

CHAPTER 10

THEATER MAINTENANCE

References

FM 3-04.500, Army Aviation Maintenance, 26 September 2000
FM 4-30.3 (FM 9-43-1), Maintenance Operations and Procedures, 1 September 2000
FM 63-2, Division Support Command, Armored, Infantry, and Mechanized Infantry Divisions, 20 May 1991
FM 63-3, Corps Support Command, 30 September 1993

Objectives

- Understand the flow of repair parts into a theater of operations and identify the units that retain class IX Authorized Stockage List (ASL) and shop stock
- Understand how maintenance operations support the strategic, operational and tactical levels of war
- Distinguish between the echelons of ground and aviation maintenance support and the units that perform them
- Understand how maintenance operations are organized throughout a theater

Background

The Army maintenance system is **organized to service and repair equipment throughout its in-service life**. Organizations are tailored to provide the required equipment maintenance capability at appropriate levels throughout the maintenance system. **The key to an effective maintenance program is preventive maintenance** or those actions taken at the lowest level to keep equipment operating smoothly. **The cornerstones of maintenance support in combat operations are: to fix as far forward as the tactical situation permits; and to anticipate support requirements.** Fixing forward enhances the ability to quickly return the maximum number of combat systems to the maneuver commander. Anticipating future requirements allows repositioning of maintenance support capabilities.

Successful maintenance operations are measured on how well a unit's equipment remains operational (available for use), how quickly it is returned to service when inoperable (maintainability), and how long the user can anticipate failure-free performance (reliability) after return from maintenance. Maintenance efforts concentrate on returning equipment to the user in time to influence the outcome of the battle.

Unit maintenance personnel repair equipment on site or recover it to the Unit Maintenance Collection Point (UMCP). In heavy divisions, maintenance support teams (MSTs) from the forward support battalion maintenance company (FSMC) perform direct support repairs in the UMCP.

Class IX Repair Parts

Successful maintenance operations are dependent on an efficient supply of available repair parts. Repair parts supply provides any part, subassembly, assembly, or component required for installation in the maintenance of an end-item, subassembly, or component. **It supports the maintenance and repair functions performed throughout the Army on all materiel except medical.** class IX items range from small common hardware items to large, complex line-replaceable units. There are three main sub-classes of repair parts:

- Common (class IX (C)) – To repair most common equipment in the Army inventory.
- Air (class IX (A)) – To repair aviation, aircraft, and airdrop equipment.
- Missile (class IX (M)) – To repair missile systems.

The degree of repair parts management required is proportional to the contribution they make to operational readiness of the end-items they support at each level of war and logistics:

- **Strategic:** Management generally depends on the item's general classification rather than its end-item use. Requisitions may go to one or more National Inventory Control Points (NICP) or commodity command. **NICP managers generally use depot-level maintenance to repair unserviceable assets.**
- **Operational:** This level focuses on **providing repair parts and a level of stockage for items not sent to the theater by Air Lines of Communication (ALOC).** Sustainment maintenance organizations ease supply requirements by providing serviceable assets and components. Theater-generated assets reduce the requirement to provide support from strategic levels of supply. GS maintenance units' shop stocks support authorized maintenance tasks. They requisition replenishment stocks through their Materiel Management Centers (MMC) and do not maintain ASLs.
- **Tactical:** Repair parts support at this level **supports both unit and DS level maintenance missions.** Organizations stock a limited of demand support items on a Prescribed Load List (PLL). DS maintenance operations maintain a shop supply (SS) for their DS maintenance operations and an Authorized Stockage List (ASL) to provide all additional class IX requirements. A class IX ASL is maintained by a Supply Support Activity (SSA) and is usually assigned to a maintenance company.

The Supply System

The supply system contains **two levels – wholesale and retail.** The **wholesale system is managed at the strategic level and is concerned with procuring supplies** from the manufacture and bringing them into the Army inventory. The **retail**

level includes all portions of the supply system not classed as wholesale and is divided into user, DS and GS levels:

- **Users** are combat, combat support, and combat service support units that stock supplies to **support their own operations**. These stocks include PLL, bench stock and shop stock items.
- **DS supply and maintenance units (DSU)** stock supplies (ASL) **for issue to customer units (users)**. Each DSU has a list of customers it supports. Stockage levels are set by the MMC and stock control is performed at the DSU.
- **GS supply units (GSU)** provide **backup support to DS supply and maintenance units** and act as **transshipment points**. GSUs are not located in the division; they are found in the COSCOM, and ASCC. The GSU's MMC performs stock control and accounting.

Supply-Related Activities

Air Lines of Communication (ALOC) - Higher priority supply requests can be shipped to the theater via air instead of through sea lines of communication. Figure 10-1 illustrates the class IX flow for ALOC supplies.

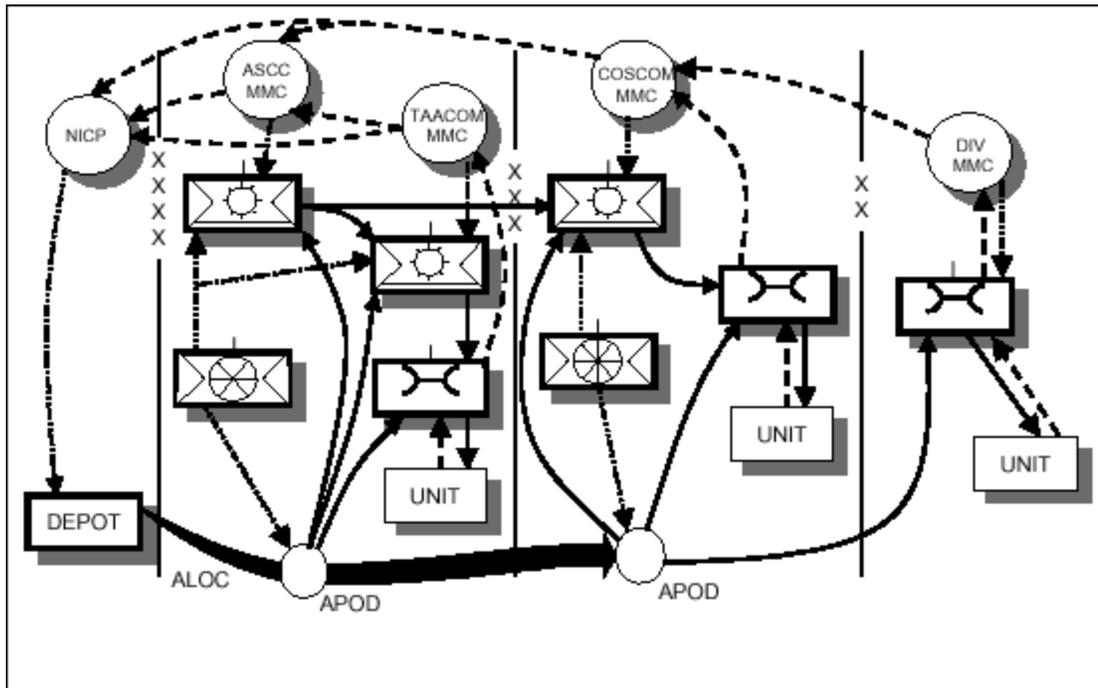


Figure 10-1 Class IX Requisition and Distribution Flow for High-Priority (ALOC) Requests

Sea Lines of Communication (SLOC) – Low priority supply requests are **generally shipped to the theater via surface ships** instead of via air-lines of communication.

Figure 10-2 illustrates the class IX flow for SLOC supplies.

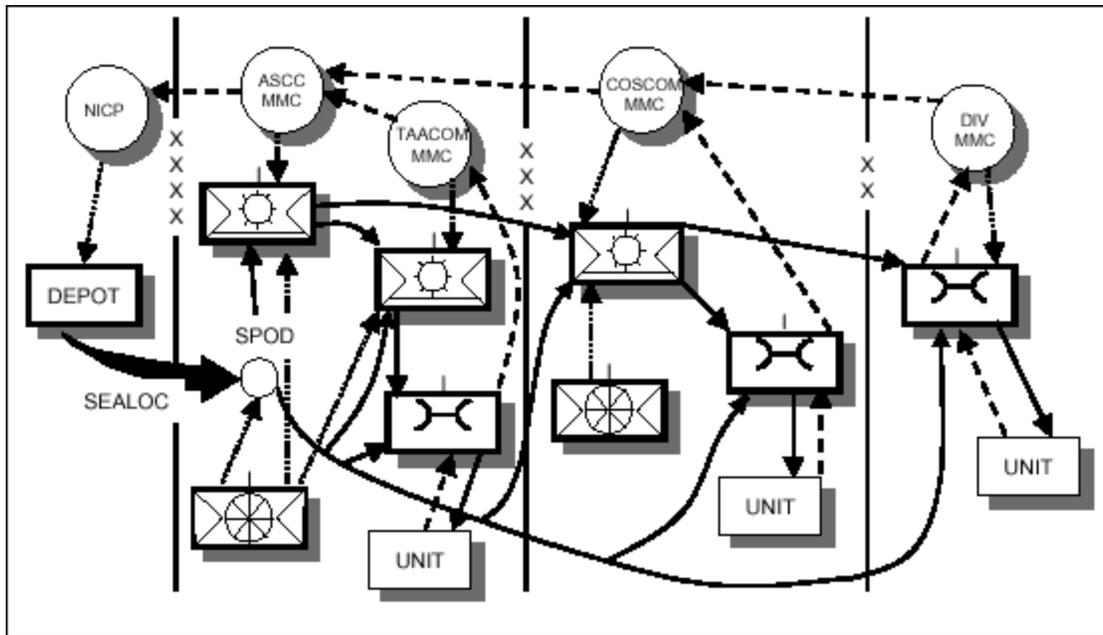


Figure 10-2 Class IX Requisition and Distribution Flow for Low-Priority (SLOC) Requests

Requisition Process – The user identifies the required parts and sends all requests to their DSU. The DSU will either issue the parts if available or send all unfilled requests to its MMC. The MMC will seek to issue the parts from other DSUs under its control. If the request cannot be satisfied by the MMC, it will forward the request to a higher-level MMC such as a COSCOM MMC or ASCC MMC. If the parts are not available in the theater, the request will be sent to the NICP for issue from a depot.

Distribution Process – Shipments enter the theater either via an APOD or SPOD. High-priority requests are sent to the theater via ALOC and are throughput to the users' DSU for issue to the user. Low-priority requests enter the theater through an SPOD and may be sent to the user through successive GSUs and DSUs or may be throughput to the users' DSU depending on METT-TC. **The normal method of distribution from the DSU to the user is supply point distribution.** Supported units (users) go to their DSU using ground transportation on a routine basis. Under mission essential circumstances, air delivery of supplies to a forward site is possible.

Reparable Exchange (RX) – RX is a supply procedure in which **serviceable repair parts, components, and assemblies are exchanged for unserviceable items.** The unserviceable parts are then sent to a maintenance facility for repair and return to the supply system. Most class IX DSUs conduct RX activities. An RX activity (RXA) is usually established with each class IX DSU to provide RX capability to its customers.

Controlled Exchange/Substitution – This is the **removal of serviceable parts, components, assemblies, and subassemblies from unserviceable but**

economically reparable equipment for immediate use in restoring a like item of equipment to a combat mission capable condition.

Cannibalization – This is the authorized removal of serviceable and unserviceable assemblies and serviceable repair parts **from unserviceable, uneconomically reparable, or excess end-items of equipment authorized for local disposal**. The goal is to return as many systems to the battle as quickly as possible. There are two general categories of cannibalization: **Cannibalization Point** operations are conducted by a Collection and Classification (C&C) company in order to return components to the GS level. **Battle Support cannibalization** is conducted by maintenance personnel in order to return equipment to combat. **During wartime, the Army service component commander must establish a cannibalization policy.**

Local Purchase – This may be used to procure items required to **satisfy immediate needs when the supply system cannot provide the required parts in a timely manner.**



Ground Maintenance

Ground Maintenance Operations by Level of War

Strategic: Maintenance operations are **largely conducted by depots** at this level throughout the continental United States (CONUS) based industrial and civilian sectors. Maintenance management at this level primarily **links the nation's economic base to its military operations in theaters.**

Operational: Maintenance operations link strategic capabilities to tactical requirements. Managers coordinate **direct support (DS) and general support (GS) maintenance**, specialized/forward repair activities, and base logistics operations. **The maintenance system both drives and supports the supply system.**

Tactical: Maintenance operations consist of **activities required to keep weapon systems operational** during battle, supporting the tactical commander's scheme of maneuver. **Managers oversee operator/crew, unit, and DS maintenance operations. The primary focus is equipment repair or replacement and return to user.**



Forward Repair System (FRS)

The Four Ground Maintenance Levels:

- **Unit (Operator/Crew and Organizational Mechanics)** – Unit maintenance is the **foundation of the maintenance system**. It focuses on operator Preventive Maintenance Checks and Services (PMCS), scheduled services, and unscheduled repair through component replacement.
- **Direct Support (DS)** – DS maintenance is **focused on repair and return of equipment to the user**. Repair teams are highly mobile and are weapon – system oriented. Support can be provided to a dedicated customer or on an area basis. DS units can provide back-up maintenance to unit level maintenance.
- **General Support (GS)** – GS maintenance is **focused on commodity repair of components and end items in support of the theater supply system**. GS units are located at Echelons Above Corps (EAC) but platoon sized elements can be move as far forward as required to support the tactical situation. GS units can provide backup support to DS units.
- **Depot** – Depot repair is performed by industrial-type organizations operated by the Army. **They provide combat ready materiel to the supply system, repair and return to the wholesale supply system at the national level or theater of operations** if directed. Depot activities provide backup support to DS and GS maintenance units. In wartime, the CINC assumes control of depot level operation in the theater of operations.

NOTE – Elements from GS and Depot-level activities can be found as far forward as required to support the tactical situation.

Sustainment Maintenance Support

Sustainment maintenance is **generally performed above the DS level**. It consists of active and reserve GS maintenance units, directors of logistics (DOLs), depots, special repair activities (SRAs), forward repair activities (FRAs), and contractors that can be **tailored to meet sustainment maintenance demands anywhere in the world**. It is integrated management that focuses on centralized management with decentralized execution of maintenance **programs at local, regional, and national levels**. It maximizes repair capability while providing high levels of weapon system availability at the least cost.

Centers of excellence (COEs) are established for sustainment activities to determine how maintenance units can best support the theater operations plan. COE support the theater supply system through TOE or TDA units, host nation support, and contract personnel.

Sustainment maintenance is managed at the local, regional and national level. Local sustainment maintenance managers (LSMM) manage their subordinate organization's workload in a designated geographical area with multiple COEs. The regional sustainment maintenance manager (RSMM) of a designated geographical area prioritize or redirect workload among LSMMs and may be established overseas as part of

a Logistics Support Element (LSE), part of the AMD Forward program. The national sustainment manager (NSMM) integrates sustainment maintenance for the total Army.

Logistics Support Elements (LSEs)

- Generally move into fixed or semi-fixed facilities in the theater, where they usually remain throughout the duration of the operation.
- Can displace forward as a whole or by platoons, sections, or teams to support the tactical commander as required.
- Are attached to the nearest maintenance company and all requirements pass through that headquarters.

The Four Methods of Ground Maintenance Support:

- **Forward Support** – Oriented toward quick turnaround to the user in order to maximize operational time and minimize repair and evacuation down time. This is the preferred method.
- **Area Support** – Resources are concentrated in a geographical area based on type and quantity supported. Focus is placed on units operating in or passing through the area.
- **Backup/Reinforcing Support** – Backup support receives workload from a supported unit for **excessive maintenance requirements** that cannot be performed due to time constraints or resource limitations. Reinforcing support sends personnel and equipment to the supported unit of similar type for temporary excessive requirements that must be performed to meet operational requirements.
- **Passback Support** – Provided by one maintenance unit to a supported unit on a **predictable and permanent workload** that is allocated by force structure.

The Ground Maintenance Flow

Maintenance begins with the operator. The operator, crew and the company maintenance team (CMT) perform unit level maintenance. Equipment operators and the CMT use preventive maintenance checks and services (PMCS) to detect equipment failures. Maximum use is made of built-in test equipment (BITE) and Test, Measurement, and Diagnostic Equipment (TMDE) to perform maintenance. These tasks are performed at the down-site or the Unit Maintenance Collection Point (UMCP).

The maintenance platoon contains the battalion's unit maintenance and recovery resources. **Maintenance is task organized by the maneuver battalion's battalion maintenance officer (BMO) to support tactical units.** He organizes the platoon into company maintenance teams (CMT) based on Task Force (TF) priorities that determine how a company will receive CSS support. The CMT is controlled by the BMO who may provide additional personnel and equipment from the maintenance platoon as required.

The BMO may divert a CMT from one company to support another element of the TF as mission dictates.

Company Trains

The company trains are established by the maneuver company first sergeant behind the first terrain feature out of the line of direct fire. The CMT is employed in support of the company and is under the operational control of the maneuver company first sergeant. The CMT provides maintenance and recovery support to the combat unit. Selected track vehicle repair parts are drawn from the prescribed load list (PLL) and carried on the CMT's maintenance vehicle. These parts provide a quick-fix capability forward on the battlefield.

Unit Maintenance Collection Point (UMCP)

Inoperative equipment that cannot be repaired on-site is recovered to a unit maintenance collection point. In a combat battalion, the **UMCP is established in or near the battalion combat trains behind the company trains, and is controlled by the BMO.** The BMO organizes the UMCP with maintenance platoon personnel, recovery vehicles, tool trucks, and PLL assets. The FSB Maintenance Support Team (MST) supports from this location. The BMO is assisted by the BMT (Battalion Maintenance Technician [Warrant Officer]), who is directly responsible for maintenance operations. Maintenance teams not engaged in support of the combat force work in the UMCP returning critical weapons systems to battle. Equipment not repaired in the UMCP is evacuated to a maintenance location where it can be repaired within pre-determined time limits.

The **FSB maintenance company provides DS maintenance and class IX repair parts support** to all division units in the brigade sector and operates in the Brigade Support Area (BSA). Maintenance Support Teams (MST) are sent forward to TF UMCP to provide DS repair capability in forward locations (fix forward).

The **MSB electronics maintenance company provides DS electronics maintenance (in support of divisional air defense, target acquisition and surveillance radar systems) and class IX support** to all divisional units and back up DS maintenance support to the FSBs. Additionally the electronics maintenance company provides MSTs for missile support. The **MSB heavy maintenance company provides DS maintenance support** to all division units in the DSA and back up DS maintenance support to the FSBs. The **maintenance troop** of the ACR Support Squadron provides **DS maintenance and class IX support** to units in the ACR.

In corps and theater organizations operators and maintenance personnel at company level conduct unit maintenance operations. Like a divisional unit, if inoperable equipment is not repairable at a breakdown site, it is recovered to a UMCP. **In the COMMZ, corps, and division areas non-divisional maintenance companies assigned to ASGs and forward or rear CSGs provide DS maintenance and class IX**

support to non-divisional units operating in or passing through their assigned area of responsibility. They also provide back up DS maintenance support to the maintenance units in the division and the Armored Cavalry Regiment (ACR) as required. Non-divisional maintenance companies have organic MST capability but they require augmentation to support most corps assets. Non-divisional capabilities and augmentation teams include in the following table:

Non-Divisional DS Maintenance Company				
Organic to all Companies		Additionally Required		
Base Shop	MST	Augmentation Teams		
Maint Control	Automotive	Light Infantry Division	SP Artillery Turret/Fire Control	TACFIRE
Class IX SSA	Communications	MST	SP Artillery MST	Fabric Repair
Automotive Repair	Power Generation	Tank Turret	Towed Artillery Turret/Fire Control	Controlled Cryptographic
Armament Repair	Small Arms	Engineer Equipment	Towed Artillery MST	Bottle Cleaning & Charging
Ground Spt Equip Repair		Wheeled Vehicle	Radar	Remotely Piloted Vehicles
Communications & Electronic Repair		Track Vehicle	Communications & Electronics	
Service & Recovery		ORF	Turbine Generator	

It is important to note that unless Augmentation Teams are included into the non-divisional maintenance company structure, the company cannot provide maintenance as required. As a rule, each corps engineer battalion, ADA battalion, FA battalion, and light infantry division is each allocated an MST augmentation team.

A Repair Parts Company usually located in the Supply and Services Battalion of the rear CSG provides GS level class IX and maintenance related Class II supply support to all units in the corps sector. A **Collection and Classification Company** establishes and operates a collection and classification facility for receipt, inspection, segregation, disassembly, preservation, and disposition of serviceable and unserviceable Class VII and IX material

NOTE: There is no ground GS maintenance capability in the doctrinal corps structure.

In the theater, TSC non-divisional maintenance companies provide DS maintenance and class IX support to units on an area basis. The TSC GS maintenance companies provide GS maintenance support to all units in the theater. **GS maintenance operates on a "repair and return to supply system" basis.** The **TSC repair parts companies** assigned to ASGs provide GS class IX support to DS class IX activities in both the theater and corps area as required. The **collection and classification companies** provide support to units in the theater.

There is **specialized communication security (COMSEC) equipment repair in the Theater Signal Command** that provides special repair of sensitive signal equipment and supporting class IX (COMSEC) supply to the theater. A **Test Measurement and Diagnostic Equipment (TMDE) repair company will support the theater with repair of electronic diagnostic equipment repair.** The TMDE unit will send out augmentation teams throughout the theater down to the division level. It also has a specialized class IX supply for its internal operations.

XXXX	XXX	XX	X	II
<p><u>ASCC</u> ASG Maint BN Maint Co Non-Div (DS) CI IX (C) ASL/SS</p> <p>Maint Co (DS) Patriot CI IX (C) ASL/SS</p> <p>OD MSL SPT Co (GS) CI IX (M) ASL/SS</p> <p>Maint Co (GS) CI IX (C) SS</p> <p>Collection & Classification Co</p> <p><u>ASG S&S BN</u> Repair Parts Co GS CI II/IX (C/M/A) ASL</p> <p><u>Theater SIG CMD</u> Theater Sig Maint Co (Sustainment) CI IX (COMSEC) ASL/SS</p>	<p><u>CORPS</u> <u>CSG(R/F)</u> Maint Co Non-Div (DS) CI IX (C) ASL/SS</p> <p>Maint Co (DS) Patriot CI IX (C) ASL/SS</p> <p>OD MSL SPT Co (DS) CI IX (M) ASL/SS</p> <p>Collection & Classification Co</p> <p><u>CSG(R) S&S BN</u> Repair Parts Co GS CI II/IX (C/M/A) ASL</p>	<p><u>DIVISION</u> <u>MSB</u> Hvy Maint Co (DS) CI IX SS</p> <p>Electronic Maint Co(DS) CI IX (C/M) ASL/SS</p> <p><u>DASB</u> Ground Maint Co (DS) CI IX (C/M) ASL/SS</p>	<p><u>BRIGADE</u> <u>FSB</u> Maint Co (DS) CI IX (C/M) ASL/SS</p> <p><u>ACR</u> <u>SPT SQDN</u> Maint Trp (DS) CI IX (C/M) ASL/SS</p> <p><u>SIB</u> <u>SPT BN</u> Maint Co (DS) CI IX (C/M) ASL/SS</p>	<p><u>DIV CBT BN</u> <u>HHC</u> Maint Plt(Unit) CI IX (C) PLL</p> <p><u>ACR SQDN</u> <u>SPT TRP</u> Maint Plt (Unit) CI IX (C) PLL</p> <p><u>SIB CBT BN</u> <u>BN</u> <u>HHC</u> Maint Plt (Unit) CI IX (C) PLL</p>

Figure 10-3. Ground/Missile Maintenance

Theater and corps level Patriot air defense battalions receive support for ground equipment from specialized **Patriot DS maintenance companies assigned to either an ASG maintenance battalion or a forward or rear CSG.** These units maintain class IX(C) supply ASL and shop stock for the supported units. **The missile components of**

air defense artillery (ADA) and land combat missile systems (LCMS) receive DS/GS level support from specialized Ordnance Missile Support Companies located in the ASG and COSCOM. These units supply class IX(M) ASL and shop stock items to supported units. The GS Ordnance Missile Company also supports the theater supply system. Figure 10-3 illustrates the main units involved in theater maintenance operations.

CSS Maintenance Terms

Maintenance Repair Time Guidelines

FM 9-43-1 did away with the old established maintenance timelines. Maintenance time guidelines are a commander's call. Timelines, if used, are developed during the orders process and based on METT-TC. Time guidelines are established by the commander to assist maintenance leaders in deciding whether to repair equipment forward or evacuate it. An **example of possible** maintenance repair guidelines is provided in Fig 10-4. This prevents equipment from accumulating in the forward area and aids in distributing the maintenance workload. Repair/recover/evacuation decisions are made at all levels based on the time required to repair. **Times are based on command policy and the factors of METT-TC.** The guidelines are considered **flexible and not restrictive.**

Note – The decision to evacuate equipment is based on the availability of all necessary repair parts, personnel, and equipment needed to conduct the repair. If the estimated repair time exceeds the command guidance once all repair parts, personnel, and equipment are on-hand the end item may be evacuated.

Maintenance Time Guidelines		
<u>LOCATION</u>	<u>HOURS</u>	<u>DISTANCE FROM BREAK DOWN SITE</u>
On Site	2	
Unit Maintenance	2 - 6	5 -10 KM
Brigade Support Area	24	15 -20 KM
Division Support Area	36	50 -60 KM
Corps Support Area	96	100 KM

Figure 10-4. **Example of a** Maintenance Time Guidelines Chart

Maintenance Allocation Chart (MAC)

The MAC lists the functional group responsible for the maintenance level in which the repair part belongs. It is found in unit level technical manuals (TM) and is **the primary guide for assigning maintenance responsibility within the levels of the Army**

maintenance system. The allocation of maintenance tasks is made on the basis of time, tools, and skills normally available at the location where the work is done. The MAC designates overall responsibility for the maintenance function on end items and components.

Battlefield Damage Assessment and Repair (BDAR)

BDAR is the rapid damage assessment and repair, bypassing, or jury-rigging of components, to restore the minimum essential capability to support a combat mission or enable self-recovery. Such repairs may be temporary or permanent, depending on the repair required. Battle Damage Assessment (BDA) determines what is damaged and if it is repairable, what assets are needed to make the repair, and where to make the repair. **The purpose of BDAR is to return the disabled combat equipment as quickly as possible to the operational commander.** The operator/crew performs initial BDA and repairs damaged equipment if possible. While anyone on the battlefield can perform some BDAR, crew, unit, and DS mechanics and technicians must be trained in assessing battle damage. The commander decides whether or not to use BDAR in lieu of normal maintenance procedures.

Modularity

Modularity is a design methodology that provides force elements that are interchangeable, expandable, and tailorable to meet the changing needs of the Army. It provides the functions and capabilities needed by force projection forces across the range of military operations. It allows units to be responsive, economical, effective, flexible, selective, and identifiable.

Army Oil Analysis Program (AOAP)

The AOAP analyzes equipment lubricant condition **to detect impending component failures through periodic evaluation** of oil samples taken during lulls in the battle or when units are in reserve. Oil analysis provides a diagnostic tool to determine the internal condition of engines, gearboxes, transmissions, and other oil-lubricated systems and components.

Apache Longbow

Aviation Maintenance

Background

Army aviation plays a critical role in successful military operations. It is one of the few branches of the Army that span combat arms, combat support, and combat service support missions for the maneuver commander. **The goal of aviation maintenance is to ensure that**



units maintain available aircraft in serviceable condition and to repair and return unserviceable aircraft to a serviceable as rapidly as possible. Aviation support requirements are a function of the total time it takes to recover and perform essential repairs to aircraft in order to provide the maneuver commander with the aircraft required to provide support to combat, combat support, and combat service support missions.

Three-Level Aviation Maintenance System

Aviation Unit Maintenance (AVUM) – Operational Maintenance

- Goal – provide maintenance **as far forward as possible** balanced to maintain sufficient mobility that keeps pace with the parent unit. Organic platoons or companies are assigned to aviation units at all levels. Activities are generally characterized as “high frequency” tasks that generate minimal down time.
- **Provides quick turnaround** through replacement, minor repairs, adjustments, lubricating and servicing. Crew chiefs assigned to each aircraft perform daily servicing, daily inspection, and high frequency, remove and replace type repairs. Scheduled maintenance and more time consuming repairs are normally performed by an AVUM maintenance element within the unit.
- Maintenance Support Teams (MSTs) are used to the maximum extent possible to repair aircraft on-site or prepare aircraft for evacuation.
- Maintains a combat PLL and bench stock for organic aircraft. Receives class IX supplies from a supporting AVIM.
- Structure depends on unit/Aviation Brigade assigned to: Division, Corps, and Army Service Component Command (ASCC).

Aviation Intermediate Maintenance (AVIM) – Intermediate and Limited Backup support to AVUM

Divisional AVIM:

- May be either a subordinate company of a Division Aviation Support Battalion (DASB) or a separate company organic to a DISCOM. Only heavy divisions have DASB units.
- Provides an **intermediate level of maintenance between the unit and the depot.** Maintains the unit’s operational readiness floats.
- Maintains a class IX ASL to replenish supported PLL stocks to itself and the AVUM. Maintains operational load items (shop stock, bench stock) to support intermediate maintenance operations. Has limited component repair capability that supports Repairable Exchange Activities (RXA).
- Employs MSTs forward to enhance quick repair/return to user.

Corps AVIM:

- Four corps AVIM companies are normally assigned to an Aviation Maintenance Battalion (AMB) that is organic to a COSCOM.
- The Armored Cavalry Regiment AVIM is organic to the ACR and not part of the corps AMB.
- Provides corps assigned aircraft with AVIM and backup AVUM support. May provide AVUM or divisional AVIM with recovery operations.
- Maintains a class IX ASL to replenish corps aviation units. Repairs limited component repair. Provides Repairable exchange parts support for divisional AVIM units.

Echelons above Corps (EAC) AVIM: -- Theater Support Command (TSC)

- May be assigned to an Area Support Group (ASG) to provide AVIM and backup AVUM support to EAC assigned aircraft.
- Maintains a class IX ASL to replenish EAC aviation units. Establishes and operates an aircraft RX repairs parts supply program. Provides selected RX support for corps aviation units.
- Provides AVIM overflow maintenance support to corps units assigned or under operational control of the theater.
- May assist AVUM, corps AVIM or divisional AVIM with recovery operations.

Aviation Depot Maintenance (Depot)

- **Performs overhaul, repair, modify, retrofit, and modernizes aircraft systems.**
- Performs repair on armament and fire control systems.
- Performs avionics and electronics repair and calibration.
- Primarily employed in CONUS at the Corpus Christie Army Depot (CCAD) but can project forward through Maintenance Support Teams (MSTs), Logistics Support Element (LSE), and host nation contracts.
- The Theater Aviation Maintenance Program (TAMP) is an Army Materiel Command (AMC) initiative between the Aviation Missile Command (AMCOM) and the Operational Support Command (OSC) to increase aviation readiness during deployments. It assists units during deployment and redeployment, provides technical assistance, supports increased operational tempo to sustain Army aviation across the entire spectrum of operations.
- The Aviation Depot Maintenance Round-Out Unit (ADMRO) program consists of five TDA organizations that mobilize in place when required. They support CONUS deploying forces and deployed forces, provide OCONUS support for contingency operations as well as support and stability operations, expand capabilities of CONUS depots, and they classify and inspect aviation stocks and components.

Aviation Maintenance - The Flow

An **Aviation Unit Maintenance (AVUM) company** provides unit maintenance and is organic to each aviation battalion within the aviation brigades in the ASCC, corps, and division. See Figure 10-5.

The ACR has an **Aviation Unit Maintenance (AVUM) company** in the **Regimental Aviation Support squadron** and an **AVIM company** in the **Regimental Support Squadron** that provides intermediate maintenance (AVIM) and aviation class IX ASL capability.

The heavy division **Combat Aviation Brigade units** receive AVIM and aviation class IX support from the **Division Aviation Support Battalion (DASB)**, which is part of the DISCOM. **All other types of divisions** receive AVIM and aviation class IX support from their **separate AVIM company of the DISCOM**.

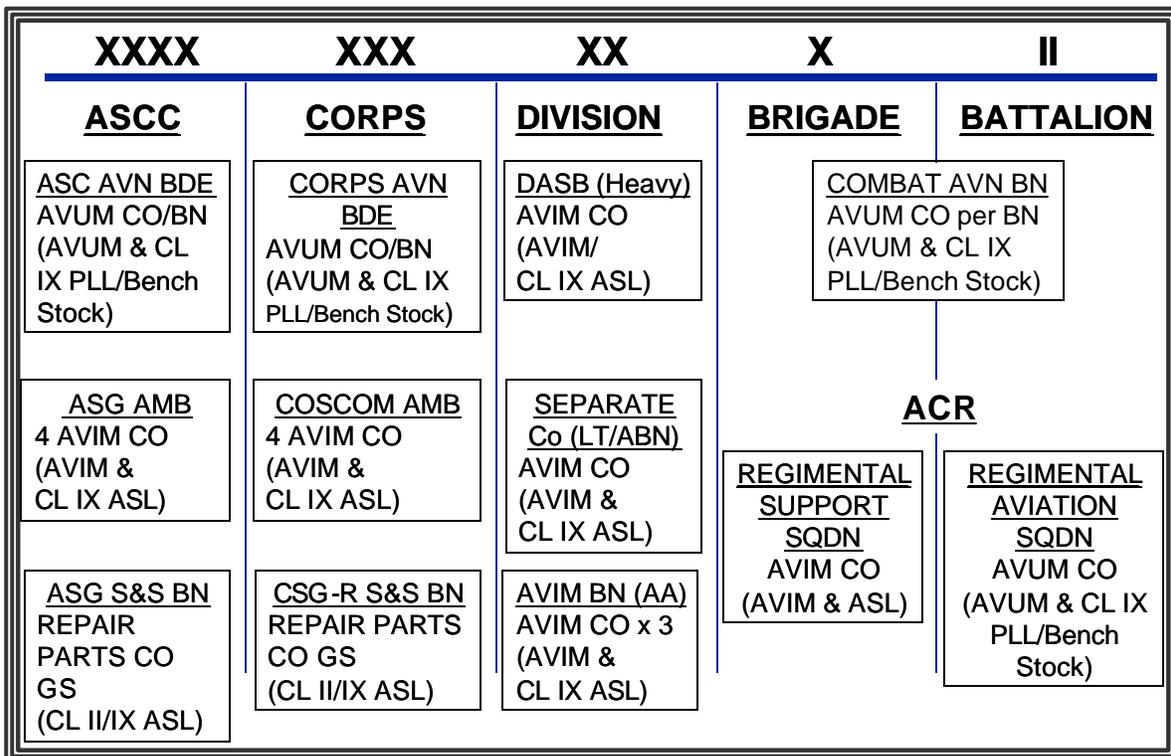


Figure 10-5. Aviation Maintenance

The corps aviation units receive AVIM and class IX (A) support from the **corps AVIM companies** that are normally part of a corps **Aviation Maintenance Battalion (AMB)** in the COSCOM located near a Corps Support Group (CSG).

The ASCC aviation units receive AVIM and class IX support from the **AVIM companies** located in the theater. These units are normally part of a Theater Support Command's **Area Support Group (ASG)**.

The **Repair Parts Companies** in the TSC and COSCOM provide **GS level aviation class IX and maintenance related Class II support** to all DASBs and AVIM

units in their respective areas of responsibility **when augmented by an aircraft repair parts supply platoon.**

Aviation Repair Parts Management -- Class IX (A)

In general, class IX(A) supply operates the same as the normal class IX flow in that most aviation repair parts are demand supported, they must be ordered before they will be received. However, **many aviation repair parts are regulated.** Regulated supplies must be scheduled or demanded and they require tight control by commanders and their staffs due to the scarcity, high cost, or mission related need. **Command regulated items must be released by the commander who designated it a regulated item.**

Chapter 10: Theater Maintenance

Homework Assignment

Manuals Required to Complete Homework: Theater Logistics Handbook, FM 100-10, FM 63-3, FM 63-4, FM 54-30, FM 63-20, FM 9-43-1 and FM 1-500.

1. List the three main categories of Class IX repair parts and indicate some differences between them. Ref FM 4-30.3

2. In regard to class IX, what is the difference between an ALOC and SLOC? Ref. FM 4-30.3

ALOC:

SLOC:

3. Describe the Repairable Exchange (RX) process. Ref 4-30.3

4. Briefly describe the mission of the repair parts supply company. Ref: FM 4-30.3

5. What is the difference between controlled exchange and cannibalization? Ref: FM 54-30.

6. List and describe the four levels of ground maintenance support: Ref FM 4-30.3

7. The three main non-divisional maintenance company elements consist of: Ref: FM 4-30.3

8. Ground maintenance is provided to Patriot ADA battalions by a _____ Ref. 4-30.3

9. Describe what a Collection and Classification company does: Ref. FM 4-30.3

_____:

10. The primary non-divisional missile maintenance organization that repairs missile specific equipment in the corps rear and COMMZ is the _____ . Ref: FM4-30.3.

11. Who has primary responsibility for recovery of damaged and inoperable equipment? Ref: FM 4-30.3 _____

12. In the FSB maintenance company, a system support team (SST) is normally the core for forming a maintenance support team (MST). Ref: FM 4-30.3. _____ True _____ False

13. GS maintenance units in the COMMZ are usually assigned to _____ of the TSC.

14. Maintenance Centers of Excellence (COE) workloads are assigned by _____ that are tasked by the _____ . Ref: FM 4-30.3.

15. The aircraft maintenance system consists of three levels. List and describe each: Ref: FM 1-500

16. The aviation maintenance organizations consist of: Ref: FM 1-500.

_____	_____
_____	_____
_____	_____

17. What is the purpose of the Theater Aviation Maintenance Program (TAMP)? Ref. FM 1-500.

18. What is the purpose of the Aviation Depot Maintenance Round-Out Unit (ADMURU)? Ref. FM 1-500.

19. What is the key difference between aviation repair part management (class IX Air) and other class IX categories? Ref. FM 1-500.

Notes