

Chapter 6

Tactical Logistics

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Section 1. General

6101. Introduction. During operations and training, tank units have a propensity to consume tremendous amount of resources. Therefore, it is imperative that thorough logistical planning be conducted to sustain tank units. The tank battalion is capable of self-administration, organic supply support, food service support, and medical services that provide routine and emergency medical care. The battalion has significant organic logistic capabilities for short-term self-sufficiency, but requires extensive CSS, especially fuel and ammunition, for sustained operations. The battalion's tank companies conduct first and second echelon maintenance on all organic equipment. The battalion provides second echelon maintenance on motor transport equipment and third echelon maintenance on tanks, tank-mounted weapons, and tube-launched, optically tracked, wire-command link guided missile (TOW) systems. The battalion possesses a significant amount of motor transport equipment. In the future, the preponderance of logistical support may be conducted via seabasing as envisioned in the concept Operational Maneuver From the Sea. The goal is to reduce the logistical footprint ashore.

6102. Methods of Support. Distribution procedures of logistical resources generally fall into one of two categories: "demand-pull" or "pull", and "supply-push" or "push". In the pull method, the supported unit directly controls the orders for resupply and other support services. The push concept uses calculations of anticipated logistics requirements to position or deliver resources when and where they are likely to be needed. Marine logistics traditionally employ a combination of both methods. Routine support, such as resupply of food, water, and fuel should be planned on a standard schedule, or "pushed", based on consumption rates and employment. The supported unit should request specific kinds of resupply, such as maintenance, medical support, and ammunition on an as-required basis. Note that in order to keep supply channels clear, requests for routine support, which has already been identified and is being pushed forward, should be omitted.

6103. Trains. A train is a means of internally task organizing and employing the organic CSS assets of the tactical unit. They are the link between the forward/subordinate elements of the tactical units and the supporting CSSE. The organization and capabilities of the trains vary with the mission and the tactical situation. Trains predominately provide supply, evacuation, and maintenance services. At battalion and company levels, trains increase responsiveness to the tactical situation.

(1). Unit trains. Unit trains centralized CSS assets of the supported unit at a single location under the control of the unit commander. Unit trains are most appropriate in the defense or during periods of low operational tempo. The commander uses this option when the tactical situation dictates self-contained train operations. On occasion, the terrain may require this configuration. Unit trains provide simplicity, economy, and survivability against ground attack.

To increase responsiveness of CSS assets, the tank battalion will often task organize and echelon its CSS assets into Combat Trains and Field Trains

(1) **Combat Trains.** Combat trains are organic elements that provide critical combat service support in forward areas. Combat trains are tailored for the tactical situation. They normally contain: petroleum, oils, and lubricants (POL); ammunition and other ordnance items; maintenance contact teams with a recovery and limited repair capability; and medical support. The exact composition depends on METT-T. The combat trains area must not take up space needed by the forward units, and supply and maintenance vehicle traffic must not impede the freedom of movement of combat and combat support units. Combat trains at the tank battalion level will normally include the battalion aid station.

(2). **Field Trains.** Field trains consist of the remaining organic and attached CSS elements located further to the rear. The commander selects this option to improve responsiveness, flexibility, and survivability against air attack. This option is preferable when the unit is in the offense.

The most important criterion for trains is responsiveness. However, seldom will a site be found which has all the desired positioning characteristics for the battalion's trains. However a good train location has:

- (1) Defensible terrain to allow the best use of limited personnel.
- (2) Enough space to permit dispersion of both vehicles and activities.
- (3) Concealment from hostile ground and air observation.
- (4) Firm ground to support materials handling, heavy equipment operations and ammunition and POL activities.
- (5) A helicopter landing site for helicopter resupply and medical evacuation.
- (6) An adequate road network between the train and forward elements and between the train and the CSSE.
- (7) Good communications with forward elements and with the supporting CSSE.
- (8) A source of water.
- (9) No terrain which are obstacles to CSS operations or which give the enemy targeting sources.

Built up areas are often good locations for trains because they provide cover and concealment for vehicles and sheltered areas for maintenance at night. When located in built-up areas, trains normally occupy building near the edge of the area for better security and to reduce the chances of being cut off and trapped.

Proper positioning of trains minimized displacements and increases the quantity and quality of CSS. When displacing trains, the technique most suitable to the tactical situation is selected. Trains may be displaced in their entirety concurrently with the maneuver of the tank unit or by echelon. Echelonment of the trains will provide immediate responsive support, flexibility in usage, and may increase survivability of assets. When trains are echeloned into combat and field trains, the S-4 will normally control the combat trains and designate the commander of the field trains.

6104. Responsibilities of Battalion Personnel

Battalion S-4. The Battalion S-4 is responsible to the commanding officer for battalion's combat service support. When trains are echeloned into combat and field trains, the S-4 will normally control the combat trains and designate a commander for the field trains. He is responsible for the immediate logistical needs of the supported units and the logistical needs of the field trains for future resupply. The S-4 must keep abreast of the tactical situation at all times in order to anticipate the battalion's needs. He also keeps the S-4A informed of the current situation and coordinates any special logistical requirements with him.

Battalion S-4 Assistant (S-4A). The S-4A is positioned by the S-4. He must work in unison with the S-4 to deconflict logistical requirements. He works with the H&S CO for security requirements, with the Supply Officer concerning resupply, and the Motor Transport Officer (MTO) concerning delivery of logistics packages (LOGPACs). He is responsible to the S-4 for organizing and directing resupply forward from the field trains to the combat trains. He directs the formation of logistics packages (LOGPAC's) for any special or nightly resupply. He works closely with the Motor Transport Officer in forming the composition of the LOGPACs. He keeps the S-4 informed of the current situation and anticipates any special logistical requirements that may exist.

Headquarters and Service Company Commander. The Headquarters and Service Company Commander normally serves as the Headquarters Commandant in the field. In addition to his duties in planning for the security and displacement of the COC, he has responsibility for, layout, physical security and movement of the battalion's trains. He works closely with the S-4A and advises him of all security matters. He is also responsible for coordinating fire support with the FSC for the field trains. Additionally, he normally leads the quartering party to locate new sites prior to displacement of the COC and trains or acts as the convoy commander when moving the COC and/or battalion trains.

Motor Transport Officer (MTO). The MTO is normally positioned in the field trains. During the planning stages of the operation, the MTO is tasked with consolidating all wheeled vehicle requirements and organizing convoys. The MTO must be aware of what supplies and equipment will be sent forward so that an adequate number of vehicles will be made available. He assembles any special LOGPACs and the nightly LOGPAC as directed by the S-4A. *The MTO will work closely with the S-4A to ensure all convoys are prepared to move in a timely manner.* The MTO may lead delivery of the LOGPACs forward personally or task one of his subordinate. When the field trains must move, he assists the H&S CO in preparing all movement orders and when moving, may become the convoy commander. Once at the new field trains location the MTO assists in the initial layout of the field trains.

Battalion Maintenance Platoon Commander. The Battalion maintenance platoon commander is normally positioned in the field trains with the tank maintenance platoon. He advises the S-4A as to what maintenance assets should be sent to the combat trains

when needed. He coordinates with the H&S Company Commander concerning security and is responsible for the security of his assigned sector within the field trains perimeter. He establishes maintenance operations and makes liaison with CSSE maintenance elements for requested support.

Tank Maintenance Officer (TMO). The TMO is normally positioned in the combat trains. His function is to coordinate the forward maintenance and evacuation effort. He acts as the OIC of the maintenance contact teams in the combat trains. When called forward to assist the company/team, the TMO, in conjunction with company personnel, will decide whether the vehicle can be fixed in place, taken to the Unit Maintenance Collection Point (UMCP), or evacuated to the field trains.

Battalion Supply Officer. The Battalion Supply Officer is located in the field trains. He is responsible for the requisition, receipt, maintenance, and disposition of supplies necessary for operations. He is normally the OIC of the LOCC and is responsible for LOCC operations and setting up an LOCC watch. He is the primary POC with the CSSE for class I, III and V resupply.

Battalion Maintenance Management Officer (MMO). The MMO serves as the battalion liaison officer at the CSSE. He is the primary point of contact for the coordination of logistical support for all elements, including detachments and attachments. He monitors the combat service support nets. He is linked by wire to the field trains when possible. If he is not with the FSSG, he is responsible to the H&S CO for the security of his assigned sector within the field trains perimeter.

Battalion Motor Transport Maintenance Officer is normally located in the field trains. He normally works under the supervision of the Battalion Motor Transport Officer and coordinates repair/recovery/evacuation of all wheeled assets.

Battalion Communications Maintenance Officer is normally located in the field trains. He normally works under the supervision of the Battalion Communications Officer and coordinates repair/evacuation of communications assets.

Battalion S-4 Chief is normally located in the combat trains. Assists the S-4 with the operation, and movement of the combat trains. Assists the Battalion S-1 (located with the S-4) with security for the combat trains and personnel accountability. Additionally, he is responsible to the H&S CO for the security of his assigned sector within the field trains perimeter.

Headquarters and Service Company Gunnery Sergeant. The H&S Company Gunnery Sergeant assists the H&S Company Commander with his duties. He normally works in the LOCC and assists the H&S Company Commander with security. He also provides logistical support for all personnel in the field trains.

Company Maintenance Chief. The Maintenance Chiefs organize and supervise the company mechanics. They supervise ERO preparation, distribute Class IX supplies, and

coordinate with platoon sergeants on platoon maintenance status and recovery of vehicles to the UMCP.

Tank Leader. Tank leaders normally receive LOGPACs and guide service support elements to and from their positions.

Company Supply Sergeant. The company supply sergeant is normally located in the field trains. During the day he coordinates the company resupply needs and ensures that all items are placed in the company LOGPAC for the night resupply. He accompanies the resupply convoy forward to the combat trains and checks in with the S-4. The tank leader will then lead the appointed vehicles to their respective resupply. Once resupply has taken place, the supply sergeant will return to the combat trains enroute to the field trains.

Section 2. Organic Capabilities

Self-sufficiency. The nature of mechanized warfare demands that tank units be self-sufficient to a certain degree.

(1) *Identify critical requirements.* Many logistics requirements cannot be predicted with satisfactory accuracy. High-use repair items can be identified and stockpiled prior to a deliberate operation. The combat service support element (CSSE) of the MAGTF builds and maintains a Class IX repair parts block based on empirical data. Repair items that are low-demand, but critical, may not have been planned for by the CSSE. The Class IX block should be reviewed by the tank unit commander, or his representative, to identify any combat deadlining components that may be overlooked. Critical logistics requirements, or "show-stoppers" should be forecasted to the CSSE.

(2) *Enhance organic capability.* Mechanized forces tend to operate over great distances throughout the battlespace. The mobility of the M1A1 tank provides for a nonlinear array of forces with considerable separation between units, including CSSE units. Tank units should enhance their organic CSS capability whenever possible. For instance, qualifying several crewmen as Helicopter Support Teams (HST) allows for greater flexibility in vertical resupply.

(3) *Safeguarding resources.* Sea basing reduces the need to establish logistics facilities ashore, thereby reducing the footprint and vulnerability of the land-based portion of the force. Tank units require certain organic CSS capabilities. Protection of those resources is normally afforded by locating them safe distances from direct combat, reducing responsiveness, or by allocating sufficient forces for defense, reducing forces available for other operations.

Section 3. Outside Agency Support

Logistics is the science of planning and carrying out the movement and maintenance of forces. Logistics provides the resources of combat power and limits what tank units can

do on the battlefield. Precision logistics seeks to expand or stretch those limits. To improve efficiency, precision logistics applies "just-in-time" inventory management and improved methods for forecasting demand.

6301. Prioritize Requirements. Working within the limits of sea-based logistics, resupply requests must be prioritized. The establishment of priorities and the allocation of resources in accordance with those priorities is a function of command, not logistics. Logistics command and control implements the priorities determined by the commander.

6302. Rapid Response. Anticipated future resupply, not identified as preplanned "pulsed" support, must be prepared for immediate shipment. Resupply items identified but not carried by the maneuver forces should be packaged for rapid resupply. For instance, palletized stocks of likely repair items should be ready for short-notice vertical resupply.

6303. Redundant Requests. Requests for logistics resupply should be routed through higher headquarters to the supporting unit, and to the supporting unit concurrently. Current communications systems, such as the Digital Automated Communications Terminal (DACT), support redundant and immediate requests. Pre-formatted messages allow users to quickly compose and transmit logistics requests to higher headquarters and the supporting unit.

6304. Collocation of Key Players. Positioning key personnel, where they can be most effective in the relay and transfer of information, can be tremendously beneficial. For instance, a maintenance representative from the ground combat element (GCE) cross-decked to the operations section of the CSSE would be able to interpret and forecast maintenance requirements.

Section 4. Resupply Operations

The Marine tank unit uses three methods in conducting supply operations: pre-positioning, routine resupply, and emergency resupply. The method to be used is determined after an analysis of the factors of METT-T.

6401. Pre-positioning. Pre-positioning of supplies, also known as prestock, may be required in some defensive operations. Normally, only Class V items will be prestocked, but Class I and Class III supplies may be included in some situations. The location and amount of a prestock must be carefully planned and then verified through reconnaissance and rehearsals. Each TC must be informed of prestock locations. The following considerations influence selection of prestock sites and execution of the resupply operation:

- Availability of overhead cover for the prestock location.
- Cover and concealment for the location and routes that vehicles will take to reach it.
- Security procedures required to safeguard the resupply operation.

- Procedures for protecting friendly personnel and vehicles in the event prestocked ammunition are ignited.

There are several techniques for accomplishing prestock resupply in the defense. Normally, Class V (ammunition) is positioned next to or within a vehicle's fighting position. This enables the tank crew to resupply during an engagement without displacing. Another technique is to locate Class V supplies en route to or within a subsequent BP. Use of this method requires consideration of security procedures to safeguard the prestock. Resupply of Class III (specifically fuel) is usually accomplished behind a unit's current BP or en route to a subsequent BP. In the defense, the tank unit may rotate vehicles or sections through prestock positions based on the enemy situation and shortages within the unit.

6402. Routine Resupply. These operations include regular resupply of items in Classes I, III, V, and IX and of any other items requested by the tank unit. Routine resupply is planned at battalion level and normally takes place at every opportunity. The company LOGPAC is a mixture of company and battalion assets that transport supplies to the company.

LOGPACs are normally assembled in the battalion field trains area under the supervision of the S-4 or his designated representatives and the tank company commander or his designated representatives. Replacements and hospital returnees normally travel to company/platoon locations on LOGPAC vehicles as required. Once the LOGPAC is prepared for movement, the tank leader moves the vehicles forward from the field trains as part of the task force resupply convoy to the logistic release point (LRP). The company first sergeant or his representative meets the LOGPAC and guides it to the company resupply point. The company then executes tailgate or service station resupply; refer to the discussion of these resupply techniques later in this section.

6403. Emergency Resupply. Emergency resupply, normally involving Classes III and V, is executed when the tank unit has such an urgent need for resupply that it cannot wait for the routine LOGPAC. Emergency resupply procedures start with immediate redistribution of ammunition in individual vehicles, followed by cross leveling of ammunition. Once requested through the commander, first sergeant, or tank leader, the battalion brings emergency supplies forward. Based on the enemy situation, the tank unit may have to conduct resupply while in contact with the enemy. Two techniques are used to resupply the unit in contact:

- Limited supplies are brought forward to the closest concealed position, where the tailgate technique of resupply is used.
- Individual vehicles or sections disengage and move to a resupply point, obtain their supplies, and then return to the fight. This is a version of the service station technique.

6404. Techniques of Resupply. The tactical situation will dictate which technique of resupply the tank unit will use: tailgate, service station, a variation of one type, or a

combination of both types. The situation will also dictate when to resupply. Generally, the unit should attempt to avoid resupply during the execution of offensive operations; resupply should be done during mission transition. Resupply is unavoidable during defensive missions of long duration.

- *Tailgate Resupply.* In the tailgate technique, fuel and ammunition are brought to individual tanks by the tank leader or another responsible individual who is assisting him (see Figure 5-1). This method is used when routes leading to vehicle positions are available and the unit is not under direct enemy observation and fire. It is time-consuming, but it is useful in maintaining stealth during defensive missions because tanks do not have to move.

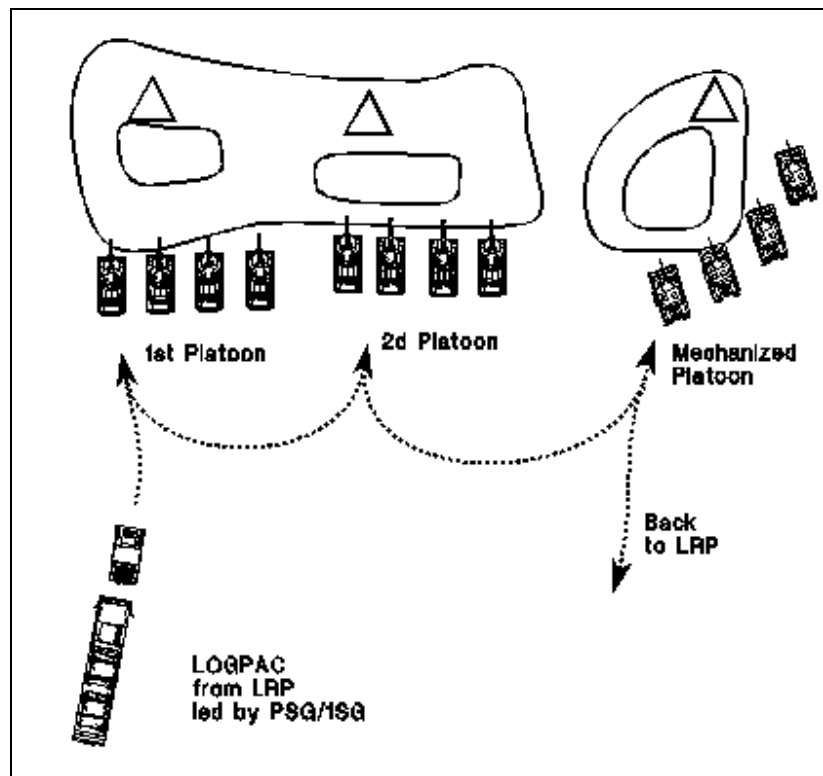


Figure 5-1. Tailgate resupply technique.

- *Service Station Resupply.* In the service station technique, vehicles move to a centrally located point for rearming and refueling, either by section or as an entire platoon. Service station resupply is inherently faster than the tailgate method; because vehicles must move and concentrate, however, it can create security problems. During defensive missions, the platoon must be careful not to compromise the location of fighting positions. A company being resupplied using this technique can maintain security by having only one platoon to move at a time; a platoon can do the same by moving a section to the resupply point at a time.

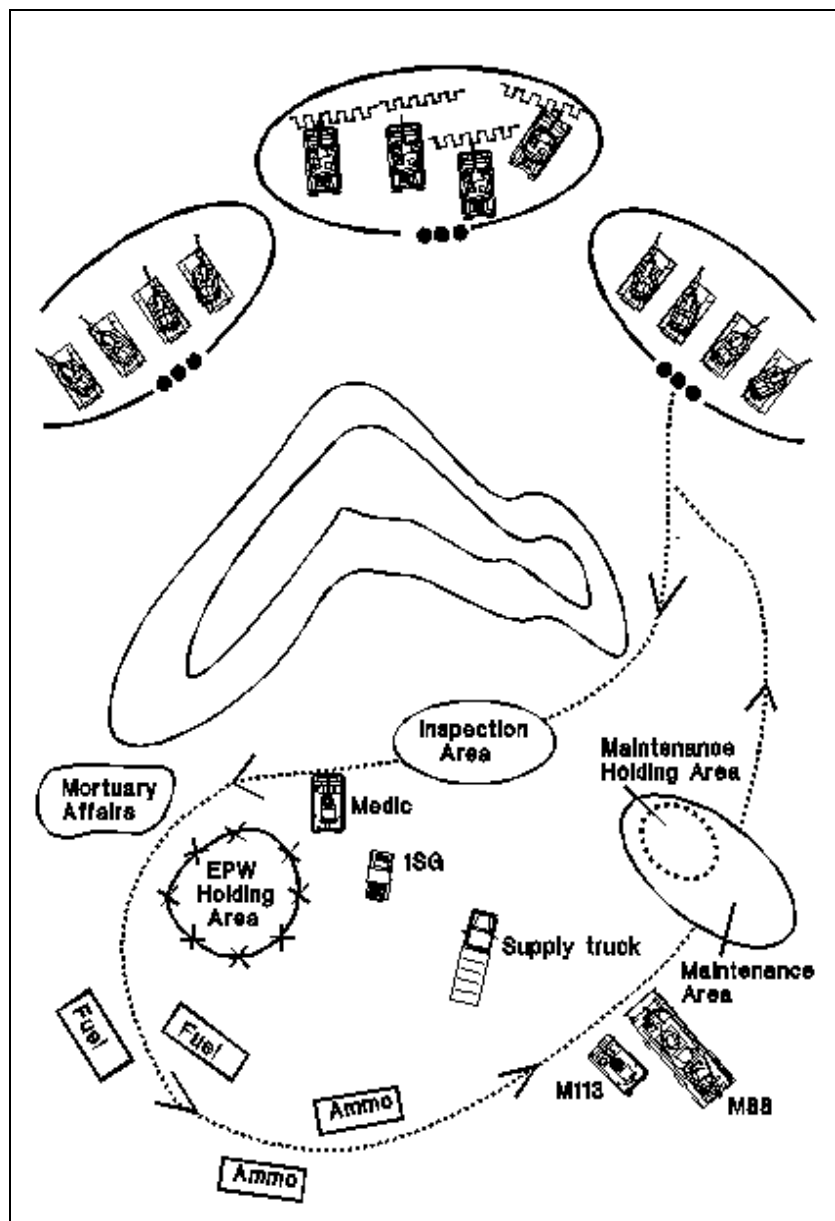


Figure 5-2. Service station resupply technique.

- *Combination Resupply.* A platoon leader can vary the specifics of the two basic techniques, or he can use them in combination. During a defensive mission, for example, he may use the tailgate technique for a mounted forward OP and the service station method for the remainder of the platoon located in hide positions (see Figure 5-3).

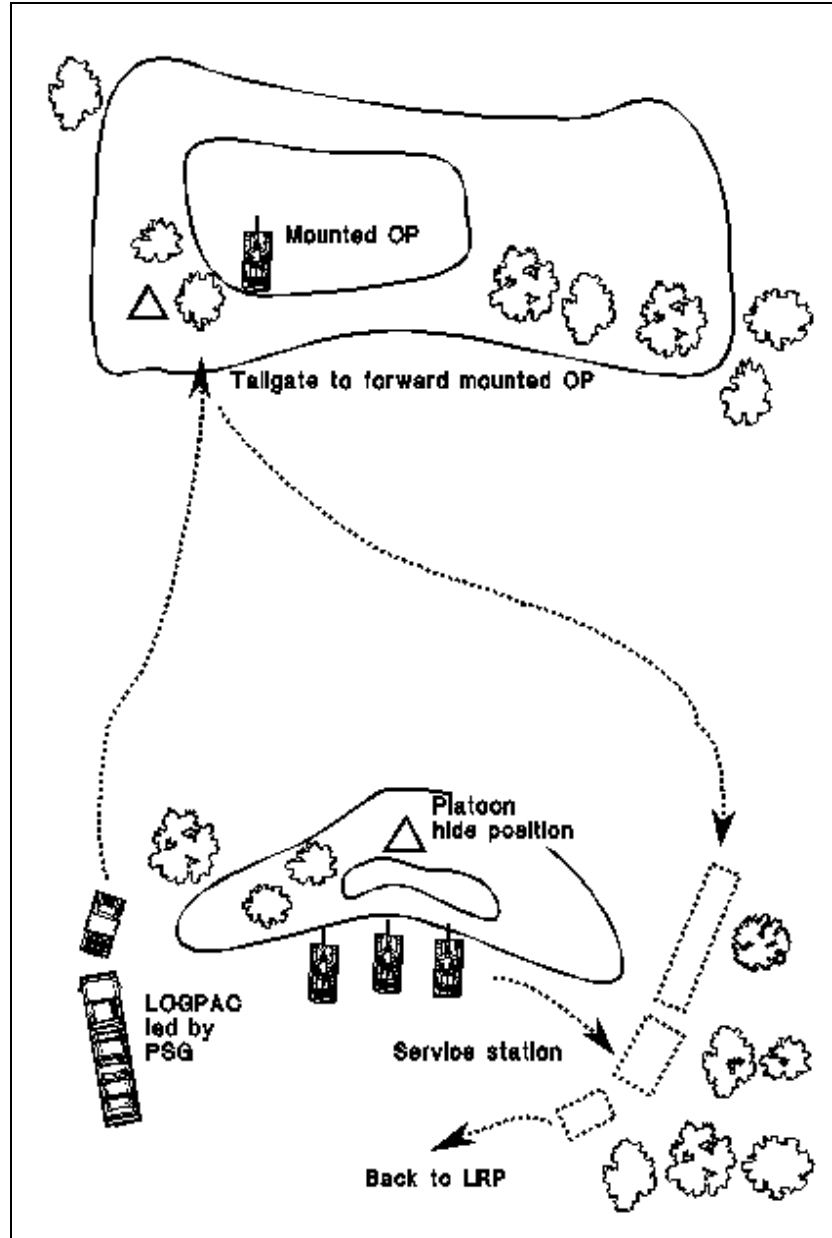


Figure 5-3. Combination of resupply techniques.

Section 5. Maintenance Operations.

Proper maintenance keeps equipment and materiel in serviceable condition. It includes PMCS, as well as the functions of inspecting, testing, servicing, repairing, requisitioning, recovering, and evacuating equipment and materiel whenever necessary.

Maintenance tasks are divided into four levels: unit (which includes both operator and organizational maintenance), CSSG direct support (DS), CSSG general support (GS), and depot. The tank company commander and tank platoon leader is concerned primarily with supervising operator maintenance, ensuring scheduled services are performed as part

of organizational maintenance, and providing support for DS maintenance elements when equipment must be evacuated.

Repair and recovery are accomplished as far forward as possible. When equipment cannot be repaired on site within two hours, it is moved to the rear (but only as far as necessary for repair) to a unit maintenance collection point (UMCP).

6501. Unit Maintenance - Operator. Operator maintenance includes proper care, use, and maintenance of assigned vehicles and crew equipment such as weapons, NBC equipment, and night vision devices. The driver and other crewmembers perform daily services on the vehicle and equipment, to include inspecting, servicing, tightening, performing minor lubrication, cleaning, preserving, and adjusting. The driver and gunner are required to record the checks and services, as well as all equipment faults that they cannot immediately correct, on the equipment inspection and maintenance worksheet. The worksheet is the primary means of reporting equipment faults through the TC to the platoon sergeant and platoon leader and ultimately to organizational maintenance personnel.

Checks and services prescribed for the automotive system, weapon systems, and turret are divided into three groups:

- Before-operation
- During-operation.
- After-operation.

These checks and services are explained in every operator's manual and should be conducted as stated in the manual. Although operators must learn to operate equipment without referring to the manual, maintenance must be performed using the appropriate technical manual--not from memory!

6502. Unit Maintenance – Organizational. Organizational maintenance is the responsibility of the unit assigned the equipment. The operators and unit mechanics perform it. Because the tank's design allows rapid modular replacement of parts, many faults can be corrected, and the vehicle returned to the tank unit, with minimum delay.

When the operator identifies a problem that is beyond his level of maintenance capability, he notifies his chain of command so the problem can be isolated and corrected. The company maintenance team has trained mechanics who are authorized to perform unit maintenance tasks as prescribed in the technical manuals for the vehicle. When company or battalion maintenance teams are not authorized to make a particular repair, they will arrange to have it done by CSSG maintenance assets.

6503. CSSG Maintenance. Personnel from the CSSG maintenance company, which normally supports a battalion or regiment, perform this level. It consists of repair and/or replacement of parts, assemblies, and components. Maintenance support teams from CSSG units are usually located forward with the battalion field trains. These support

teams may go forward to fix disabled equipment on site, but they are limited in what they can fix and where they can go.

6504. Evacuation. Evacuation is necessary when a damaged vehicle cannot be repaired on site within two hours or when evacuation is the only means (besides friendly destruction) available to prevent capture or destruction by the enemy. When a vehicle needs to be evacuated, the platoon leader or platoon sergeant reports its exact location, the vehicle type, and the extent of damage, if known, on the company net to the company maintenance chief. The crew should remain with the vehicle to assist in evacuation and repair, to provide security, and to return the repaired vehicle to the platoon as soon as possible.

A recovery vehicle from the company or battalion maintenance team will evacuate the damaged vehicle. The vehicle is evacuated to an LRP, the main supply route (MSR), or the UMCP as necessary.

The recovery team normally employs an M88A1 recovery vehicle. This vehicle travels with the company maintenance team under the direction of the maintenance chief. The location of the company maintenance team during operations is designated in the company OPORD.

If a recovery vehicle is not available or if time is critical, other platoon vehicles can evacuate the damaged vehicle for short distances. The decision to do this rests with the platoon leader. Towing procedures are listed in the operator's manual. Self-evacuation by the platoon is a last resort that should be considered only to prevent losing the damaged vehicle to the enemy.

If the damaged vehicle will be lost for an extended period, the platoon can replace other vehicles' damaged equipment (such as weapons and radios) with properly functioning items from the damaged vehicle. Damaged equipment can then be repaired or replaced while the vehicle is being repaired.

6505. Destruction. When damaged or inoperable equipment cannot be evacuated and it becomes apparent that enemy capture is imminent, the equipment must be destroyed. Platoon leaders must ensure crews are trained to destroy their vehicles rather than allow them to fall into enemy hands. Instructions for destroying equipment are included in the operator's manual for each item.

The platoon leader should get the commander's permission before destroying any equipment. When communications fail, however, the platoon leader must use his judgment to decide whether or not evacuation is possible. Every reasonable effort must be made to evacuate secure equipment, classified materials, and all weapons.