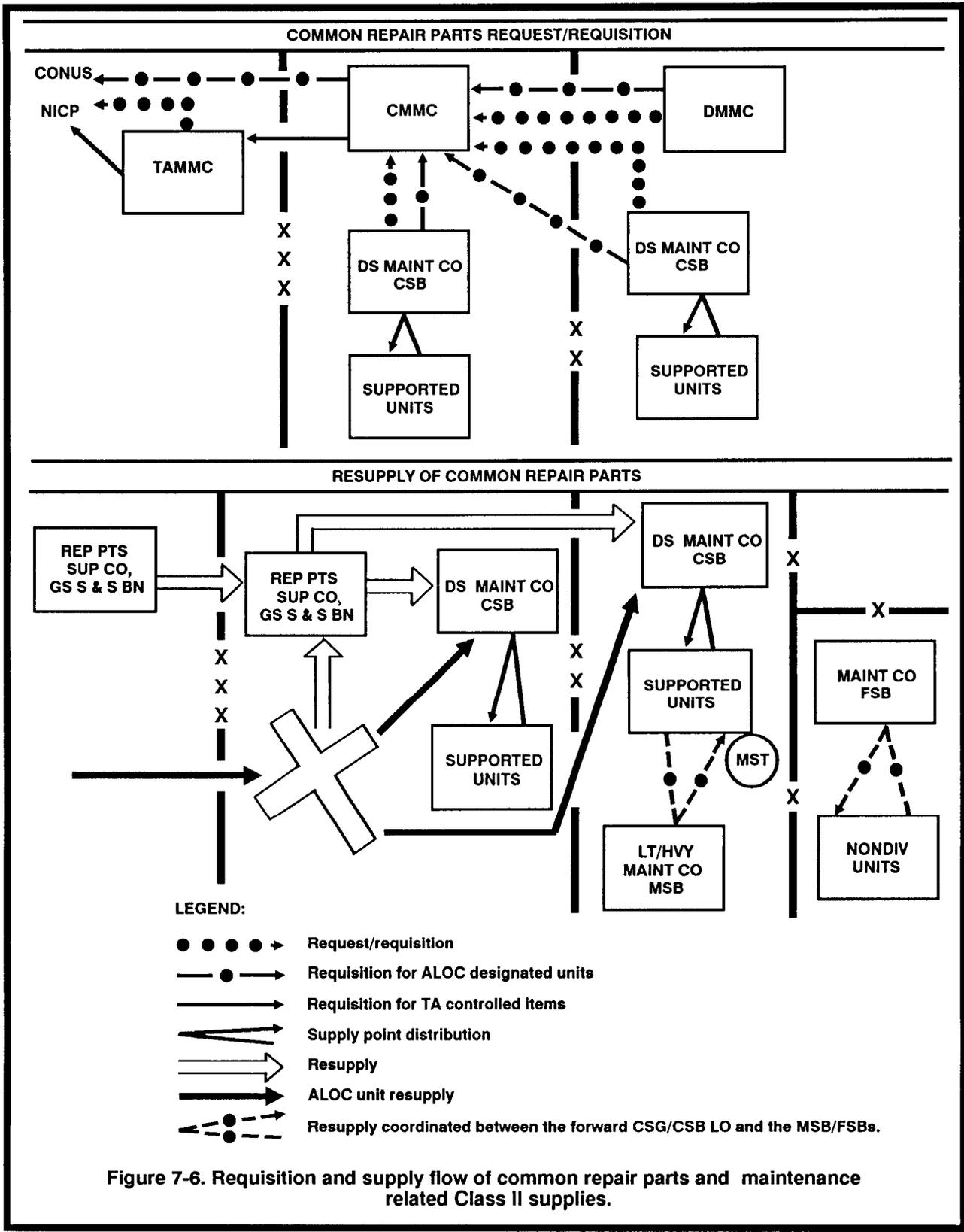
Issue

The GS repair parts supply company supplies designated Class IX items. The CMMC monitors the repair parts inventory maintained in the repair parts supply company. If parts exist in the repair parts supply company, the parts supply branches of the CMMC's commodity divisions transmit referral orders directing shipment to the supporting nondivision DS maintenance company.

To meet urgent demands, the COSCOM maintenance support branch chief directs CMMC supply parts branches to laterally transfer repair parts stocks or redistribute stocks from DS maintenance units that have an excess on hand.

Distribution

COSCOM and TAACOM repair parts supply companies make up the GS base of supply for surface repair parts. Once surface delivered repair parts arrive in theater, theater truck assets move them to a TAACOM or COSCOM GS repair parts supply company. Repair parts are then transported to DS maintenance units.



CONUS NICPs provide Class IX and maintenance related Class II items in support of ALOC units. Repair parts requisitioned from an NICP are flown to the aerial port nearest the ALOC designated requesting unit.

AIRCRAFT REPAIR PARTS

Aircraft repair parts ensure the maximum availability of mission-capable aircraft. Figure 7-7 depicts the requisition and supply flow of aircraft repair parts.

Request

Aviation units submit requests to their supporting AVIM unit. The AVIM unit's ASL covers combat PLLs. The ASL also includes repair parts for AVIM level authorized repairs.

Requisition

Nondivision AVIM units and DMMCs transmit consolidated requisitions for aircraft repair parts to the CMMC's aviation division. AVIM units also requisition replenishment parts.

The CMMC's aviation parts supply branch processes the requisitions. It transmits requisitions for air-eligible items in support of ALOC designated units to CONUS NICPs. When non-ALOC parts are available in the corps rear area, the CMMC prepares an MRO. As necessary, it arranges to cross-level spares and initiates follow-up actions. If the aircraft repair parts or required quantities do not exist in the corps area, the CMMC's aviation parts supply branch transmits the requisitions to the TAMMC.

Supply

The CMMC directs issues to fill high priority and not mission capable supply requisitions. An aircraft repair parts supply platoon, attached to the repair parts supply company, provides GS level aircraft repair parts to AVIM units.

The COSCOM maintenance support branch chief directs that the CMMC's aviation parts supply branch laterally transfer stocks to meet urgent demands. He might also direct redistribution of aircraft repair parts from AVIM units which have an excess on hand.

Distribution

Air resupply or throughput distribution provides a means to push critical aircraft repair parts from AVIM units forward to AVUM elements. To reduce transit times, AVIM MSTs can transport supplies forward to aviation elements.

Controlled Exchange

Battle-damaged or unserviceable aircraft may be used as a source of aircraft repair parts. AR 750-1 prescribes criteria to be met before controlled exchange can be authorized.

MAINTENANCE FLOATS

The corps G3 identifies combat units which can most impact the outcome of specific combat missions and the first battles. Upon outbreak of general hostilities, nondeployed COSCOMs use ORF items stocked at DS maintenance or AVIM units to enhance equipment readiness and fill shortages in those combat units.

Deployed COSCOMs use ORFs for the same reasons and to replace initial battle losses during the first days of hostilities. Based upon guidance provided by the corps G3, the COSCOM support operations officer decides when to release an ORF to replace initial battle losses. AR 750-1 prescribes maintenance float policy, procedures, and controls.

REPAIR TIME CRITERIA

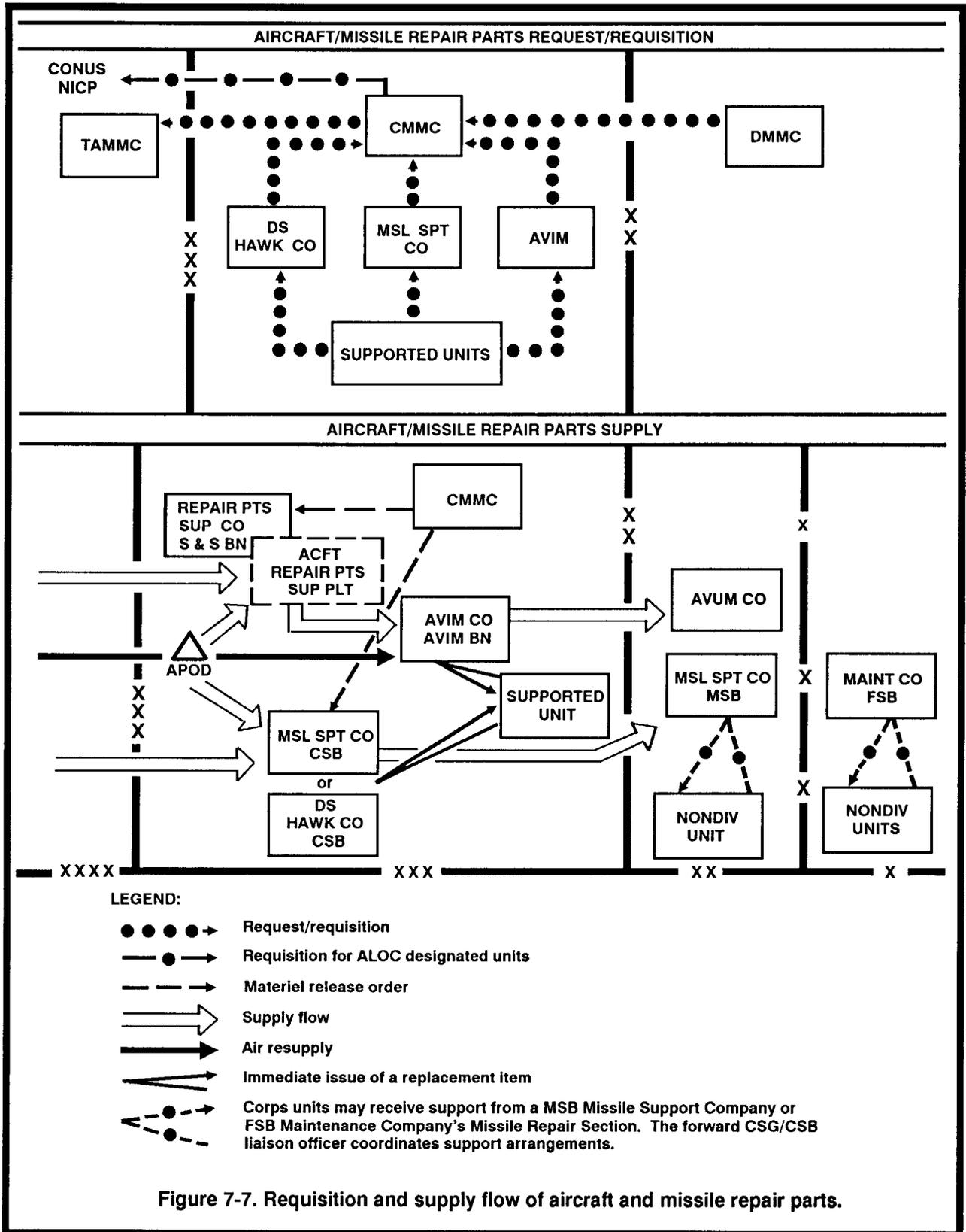
The corps G4 establishes a repair time criteria. Decisions whether to repair, recover, or evacuate are made at all levels based on the time required to repair. Repair times are established in SOP and in OPORDs when changes occur based on the tactical situation. When nondivision DS maintenance units cannot repair unserviceable items within the designated time limit, the owning unit drops the items from their property book and requisitions replacement items from the supply system.

REPLACEMENT END ITEMS

The daily battle loss report serves as the requisition for selected major end items. Units submit battle loss reports through S3 channels. The S3 determines the priority of issue and forwards requirements for replacement of major end items to the CMMC.

The CMMC reports battle loss, current status, and due in data of reportable critical, command-controlled end items/weapon systems to the corps G3 and G4. The corps G3 approves their issue and directs priority distribution to those units the corps commander regards as the most critical to the success of the corps battle.

Following command approval, the TAMMC or CMMC directs issue from a heavy materiel supply



company to the supporting DS supply company and requesting unit. Replacement weapon systems need to be linked with the replacement crew. Depending

upon METT-T, linkup occurs in the BSA, DSA, regeneration site, or heavy materiel supply company area.

MANAGING MAINTENANCE AND REPLACEMENT OPERATIONS

The COSCOM support operations officer controls COSCOM maintenance and replacement operations. He uses his maintenance support branch and weapon systems support branch and their interface with the appropriate CMMC maintenance support branch, parts supply branch, and equipment supply branch to maintain centralized control of decentralized maintenance operations.

MAINTENANCE SUPPORT BRANCH

The COSCOM support operations officer provides operational control of maintenance operations in the corps. His maintenance support branch provides technical staff control and supervision through its interface with subordinate CSG maintenance staff and the CMMC's commodity divisions. COSCOM maintenance management officers implement priorities established for maintenance of critical weapon systems. They monitor maintenance status of command controlled items. Maintenance support branch personnel monitor equipment status reports and data on Class IX stocks. As necessary, they redirect the maintenance efforts of subordinate CSGs. They indirectly manage maintenance by -

- Providing policy and procedural guidance to and coordinating the activities of CMMC maintenance managers.
- Recommending changes in mission assignment of DS maintenance units and allocation of MSTs.
- Recommending redistribution of maintenance support capability in response to changing tactical requirements.
- Recommending changes to maintenance repair time limitations based upon corps priorities, maintenance work load, availability of repair parts, the tactical situation, and stockage of major end items.
- Coordinating with the CMCC and CMMC to integrate Class IX and maintenance related Class II movements into the corps movement program.
- Recommending changes in evacuation policies.
- Developing instructions for maintenance units relative to evacuation of unserviceable equipment requiring higher level maintenance.

- Developing instructions on evacuation of unserviceable materiel and scrap.
- Authorizing repair of specific end items.
- Monitoring backlogs of critical items at DS maintenance units.
- Recommending tailoring of units and the forming of like sections from several units for high-priority maintenance to support regeneration operations.
- Recommending augmentations for maintenance units.
- Coordinating the evacuation of unserviceable end items, assemblies, and components to rear maintenance units.
- Ensuring timely support through monitoring CSSCS reports resulting from the interface between SAMS and SARSS.

Table 7-2 lists ways which maintenance management officers may recommend to offset maintenance capability shortfalls. The COSCOM support operations officer coordinates materiel management problems that require top-level decisions with the corps G4. AR 710-2 prescribes repairable management procedures.

WEAPON SYSTEMS SUPPORT BRANCH

Maintenance efforts focus on returning major weapon systems to battle. Because of the criticality of weapon systems replacement to the corps battle, the corps commander designates a coordinating staff officer as the corps weapon systems manager. Intensive management of corps weapon systems includes coordinating weapon systems repair, replacement, and transportation resources of the COSCOM as well as the crew replacement resources of the personnel group. However, the work load associated with keeping track of all assigned crew-served weapon systems, their unit of assignment, mechanical condition, and expected date of return from maintenance units are best handled at the COSCOM level.

At the COSCOM level, the weapon systems support branch chief acts as the WSM. His personnel monitor

Table 7-2. Ways to offset maintenance shortfalls.	
Major Components	<ul style="list-style-type: none"> ● Implement selected piece part repair. ● Search for substitution items. ● Step up collection and classification operations. ● Authorize controlled exchange. ● Lower cannibalization authorization level. ● Move critical components by Army air.
Replacement Weapon Systems	<ul style="list-style-type: none"> ● Revise maintenance priorities. ● Cross-level assets. ● Increase maintenance. ● Seek support from TA.
Critical MOS and Annual Maintenance Man-hours	<ul style="list-style-type: none"> ● Cross-level work loads between maintenance units. ● Increase deferred maintenance. ● Temporarily task other maintenance units which have a significant number of maintenance personnel. ● Seek assistance from TA/HN. ● Contract HN capability.
Movement	<ul style="list-style-type: none"> ● Cross-level transportation assets. ● Fix forward to reduce HET requirements. ● Divert assets from less critical missions. ● Seek assistance from supported units. ● Preposition forward following risk assessment. ● Increase throughput. ● Request HNS.

the repair or incoming status of weapon systems in subordinate COSCOM maintenance or supply units. The WSM places emphasis on the use of critical HETs or rail assets available to push weapon systems forward to the link-up point.

The WSM develops detailed weapon systems replacement management procedures. To make weapon systems replacement work he needs to —

- Coordinate directly with the division WSM who consolidates reports of shortages in the division.

- Monitor personnel status reports, SITREPs, battle loss reports, or spot reports reported through S1/G1 and S4/G4 channels.
- Monitor weapon systems shortages in each division, separate brigade, and ACR.
- Use COSCOM maintenance support branch personnel to expedite the repair and monitor the status of weapon systems or components.
- Coordinate with CMMC/TAMMC Class VII commodity managers on existing and incoming weapon systems data.
- Coordinate requirements for crew member replacements directly with personnel management branch personnel designated by the corps AG to coordinate, manage, and provide crew members or replacements.
- Obtain data from the theater army personnel operations center on TA priorities and transmit corps priorities to TA.
- Monitor the reprocessing status of vehicles by the heavy materiel supply company.
- Discuss possible link-up points with the DMMC's WSM, division RTOC, and corps sector RAOCs.
- Work with the corps G4 and G3 on requirements for air, rail, or HET support to transport ready-to-fight weapon systems to the link-up point or to an assembly area for formations in reserve.

CMMC MANAGEMENT MISSION

The CMMC provides routine day-to-day maintenance management following guidance and direction furnished by the COSCOM support operations officer. COSCOM maintenance and supply branch personnel focus COSCOM maintenance and repair parts resources on the repair and return of critical weapon systems. The functional branch breakdown of the commodity divisions shown on Figure 7-8 permits intensive management of maintenance, equipment, and repair parts.

Personnel assigned to the CMMC commodity divisions implement the policies and plans of the COSCOM support operations officer. Depending on branch assignment, personnel –

- Collect and analyze maintenance and materiel status data.
- Analyze supply and maintenance support operations and apply corrective actions directed by the COSCOM support operations officer or subordinate logistics branch chief.
- Coordinate and perform liaison functions with DMMCs, BMMCs, RMMCs, and the TAMMC.
- Maintain liaison with counterparts at NICPs and with staff in supported nondivision DS maintenance units and supply support activities.
- Direct the storage and distribution of GS level stocks.
- Review and analyze demands.
- Identify items which require intensive management.
- Review ASLs received from DMMCs, GSUs, and nondivision DS maintenance units.
- Analyze not mission capable maintenance backlog.
- Take action to satisfy ASL zero balance lines.
- Monitor the materiel readiness status of the command.
- Forecast maintenance requirements.
- Establish and coordinate repair priorities.
- Monitor repair parts usage and resulting not mission capable supply support problems.
- Monitor modification work orders.
- Cross-level DS maintenance unit work loads.
- Coordinate GS maintenance support to the corps.
- Initiate, within guidelines from the COSCOM support operations officer, actions to meet stock-age objectives.
- Coordinate stock status reporting procedures with subordinate COSCOM units.
- Perform inventory management functions for commodity items stored and distributed by applicable COSCOM units.
- Evaluate on hand supply assets to determine if they are sufficient to accomplish the COSCOM's support mission.
- Maintain the stock record account.

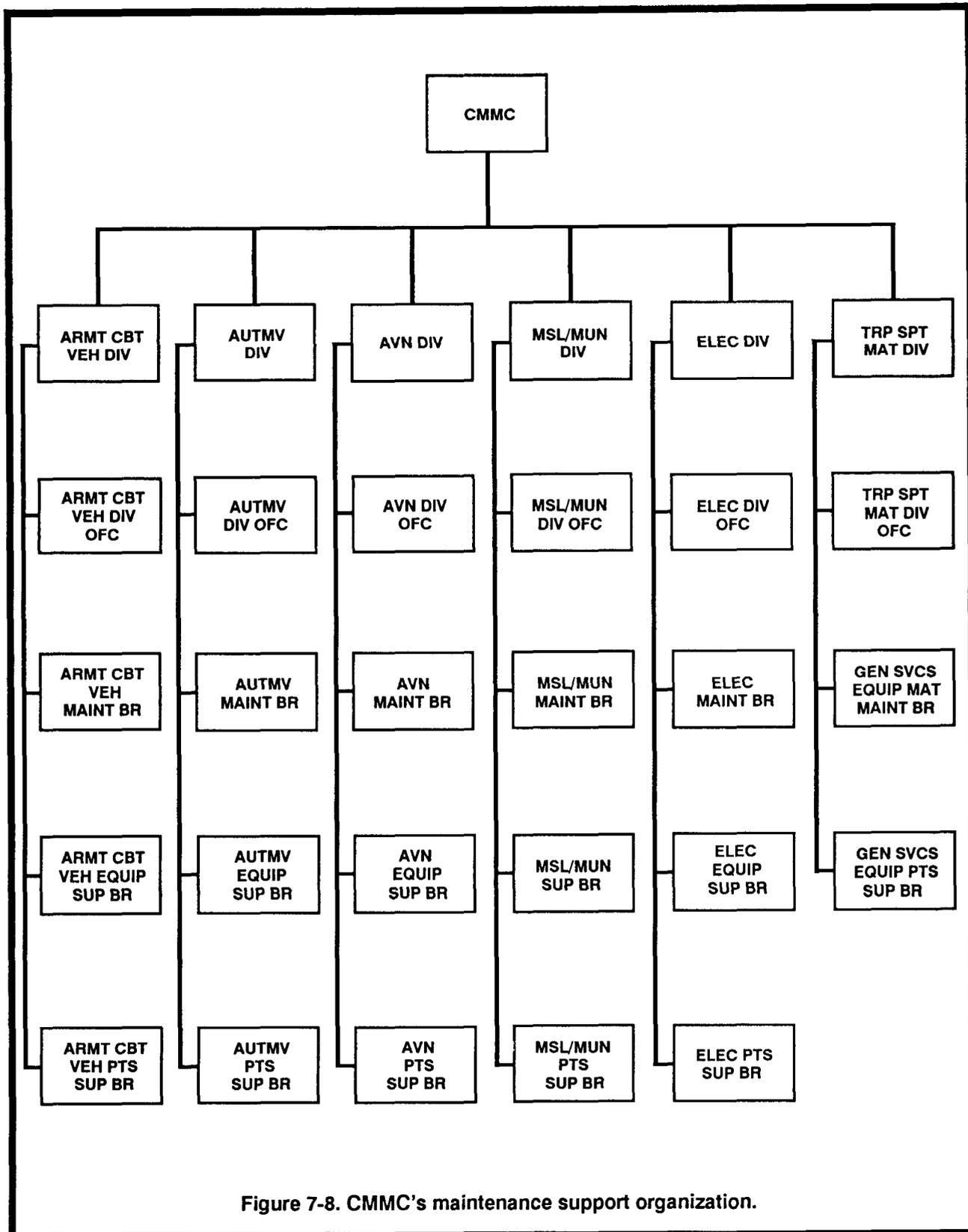


Figure 7-8. CMMC's maintenance support organization.

- Evaluate the work load and capability of applicable COSCOM units.
- Cross-level work loads and resources to achieve compatibility.
- Send MROs to GSUs.
- Coordinate movement requirements with the CMCC as required.
- Inform supply units of in-transit assets.

Commodity divisions refer materiel problems that deviate from the routine to appropriate support operations branch staff. The COSCOM support operations officer coordinates materiel management problems that require top-level decisions with the corps G4.

ARMAMENT-COMBAT VEHICLE DIVISION

The CMMC's armament-combat vehicle division provides supply and maintenance management of weapons (excluding missiles and their warheads). It micro manages combat vehicles and systems unique ancillary equipment, to include end items, components, and repair parts.

The CMMC's armament-combat vehicle division office programs maintenance, cross-levels resources, and manages the armament-combat vehicle assets of the corps.

Armament-Combat Vehicle Maintenance Branch

This CMMC branch manages maintenance of armament-combat vehicles. Branch maintenance managers transmit repair priority data to maintenance units. They coordinate with the armament-combat vehicle parts supply branch on repair parts requirements for maintenance of armament combat vehicles in short supply.

Armament-Combat Vehicle Equipment Supply Branch

This CMMC branch manages the day-to-day supply actions for Class VII armament-combat vehicle equipment. It manages Class VII requisitions for TOE equipment, to include processing requisitions on a daily basis and initiating follow-up actions.

Branch personnel take actions to till requisitions. They maintain stock record accountability for Class VII stocks within the corps.

Armament-Combat Vehicle Parts Supply Branch

This CMMC branch manages day-to-day supply of Class IX armament-combat vehicle parts. Branch managers maintain Class IX ASLs for armament-combat

vehicles. They recommend cross-leveling of repairs for armament-combat vehicles.

AUTOMOTIVE DIVISION

The CMMC's automotive division performs integrated materiel management for automotive equipment. It manages tactical wheeled and general-purpose vehicles; construction and MHE, and systems unique ancillary equipment, including end items, components, and repair parts.

Automotive Maintenance Branch

Branch personnel monitor maintenance of automotive equipment in the corps. They coordinate with the automotive parts supply branch on repair parts requirements for specific automotive items in short supply.

Automotive Equipment Supply Branch

This CMMC branch manages day-to-day supply actions in support of Class VII automotive equipment. Branch personnel process Class VII requisitions for MTOE automotive equipment and initiate follow-up actions. They maintain stock record accountability for Class VII automotive equipment supplies within the corps.

Automotive Parts Maintenance Branch

This CMMC branch manages the day-to-day supply of Class IX automotive equipment parts. Branch managers maintain Class IX ASLs for automotive equipment parts. They process daily requisitions for automotive repair parts and initiate follow-up actions. As necessary, they laterally transfer automotive parts or direct redistribution from activities with an excess of automotive parts.

AVIATION DIVISION

The CMMC's aviation division integrates supply and maintenance management of aircraft, avionics, aircraft armament, airdrop, and systems unique ancillary equipment. It provides day-to-day management of aviation supply and equipment. This includes repair parts and specialized equipment issued with aviation equipment.

Aviation Maintenance Branch

The aviation division's aviation maintenance branch manages the maintenance of aviation equipment. Branch personnel transmit repair priorities to AVIM units.

Aviation Equipment Supply Branch

This CMMC branch manages day-to-day supply actions

for Class VII aviation equipment supply support of aircraft and airdrop, avionics, aircraft armament, and related test equipment. Branch personnel maintain stock record accountability for Class VII aviation equipment within the corps. They process Class VII requisitions for MTOE aviation equipment and initiate follow-up actions. They coordinate with NICPs to fill requisitions for aviation equipment.

Aviation Parts Supply Branch

This CMMC branch manages day-to-day supply of Class IX aviation equipment parts. Branch personnel maintain Class IX ASLs on aviation parts. They process daily requisitions for aviation parts and initiate follow-up actions. They recommend cross-leveling of aviation parts.

ELECTRONICS DIVISION

This CMMC division performs integrated supply and maintenance management of C-E equipment and associated systems unique ancillary equipment, to include end items, components, and repair parts. It processes requisitions, programs maintenance, cross-levels resources, and manages day-to-day C-E assets of the corps.

Electronics Maintenance Branch

The CMMC's electronics maintenance branch manages maintenance of communications and electronics equipment in the corps. Branch personnel transmit repair priorities data on C-E equipment to subordinate maintenance units. They coordinate with the electronics parts supply branch on repair parts requirements for maintenance of C-E items in short supply.

Electronics Equipment Supply Branch

This CMMC branch manages day-to-day supply actions for Class VII C-E equipment. Branch personnel process requisitions for Class VII C-E equipment and initiate follow-up actions. They coordinate requisitions for controlled Class VII C-E items with the TAMMC. They maintain stock record accountability for Class VII C-E items. They also develop Class VII C-E equipment distribution plans and resolve corpswide distribution problems relative to C-E equipment.

Electronics Parts Supply Branch

This CMMC branch manages day-to-day supply of Class IX C-E repair parts. Branch personnel process requisitions for Class IX C-E repair parts and initiate follow-up actions. They maintain Class IX ASLs on C-E equipment. They recommend cross-leveling of C-E repair

parts and resolve corpswide distribution problems.

TROOP SUPPORT MATERIEL DIVISION

This division performs integrated materiel management for supplies provided to the corps by the US Troop Support Command, DLA, and GSA. It processes requisitions, programs maintenance, cross-levels resources, and manages day-to-day troop support materiel assets of the corps.

General Services Equipment Materiel Maintenance Branch

This branch manages maintenance for general materiel equipment. Branch personnel provide expertise on the repair of power generation equipment, turbine engine generators, utilities equipment, quartermaster and chemical equipment, construction equipment, special purpose equipment, and fabric items. They provide intensive management of common materiel deadlined for need of Class IX repair parts. They monitor the status of requisitions for common materiel. They coordinate with NICPs requesting expedited shipment of repair parts.

General Services Equipment Parts Supply Branch

This CMMC branch manages the supply of repair parts originating with DCSC for general materiel equipment. Branch managers establish and review ROs of common parts based upon past demand experience and anticipated requirements. They monitor ASL zero balance lines with dues out and take intensive management action to satisfy dues out.

STANDARD ARMY MAINTENANCE SYSTEM

SAMS automates maintenance management and reporting. A supported unit submits a work order request via its ULC to its supporting unit. SAMS generates a job number, requests required parts, or obtains status through its interface with SARSS.

SAMS-1

SAMS-1 automates day-to-day maintenance functions at DS/AVIM maintenance units. It provides a complete shop stock management system. It automates preparation of maintenance work orders. SAMS-1 software programs can be used to -

- Requisition parts.
- Process parts requirements for issue from shop stock.
- Compute shop stock levels.
- Manage bench stock.

- Manage shop work load.
- Maintain repair parts requirements and status data.
- Maintain information on repair tasks to be accomplished.
- Interface and transfer data to supporting supply activity on unfilled work order parts and shop stock replenishment requirements.
- Provide labor costs related to specific work orders.

SAMS-2

SAMS-2 collects data from SAMS-1 sites and provides maintenance officers information on inoperative equipment status, maintenance shop capabilities, and parts costs. SAMS-2 also produces reports on maintenance work loads, equipment backlogs, materiel readiness status, MWO status, calibration, and use of reparable items.

STAMIS Interfaces

The following interfaces between SAMS and ULLS, SARSS, and CSSCS are shown on Figure 7-9:

- The interface between ULLS at unit level and SAMS-1 at DS maintenance unit level enables units to submit maintenance requests to their supporting nondivision DS, AVIM, or DS missile maintenance unit. ULLS transmits work requests to SAMS-1. SAMS-1 feeds ULLS the work order status. ULLS also transfers readiness data to SAMS-2.
- The interface between SAMS-1 and SAMS-2 at CSBs and CSGs results in daily and weekly reports of inoperable equipment.
- The interface between SAMS-1 and SARSS-1 results in the automatic preparation of requisitions and automatic update of repair parts supply status. It enables maintenance units to monitor Class IX repair parts supply.
- The interface between SAMS-2 and CSSCS at the COSCOM HHC, CMMC, and CSGs enables maintenance managers to —
 - Ensure timely support.
 - Coordinate repair priorities.

- Monitor MWOs.
- Cross-level maintenance work loads among maintenance units.

CSSCS MAINTENANCE REPORTS

CSSCS collects maintenance status data through its interface with SAMS-2 at subordinate battalions and CSGs. CSSCS provides a series of maintenance status displays. COSCOM maintenance support branch personnel use the maintenance capability status displays assess overall maintenance capability for the force. They use support maintenance unit or maintenance support team status displays to assess problem areas and maintenance status in subordinate units.

CSSCS CLASS IX REPORTS

The automated interface between CSSCS and SARSS enables CSSCS to receive data on on-hand, due-in, and demand data. SARSS provides CSSCS automated Class IX ASL asset and demand data.

CSSCS data screens provide status data on Class IX assets located within the corps. However, CSSCS only tracks the Class IX assets listed on the CSSCS tracked items list. CSSCS provides status for Class IX assets in ASLs. It lists asset data in terms of quantities and DOS.

COSCOM maintenance support branch personnel use the Class IX ASL asset display report to assess current assets versus anticipated requirements.

CSSCS EQUIPMENT STATUS REPORTS

Based on the CSSCS tracked items list, the CMMC receives battalion and separate company level authorization and on-hand data extracted from SARSS-2A/2B asset visibility reports for corps units. CSSCS also tracks items identified as substitute items. SPBS-R provides input on equipment authorization and equipment on-hand. SAMS provides input related to inoperable equipment status.

COSCOM weapon systems support branch personnel use an equipment status summary report to assess the current and projected serviceable asset availability for the force.

COSCOM and CSG support operations staff officers use detailed data displays on equipment status reports or equipment items reports to assess equipment availability, assess readiness, and change maintenance priorities on a particular equipment item.

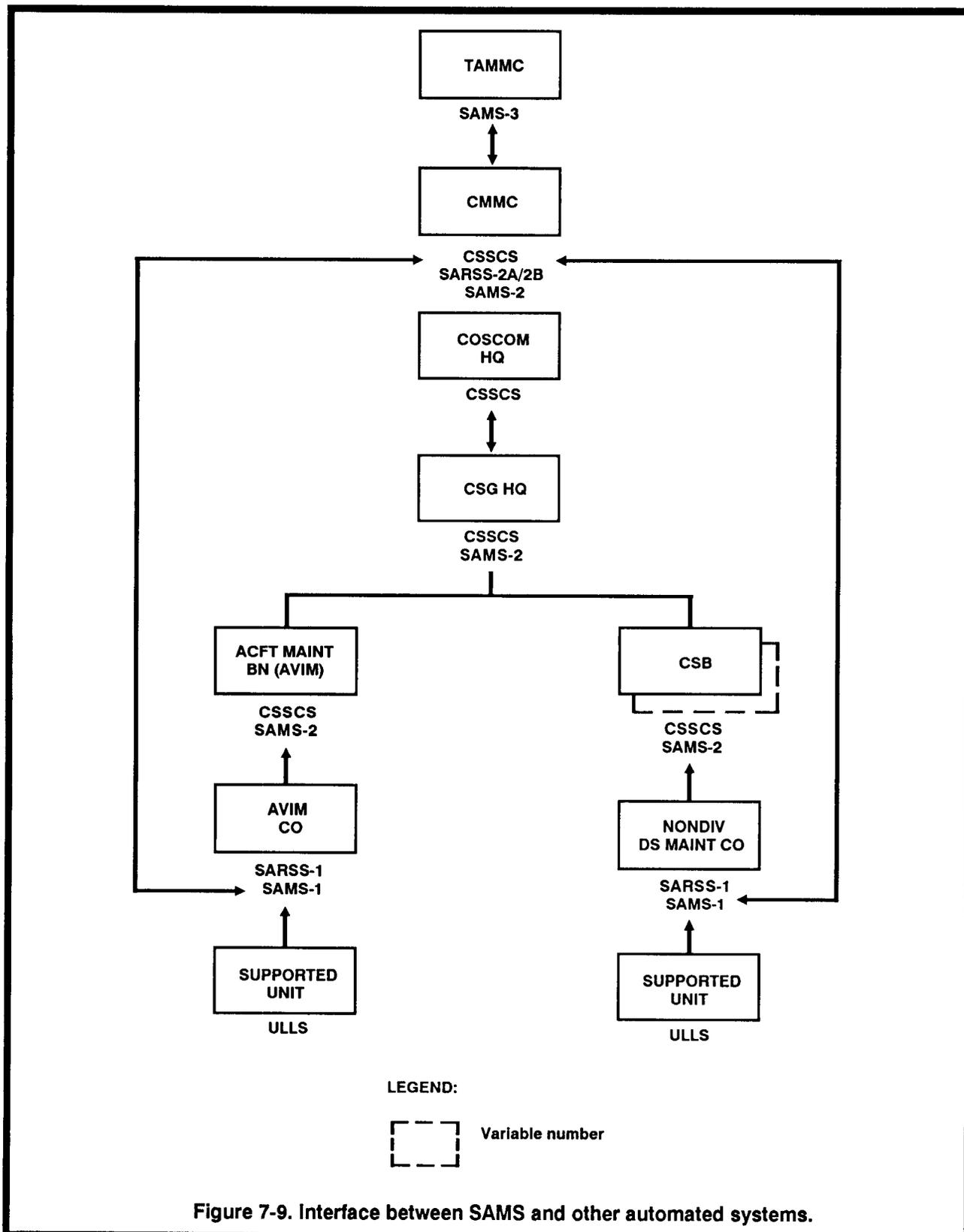


Figure 7-9. Interface between SAMS and other automated systems.